Predictors of attitudes toward LGBTQ+ students and school climate in English secondary schools: regression and mediation analyses of peer and adult relationships

Children and Youth Services Review 186 (2026) 108954

Contents lists available at ScienceDirect

Children and Youth Services Review

journal homepage: www.elsevier.com/locate/childyouth

Predictors of attitudes toward LGBTQ+ students and school climate in English secondary schools: regression and mediation analyses of peer and adult relationships

Ann E. Wilson-Daily [a,*], Markus Kemmelmeier [b], Richard Harris [c]

[a] Serra Húnter Fellow, Faculty of Education, Universitat de Barcelona, Barcelona, Spain
[b] Vice Provost for Graduate Education, Dean of the Graduate School, University of Nevada, Reno, Nevada, USA
[c] Institute of Education, University of Reading, Reading, UK

ARTICLE INFO

Keywords:
Adult support
Peer relationships
LGTBQ+ students
Discrimination
School victimization
Nonbinary experiences

ABSTRACT

Background: LGBTQ+ youth face persistent challenges in UK secondary schools. Gaining a deeper understanding of school environments can inform efforts to improve their wellbeing, but studies on relational factors like peer and adult relationships remain limited in the UK.
Method: Analysing survey responses from 241 LGBTQ+ (12.4%) and non-LGBTQ+ (77.2%) students (10.4% unsure) within five secondary schools in England, this study explores the predictive and mediating roles of peer and adult connectedness. Regression analyses treated positive views of the LGBTQ+ community, perceived school climate for LGBTQ+ students, and relationships with school peers as dependent variables (DVs), controlling for demographic and attitudinal covariates including religiosity and a SES proxy. Mediation analyses explored the possibility of causal relationships between these variables.
Results: Regression results showed that student perceptions that Adults care about them predicted all three DVs: positive views of the LGBTQ+ community ($b = 0.374$, $p < 0.001$), School Climate for LGBTQ+ students ($b = 1.646$, $p = 0.006$), and relationships with school peers ($b = 0.325$, $p < 0.001$). Moreover, significant interactions revealed that such adult support was particularly important for males' experiences of the school climate ($b = 3.350$, $p = 0.002$) and peer relationships ($b = 0.266$, $p = 0.043$). Critically, bootstrapped mediation analyses (20,000 iterations) revealed that relationships with school peers partially mediated LGB students' assessment of their School Climate, indirect effect ab = 0.69, 95% [.04, 1.67] (partially standardized 0.14 95% [.01, 0.31]), accounting for 8.5% of the total effect. However, relationships with adults in schools did not emerge as mediator.
Conclusions: Findings substantiate the theoretical value of including "Adults at school care about me" as a potentially broad protective predictor in future studies and amending and broadening the Psychological Sense of School Membership (PSSM) scale with the adult and peer scales proposed here. However, based on our mediation analyses, only peer relationships, but not adult relationships seem to account for at least part of the experience of lower evaluations of school climate among LGB students. Practically, we recommend studying the effectiveness and feasibility of DfE-aligned interventions such as a "trusted adult" mentor training and use of the Adults scale proposed here to set benchmarks for monitoring inclusive support in line with the UK Equality Act. With a five-school scope limiting generalizability, future studies should be multi-site, ideally longitudinal studies and use such designs to confirm these preliminary results, incorporating an intersectional focus and transgender subsamples.

1. Introduction

Some researchers have found that circumstances for LGBTQ+ students in the UK have been improving (McCormack, 2011; White et al., 2018); nevertheless, other evidence points to a hostile and worsening environment for LGBTQ+ students in UK schools (e.g., Amos

* Corresponding author at: Departament de Didàctiques Aplicades, Universitat de Barcelona, Campus Mundet, Passeig de la Vall d'Hebron, 171, 08035 Barcelona, China.
E-mail address: awilson@ub.edu (A.E. Wilson-Daily).

https://doi.org/10.1016/j.childyouth.2026.108954
Received 29 October 2025; Received in revised form 25 February 2026; Accepted 3 April 2026
Available online 5 April 2026

et al., 2020; Stonewall, 2017), and in the community more generally (Stonewall; 2023; ILGA, 2025). Many LGBTQ+ students are still more likely to experience discrimination in UK secondary schools than their non-LGBTQ+ peers (e.g., Amos et al., 2020; Stonewall, 2017; Woodhead et al., 2025), face a higher risk of mental health difficulties and poorer health outcomes (Amos et al., 2020) and suffer higher levels of attempted suicide and self-harm, especially in the case of transgender and nonbinary students (e.g., McDermott et al., 2025; Patalay & Fitzsimons, 2021; Salkind et al., 2019). Furthermore, LGBTQ+ students leave school with higher levels of truancy and lower grades, and some fail to earn a secondary school diploma or fail their exit exams (e.g., Aragon et al., 2014; Bradlow & Guasp, 2020).

Studies suggest LGBTQ+ students suffer from serious long-term mental health problems stemming from their school experiences (e.g., Amos et al., 2020; Toomey et al., 2010) and are in danger of disengaging from continuing their education and/or employment altogether (Bradlow & Guasp, 2020). These inequalities vary by sexual orientation and gender identity (McBride, 2021) and other intersecting factors such as race and socioeconomic status (e.g., Morgan et al., 2025; Woodhead et al., 2025). Nevertheless, recent metanalyses have shown that adversities experienced in youth, such as bullying, are among the most preventable risk factors for developing severe mental disorders (e.g., Dragioti et al., 2022).

LGBTQ+ youth in the UK commonly deal with unique social stressors related to their sexual orientation and/or gender identity from staff, peers, policy, and curriculum (e.g., Amos et al., 2020; Harris et al., 2025; Woodhead et al., 2025). Some students can even suffer family or social rejection from their religious community that can result, in extreme cases, in homelessness (e.g., McCann, & Brown, 2019; Tunåker, 2023). Furthermore, gender minority students have the stress of managing invalidating responses of dead naming[1] or other forms of identity denial in schools, like forced use of gendered spaces not in alignment with how they identify (e.g., Harris et al., 2025; McBride, 2021).

Nevertheless, studies show that secondary schools have the potential to provide support and experiences that may buffer against risk factors for LGBTQ+ students (e.g., Hobaica et al., 2021; Kuhlemeier et al., 2023; Leung et al., 2022; Russell & Fish, 2016). Studies have shown that targeted policies (Day et al., 2016; Hatzenbuehler & Keyes, 2013; Kull et al., 2016; Saewyc et al., 2014), LGBTQ+ -inclusive curriculum (Goldfarb & Lieberman, 2021; Helmer, 2015; Snapp et al., 2015), school-based LGBTQ+ clubs (e.g., Poteat et al., 2024; Toomey et al., 2011), and staff training (see Madireddy & Madireddy, 2020; Saewyc et al., 2014) all contribute to improving the experiences of LGBTQ+ students.

Whereas school policy and characteristics can promote or hinder the health of the LGBTQ+ students, our understanding of the specific factors and processes is often not sufficient. In order to develop targeted interventions, it is important to better understand the school contexts that LGBTQ+ youth inhabit and the factors that impact their experiences (Burish et al., 2023; Haas et al., 2010; Naser et al., 2022). This may include careful study of members of the LGBTQ+ community but also non-LGBTQ+ youth who tend to make up these students' environments in schools (Bronfenbrenner & Morris, 2006).

In this study, we look at attitudes, climate and the potential predictive and mediation effects of peer and adult connectedness in English schools. Our research recognizes the importance of expanding notions of LGBTQ+ student mental health to include perspectives of wellbeing and connectedness within the greater school community (see Fish, 2020) and the need to examine youth in context (Bronfenbrenner & Morris, 2006; Lerner et al., 2015). Specifically, we look at school peer relations and relationships with adults, for youth that identify as LGBTQ+ and those who do not, to explore how these shape LGBTQ+ student experiences in England. We consider it important to study non-LGBTQ+ student attitudes alongside those of LGBTQ+ students as these play an important role in the social structure of school settings.

1.1. The importance of relationships with adults in schools

High levels of school connectedness among LGBTQ+ students are associated with improved mental health (e.g., Gower et al., 2018), albeit most available studies on LGBTQ+ students have focused on associations with suicide ideation and substance abuse, likely as those are the data available from general surveys of secondary school in the US (e.g., Ancheta et al., 2021; De Pedro et al., 2017). Nevertheless, recent UK-based national surveys have been analysed to this end. McDermott et al. (2025), found that having at least one trusted adult was a consistently strong protective factor across all measured mental health outcomes, particularly for suicidal ideation, suicide attempts, and self-harm within the past year. Specifically, students who reported a trusted adult showed roughly 23% lower rates of suicidal ideation, 19% lower suicide attempts, and 25% lower self-harm, along with notable reductions in anxiety and depression. Trusted adult status was defined by participants' binary self-report in this study of having a trusted adult (yes or no). Similarly, in a systematic review including two UK studies (McDermott et al., 2016; Rimes et al., 2019),[2] Wang et al. (2023) identified teacher and, separately other adult support, alongside feeling safe at school and the presence of anti-bullying policies, as critical protective factors against suicide attempts among LGBTQ+ youth. De Pedro et al. (2017) showed that both a meaningful, close relationship with at least one adult in school and school connectedness (i.e., sense of belonging, being happy to be at school, feeling close to people at school, etc.) meant that lesbian, gay and bisexual secondary school students were less likely to abuse illegal substances.

1.2. The importance of relationships with school peers

Negative treatment from peers related to LGBTQ+ identities has been shown to take a toll on students' mental health (e.g., Amos et al., 2020; Hatchel et al., 2018; Wilson & Cariola, 2020; Woodhead et al., 2025). This victimization can take several forms, including: sexual harassment victimization (Hatchel et al., 2018; Mitchell et al., 2014), social exclusion and isolation (e.g., Harris et al., 2022; Ueno, 2005), physical abuse (e.g., De Pedro et al., 2019; Eisenberg et al., 2019), and other verbal and relational peer discrimination (De Pedro et al., 2019; Harris et al., 2025).

From the perspective of minority stress theory (Meyer, 2003), these experiences represent distal stressors that may give rise to proximal processes, such as identity concealment or internalized stigma, that increase emotional distress. Conceptually, this can be understood as a stress pathway: peer victimization → concealment or internal strain → psychological distress, which may be buffered by affirmative peer relations. Consistent with this model, Ueno (2005) found that mutual friendships among LGBTQ+ students mitigate distress, partly by normalizing identity expression and reducing the need for concealment. Likewise, Craig et al. (2018) showed that peers can act as a buffer for secondary school student wellbeing if support from family and the wider school community is lacking (cf. Parra et al., 2018). For gender minority youth, connection with like peers has been associated with increased comfort with their identity (Reck, 2009) and aid in connecting with social services and other helpful resources (e.g., Corliss et al., 2007).

1.3. Study context

As Johnson (2024) argues, schools exist within, and are responsive to, a broader socio-political context (see also Bronfenbrenner & Morris,

[1] The act of referring to a transgender or nonbinary person by a name they no longer use.

[2] Both studies included students up to age 25.

2006; Lerner et al., 2015). It is therefore helpful to understand this context when making sense of the data around the school environment. The data for this research were gathered in England in 2022, and during this time until present, sources show that the general environment for the LGBTQ+ community in England has become more hostile (Stonewall, 2023; ILGA, 2025). From 2013 to 2015, the ILGA's rainbow map of Europe ranked the UK as the most welcoming society for the LGBTQ+ community, helped by legislation such as the Equality Act of 2010, which included sexual orientation and gender reassignment as protected characteristics. However, by 2025, the UK had slipped to 22nd, with Katrin Hugendubel, the ILGA's advocacy director, saying that the situation in the UK reflected "a coordinated global backlash aimed at erasing LGBTI rights" (ILGA, 2025). This is also seen in a massive increase in the number of reported hate crimes against members of the LGBTQ+ community in England and Wales (Stonewall, 2023). Within this context, the transgender community has become the focus of an increasingly hostile public discourse from both former Conservative government members (see Badshah, 2022; McKeon, 2023; Russell, 2023) and more recent Labour government actions (see Bandini, 2025).

It is within this context that schools are operating. Under the Equality Act, there is an expectation that schools provide environments where harassment and discrimination are not tolerated. Yet, at the time of data collection, within the school curriculum there was no explicit requirement for students to learn about LGBTQ+ issues, except within the statutory guidance for the teaching of Relationships and Sex Education (RSE; Department for Education [DfE], 2021). The guidance offered was not at all prescriptive:

> Schools should ensure that all of their teaching is sensitive and age appropriate in approach and content. At the point at which schools consider it appropriate to teach their pupils about LGBT, they should ensure that this content is fully integrated into their program of study for this area of the curriculum rather than delivered as a standalone unit or lesson. Schools are free to determine how they do this, and we expect all pupils to have been taught LGBT content at a timely point as part of this area of the curriculum (DfE, 2021, p. 15).

However, school coverage of LGBTQ+ issues has been heavily criticized by students within the community, who highlight the hetero- and cisnormative nature of the curriculum they encounter (Harris et al., 2022, 2025). Many studies of the LGBTQ+ experience in UK schools highlight the general challenges facing students (e.g., Morgan et al., 2024; Stonewall, 2017; Woodhead, 2025), many of which emanate from LGBTQ+ students' non-LGBTQ+ peers. Indeed, LGBTQ+ students feel that many of the issues they encounter stem from the ignorance of their non-LGBTQ+ peers (Harris et al., 2025; Morgan et al., 2024). Yet this may over-simplify the situation, as various factors may explain why LGBTQ+ students can experience a hostile school environment.

1.4. The present study

This study is designed to build upon and combine previous research, mostly from studies of secondary school contexts outside England. We used regression analysis to understand the factors that predict attitudes toward the LGBTQ+ community, positive school climate, and positive peer relations for LGBTQ+ students, and others, allowing for the simultaneous consideration of various predictors, including SES, religion, LGBTQ+ friends and family members to name a few, essential for understanding the complex dynamics that shape personal views and attitudes towards LGBTQ+ persons.

A particular focus of our study is on the social connections that students experience at school. Much of the literature on LGBTQ+ youth in schools focuses on a variable referred to as school connectedness, with many authors relying on Goodenow's (1993) Psychological Sense of School Membership scale (e.g., Perales & Campbell, 2020). We also present a novel scale for measuring school climate with items specific to perceptions of school climate for LGBTQ+ students.

Our analyses also take a host of background variables into consideration. One such variable is immigration. Previous studies show that in some contexts, students from immigrant backgrounds indicate lower levels of acceptance of homosexuality (Teney & Subramanian, 2010; Weber & Gredig, 2018) and nonnormative gender identities (e.g., Rutten & Theewis, 2020) than their peers; although, differences in such views, in comparison to native peers, may disappear after time spent in certain host countries, including England (see Wuestenenk et al., 2022).

An additional control was religion, an established predictor of attitudes toward LGBTQ+ individuals among adolescents (Hooghe et al., 2010; Roggemans et al., 2015; Sanjakdar, 2011). Given our school contexts, we looked specifically at Muslim, Christian and Hindu religions separately. Gender was included as a control variable given that studies (e.g., Camodeca et al., 2018; Hooghe et al., 2010) have revealed that homophobic bullying and attitudes in secondary schools were associated with being male (and heterosexual). We also controlled for students' grade level given that matters of sexuality and gender might become more salient over time. Namely, LGBTQ+ peer self-realization and disclosure may become more frequent as students' progress through secondary school (Dunlap, 2016).

Furthermore, we take indicators of socioeconomic status, specifically, parental education and employment into account. Large surveys of secondary school students (Hooghe et al., 2010) showed that parental educational level (university) predicted positive views of support for gay rights. Similarly, Kosciw et al. (2009) found lower levels of adult educational attainment and district-level poverty both predicted hostile school climates for LGBTQ+ secondary school students.

Having close LGBTQ+ friends has been shown to positively affect attitudes toward this group and has increased peer ally intervention against heterosexism and cisgenderism in schools (see Heinze & Horn, 2009; Knepp, 2022; Poteat & Vecho, 2016). Therefore, we decided to control for whether participants had close LGBTQ+ -identifying friends at school, outside of school and LGBTQ+ -identifying family members (see also Flores, 2015).

Perceptions of how LGBTQ+ materials relate to curriculum at school was also included as a potential predictor given its salience in the literature as leading to more positive attitudes towards LGBTQ+ identifying persons and decreased LGBTQ+ student victimization (e.g., Goldfarb & Lieberman, 2021; Helmer, 2015; Snapp et al. 2015).

2. Method

2.1. Participants

A total of 270 Year 8 (aged 12–13), 9 (aged 13–14) and 10 (aged 14–15) students in 5 schools in England participated in our pen and paper survey in the spring of 2022 (one survey was excluded because the validity of the responses had to be questioned; 13 students did not finish filling out the survey). School characteristics are outlined in Table 1 and participant distribution ($n = 256$) regarding age and LGBTQ+ -identification, questioning or non-LGBTQ+ are shown in Table 2.

Accessing UK secondary schools for research on LGBTQ+ issues proved challenging: approximately 100 schools in southern England were invited to participate, with only six agreeing and one ultimately not surveying students. Reasons for non-participation were not systematically collected from all schools that chose not to participate. The five participating schools serve students aged 11–18 and are comparable in overall size but vary markedly in socioeconomic status (SES) and student demographics. For instance, free school meal eligibility, a standard SES proxy, ranged widely, as did proportions of students with English as an additional language, the latter was notably higher in Ash and Willow schools (see Table 1). Further SES indicators, including the Income Deprivation Affecting Children Index (IDACI) and Indices of Multiple Deprivation rankings, position Ash and Maple as relatively lower-SES schools (though mid-ranked nationally). Oak and Sycamore schools are estimated to be within the top 15% highest SES.

Table 1
Sociodemographic characteristics of the sample schools.

	Number of pupils on roll*	% females/ males	% of students with Special Educational Needs (SEN)	% with English as an additional language (EAL)	% claiming free school meals	IDACI score**	Index of Multiple Deprivation Rank***
Ash School	1150	51/49	9	23	26	0.17	15,500
Maple School	1050	51/49	12	9	15	0.16	14,300
Oak School	700	47/53	7	4	15	0.06	30,300
Sycamore School	1100	44/56	9	6	15	0.03	30,000
Willow School	1050	50/50	2	47	9	0.06	24,000
National average		50/50	11	17	28		

Notes. *The number of pupils on roll is rounded to the nearest 50. Data drawn from DfE performance tables https://www.compare-school-performance.service.gov.uk/ **The IDACI scores come from a government website – https://imd-by-postcode.opendatacommunities.org/imd/2019. This score represents the percentage of students living in deprivation, i.e. 0.17 would mean 17% of children in the area were categorized as deprived. ***The Index of Multiple Deprivation (IDACI) clusters areas of the country into small numbers of approximately 1500 people/650 households, and then ranks according to SES; a rank of 1 would be low SES, 33,755 is the highest. To maintain confidentiality, we rounded the ranking to the next hundreds.

Table 2
Crosstabulation: Characteristics of sample by school, year and LGBTQ+ identification.

		Year			LGBTQ+ identity or not				
		8	9	10	Non-LGBTQ+	Not sure	LGBTQ+	Missing*	Total
	Ash School	17	31	7	41	4	8	2	55
	Maple School	0	19	17	23	2	10	1	36
	Oak School	16	7	11	21	5	4	3	33
	Sycamore School	48	42	0	68	12	6	4	90
	Willow School	0	23	19	33	2	5	2	42
Total		81	122	54	186	25	33	12	256

Note. Schools were asked to survey a minimum of 60 Year 8–10 students. *12 students (4.7%) had missing answers for the LGBTQ+ -identification questions (gender or sexual identity) or chose the "I don't want to say" option on the sexual identity multiple-choice item. The inclusion of the "I don't want to say" option was required by the ethics committee that approved our questionnaire.

Additionally, Willow operates as a grammar school, selectively admitting academically-tracked students from age 11.

2.2. Measures

See the following Open Science Framework (OSF) link: https://osf.io/tbr7h/files/osfstorage for survey materials and SPSS files. Reverse-scoring is present in 40% of Likert-type items (10 of 25 items, see Appendix A1). This was employed in our study to balance positive/negative phrasing for young respondents and mitigate acquiescence bias, following standard practice (see Alvarado-Leiton et al., 2026).

2.2.1. Dependent variables

2.2.1.1. Personal LGBTQ+ -related views. This scale consisted of a total of nine items (1 = strongly disagree to 5 = strongly agree). Four were taken directly from the Transgender Attitudes and Beliefs Scale (TABS; Kanamori et al., 2017), sample item: "Transgender individuals should be treated with the same respect and dignity as any other person". Three additional items were adapted from this same scale, sample item: "I would feel uncomfortable working with a transgender person on a school project" (reversed). The following item was taken from the Essentialist Belief Scale (Haslam & Levy, 2006), "Sexual orientations are categories with clear and sharp boundaries: People are either homosexual or straight" (reversed) and a further was added, "It would not be a big deal for me if one of my friends came out as lesbian, gay or bisexual". Six of the nine items focused on gender identity and three on sexual identity, though all loaded on the same factor. Because these subscales yielded very similar results, and since they were highly correlated, they were combined here ($\alpha = 0.91$; $\omega = 0.91$)

2.2.1.2. School climate. Five items were generated by authors to access school climate (inspired by Payne & Smith, 2013; Rawlings, 2019; Stonewall, 2017): "LGBTQ+ students at my school receive physical abuse from peers (pushing, shoving, thrown objects, etc.)", "LGBTQ+ students at my school are called names by peers (name calling, derogatory comments, etc.)", "LGBTQ+ students at my school receive death threats from peers", "Students at my school make mean comments and jokes when talking about their LGBTQ+ peers", and "Students use the word 'gay' in a negative way at my school" (1 = strongly disagree to 5 = strongly agree; $\alpha = 0.87$; $\omega = 0.87$). For ease of discussion, this scale was reversed so that higher numbers reflect a more positive perception of school climate for LGBTQ+ students

2.2.1.3. Relationships with school peers. The item "Other students here like me the way I am" was taken from the Psychological Sense of School Membership Scale (or PSSM, Goodenow, 1993); others were adapted from the Social Connectedness Scale – Revised (SCS-R; Lee et al., 2001): "In general, I relate well to other students at this school," and the reversed items: "Even around the students I know at school, I don't feel that I really belong", "I feel distant from other students at school", "I don't really interact with anyone at this school" (1 = strongly disagree to 5 = strongly agree; $\alpha = 0.81$; $\omega = 0.81$)

2.2.2. Predictors

2.2.2.1. Curriculum integration. We generated two items to measure curriculum integration which clearly loaded together: "My teachers often integrate LGBT topics in the curriculum." "My teachers often integrate trans topics in the curriculum." (1 = *strongly disagree* to 5 = *strongly agree*; $r = 0.62$; Spearman-Brown coefficient 0.77)

2.2.2.2. Adults at school care about me. A total of four items made up this scale. One item was taken directly from Mayberry et al. (2009): "Generally, the adults in my school respect my opinion", An additional two items were adapted from a single item from Mayberry et al. (2009):

"Adults who work at my school care about me" and "Adults at my school care about how well I do at my school". One further item was taken from the Psychological Sense of School Membership (PSSM) scale (Goodenow, 1993): [item 9] "The teachers here respect me." (1 = strongly disagree to 5 = strongly agree; α = 0.83; ω = 0.83). For additional details see Appendix A1

2.2.2.3. LGBTQ+ identification. Using a multiple-choice item with an open-ended 'Other' response option, we inquired about various aspects of students' sexual and gender identity at a single timepoint. For purposes of describing sample participants in Table 2, we reported *cis*-gender heterosexual students (non-LGBTQ+) and students who identified as lesbian, gay, bisexual, queer, transgender, nonbinary or otherwise as a member of sexual or gender minority. In our regression analyses we contrasted students who identified their sexual identity as lesbian, gay or bisexual (LGB, n = 33); students who were not sure (questioning, n = 25); and students who described themselves as heterosexual (n = 186).[3] In terms of gender, we contrasted students based on whether they described themselves as male, female or nonbinary (n = 119, 107, and 15, respectively). Because there were only two individuals who identified as transgender, we were not able to include these individuals in the analysis. Because we also excluded one person who provided an "other" response to gender identity question, our analyses were based on 241 cases

2.2.2.4. Other sociodemographic variables. Students indicated their school year though a multiple-choice question (see materials: https://osf.io/tbr7h/files/osfstorage, in OSF). They also indicated the highest educational level obtained by each parent and their employment status in two seperate multiple-choice questions. These were dummy coded as at least one parent has a university degree or not, and at least one parent is employed or not, respectively. Students were asked if they were "Anglican, Catholic, other Christian, Muslim, Hindu, Sikh, Jewish, Other, please specify:" Anglican, Catholic, other Christian were dummy-coded into a new variable of "Christian" (or not), two separate religion variables were created for Muslim and Hindu responses.[4]

3. Results

3.1. Factor analyses

Principal axis factor analysis with Varimax rotation was conducted on the Likert scale items (see Appendix A1). The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was 0.84, and Bartlett's test of sphericity was significant, $\chi 2 = 2536.12$ (df = 300, $p < 0.001$, factors explaining 64.6% of variance), indicating that factor analysis was warranted. This analysis revealed a clear and separate factor structure for the Relationships with School Peers and Adults at School Care About Me items, notably regarding items taken from the Psychological Sense of School Membership (PSSM) scale (Goodenow, 1993), (see also previous sections 2.2.1.3. and 2.2.2.2. for reliability scale scores α / ω).

3.2. Descriptive analyses

Table 3 provides the zero-order correlations for the dependent and Adults at school care about me and Curriculum Integration variables. In general, our dependent variables were uncorrelated, with the exception of perceptions of school climate for LGBTQ+ students and reported relationship with peers. All three dependent variables (DVs) were correlated with whether students believed that there were adults at the school who cared about them.

Table 3
Zero-order correlations among the dependent variables (DVs) and Adults at school care about me and Curriculum integration predictors.

	1	2	3	4	*M*	(*SD*)
1. Personal LGBTQ+ views (DV)	–				3.81	0.86
2. School climate [R] (DV)	0.046	–			3.39	0.90
3. Relationships with school peers (DV)	0.027	0.292**	–		3.62	0.71
4. Adults at school care about me (predictor)	0.374**	0.245**	0.355**		3.54	0.76
5. Curriculum integration	0.094	0.238**	0.198**	0.241**	3.11	0.91

Note. **Significant at $p < 0.01$. [R] Reversed. n = 221–241.

3.3. Regression analyses

Preliminary examination revealed that the models reported here met the assumption of regression analysis. Similarly, analyses did not demonstrate a need for multilevel regression; nonetheless, schools (k = 5) were entered a dummy-coded predictors. We conducted three regression analyses: one for each of our three dependent variables (Personal views of LGBTQ+, Positive school climate, and Relationships with school peers). To ensure normality of residuals, a core assumption of linear models, we analysed the square of our school climate variable, which was reversed so that positive numbers coincided with positive perceptions. Across models we ensured that findings were not compromised by the presence of multicollinearity (all VIF < 3.36). Models are summarized in Table 4.

3.3.1. Regression findings by dependent variable

3.3.1.1. Personal views of the LGBTQ+ community. Compared to non-religious students, identifying as Muslim was linked to more negative LGBTQ+ views, b = -0.708, p = 0.002. A similar effect of identifying as Christian approached statistical significance, b = -0.242, p = 0.067, though identifying as Hindu did not, b = -0.202, p = 0.36. Males reported more negative views than females, b = -0.652, $p < 0.001$. Not surprisingly, students identifying as LGB had more positive views, b = 0.660, p = 0.016. Critically, students from households with at least one parent holding a university degree viewed members of the LGBTQ+ community more favourably than others, b = 0.239, p = 0.034. Interestingly, the students' perception that adults at school cared about them was a positive predictor of personal LGBTQ+ views, b = 0.374, $p < 0.001$, which did not vary based on whether they identified as male or non-binary, as neither interaction was significant, $p > 0.59$. Additional data exploration did not find that the effect of predictor variables was qualified by student gender identity or sexual orientation. That is, the inclusion interaction terms did not add to the explanatory power of our

[3] Twelve students who declined to describe their sexual or gender identity were reported separately. One additional student emerged routinely as an outlier and was therefore removed from the analyses.

[4] The religion question in our survey aligned with ONS religion categories (https://www.ons.gov.uk/census/census2021dictionary/variablesbytopic/ethnicgroupnationalidentitylanguageandreligionvariablescensus2021/religion); however, only four participants of 241 identified as Sikh (1.7%) and one as Jewish (0.4%) meaning that these religions could not be contemplated as separate predictors in our regression analyses.

Table 4
Regression models of students' Personal LGBTQ+ views, Positive school climate[2], and Relationships with school peers and (with interactions*).

	Personal views of LGBTQ+			Personal views of LGBTQ+ *			Positive school climate** (for LGBTQ+ students)			Positive school climate** (for LGBTQ+ students) *			Relationships with school peers			Relationships with school peers*		
	b	se	p	b	se	p	b	se	p	b	se	p	b	se	p	b	se	p
Intercept	3.402	(0.324)		3.403	(0.327)		13.362	(2.690)		13.034	(2.629)		4.007	(0.322)		4.009	(0.319)	
Sycamore School (Oak School ref.)	0.197	(0.169)	0.25	0.196	(0.171)	0.26	2.379	(1.411)	0.094	2.676	(1.385)	0.055	0.253	(0.166)	0.13	0.257	(0.165)	0.12
Willow School	0.125	(0.230)	0.59	0.104	(0.233)	0.66	2.479	(1.872)	0.19	3.263	(1.844)	0.079	0.274	(0.224)	0.22	0.355	(0.224)	0.12
Maple School	0.044	(0.222)	0.84	0.028	(0.227)	0.90	0.871	(1.821)	0.63	1.022	(1.795)	0.57	0.074	(0.217)	0.73	0.114	(0.217)	0.60
Ash School	−0.018	(0.192)	0.93	−0.021	(0.194)	0.92	0.789	(1.596)	0.62	1.195	(1.568)	0.45	0.164	(0.188)	0.39	0.176	(0.187)	0.35
Christian	−0.242	(0.131)	0.067	−0.235	(0.135)	0.085	−0.643	(1.060)	0.55	−0.659	(1.060)	0.54	−0.012	(0.127)	0.92	−0.042	(0.129)	0.75
Hindu	−0.202	(0.219)	0.36	−0.185	(0.223)	0.41	1.875	(1.802)	0.30	1.485	(1.777)	0.41	0.050	(0.218)	0.82	−0.014	(0.217)	0.95
Muslim	**−0.708**	**(0.228)**	**0.002**	**−0.691**	**(0.232)**	**0.003**	2.201	(1.784)	0.22	1.795	(1.755)	0.31	0.119	(0.216)	0.58	0.059	(0.215)	0.79
Immigrant	−0.024	(0.146)	0.87	−0.030	(0.148)	0.84	0.922	(1.152)	0.43	0.894	(1.131)	0.43	−0.087	(0.139)	0.53	−0.073	(0.138)	0.60
Year 9 (Year 8 ref.)	0.162	(0.127)	0.21	0.164	(0.128)	0.20	−1.821	(1.044)	0.083	−1.886	(1.017)	0.066	−0.170	(0.125)	0.18	−0.179	(0.124)	0.15
Year 10	0.136	(0.184)	0.46	0.161	(0.193)	0.41	−0.494	(1.515)	0.75	−0.968	(1.539)	0.53	−0.146	(0.182)	0.43	−0.235	(0.188)	0.21
LGBTQ+ topics integrated in the curriculum	0.095	(0.067)	0.16	0.095	(0.067)	0.16	0.237	(0.546)	0.66	0.306	(0.533)	0.57	−0.007	(0.066)	0.91	−0.007	(0.065)	0.92
At least one parent has a university degree	**0.239**	**(0.112)**	**0.034**	**0.237**	**(0.113)**	**0.037**	−0.587	(0.925)	0.53	−0.568	(0.901)	0.53	−0.072	(0.110)	0.51	−0.063	(0.109)	0.56
At least one employed parent	0.065	(0.206)	0.76	0.063	(0.208)	0.76	−0.802	(1.718)	0.64	−0.790	(1.673)	0.64	−0.150	(0.207)	0.47	−0.146	(0.204)	0.48
Male[⊗]	**−0.652**	**(0.126)**	**0<.001**	**−0.655**	**(0.127)**	**0<.001**	−0.996	(1.050)	0.35	−0.926	(1.024)	0.37	−0.132	(0.125)	0.29	−0.124	(0.124)	0.32
Nonbinary[⊗]	−0.232	(0.326)	0.48	−0.223	(0.329)	0.50	1.065	(2.627)	0.69	1.365	(2.570)	0.60	**−0.966**	**(0.317)**	**0.003**	**−0.966**	**(0.315)**	**0.003**
Questioning[▽]	0.388	(0.210)	0.067	0.384	(0.211)	0.071	−0.931	(1.752)	0.60	−0.733	(1.708)	0.67	−0.122	(0.210)	0.56	−0.112	(0.208)	0.59
LGB[▽]	**0.660**	**(0.270)**	**0.016**	**0.661**	**(0.272)**	**0.016**	**−6.689**	**(2.140)**	**0.002**	**−7.056**	**(2.087)**	**0<.001**	−0.102	(0.258)	0.69	−0.137	(0.255)	0.59
Male*questioning	0.329	(0.358)	0.36	0.329	(0.360)	0.36	−1.190	(2.850)	0.68	−1.403	(2.776)	0.61	−0.277	(0.342)	0.42	−0.281	(0.337)	0.41
Male*LGB	−0.531	(0.553)	0.34	−0.515	(0.557)	0.36	−0.715	(4.512)	0.87	−0.829	(4.395)	0.85	−0.954	(0.544)	0.082	−0.970	(0.538)	0.073
Close LGBTQ+ school friends	0.092	(0.119)	0.44	0.090	(0.120)	0.45	−0.128	(0.993)	0.90	−0.099	(0.968)	0.92	−0.006	(0.119)	0.96	0.003	(0.117)	0.98
Close LGBTQ+ other friends	0.006	(0.119)	0.96	0.010	(0.120)	0.93	**−2.293**	**(0.978)**	**0.020**	**−2.500**	**(0.955)**	**0.010**	0.043	(0.118)	0.71	0.028	(0.117)	0.81
Close LGBTQ+ family	−0.068	(0.122)	0.58	−0.069	(0.123)	0.58	1.511	(1.025)	0.14	1.739	(1.006)	0.086	−0.199	(0.122)	0.10	−0.192	(0.121)	0.12
Adults at school care about me	**0.374**	**(0.073)**	**0<.001**	**0.420**	**(0.104)**	**0<.001**	**1.646**	**(0.596)**	**0.006**	−0.212	(0.822)	0.80	**0.325**	**(0.072)**	**0<.001**	0.163	(0.101)	0.11
Adults/school interactions																		
Adults/school care about me*Male[⊗]				−0.073	(0.134)	0.59				**3.350**	**(1.070)**	**0.002**				**0.266**	**(0.130)**	**0.043**
Adults/school care about me*Nonbinary[⊗]				−0.171	(0.364)	0.64				3.260	(2.906)	0.264				0.603	(0.356)	0.093
R^2		0.529			0.530			0.327			0.371			0.329			0.355	

Note. Coefficients that were statistically significant at $p \leq 0.05$ appear in boldface. [⊗] Female is the reference group. [▽] Non-LGB students are the reference group. Highest parental educational level and Adults care about me have been centered. Because of the small number of students who identified as transgender (n = 2) we eliminated transgender as a predictor; nevertheless, we repeated the present analyses with these cases; results were consistent with those reported here. Additional analyses focused on whether the statistical effects of feeling cared for by adults were qualified by both gender and sexual orientation; however, sexual orientation results are not reported here as none of the effects was statistically significant. We used the square of the reversed School climate variables to remedy a skewed distribution of this dependent variable. Because we had excessive missings on the two parent education variables: At least one parent has a university degree (47 missings) and At least one employed parent (15 missings) we repeated all regression analyses without these two predictor variables; findings remained essentially unchanged with the exception of the previously significant interaction between the DV Relationships with school peers and gender, which was reduced to a statistical trend (see <https://osf.io/tbr7h/files/osfstorage/699e0b600716408c82ee2dc7 in OSF >).

model, $\Delta R^2 < 0.001$, $p = 0.80$

3.3.1.2. Positive school climate. Sexual orientation as LGB was strongly associated with a more negative view of school climate, $b = -6.689$, $p = 0.002$. Critically, whether students reported that adults in school cared about them strongly predicted their perceptions of a positive climate for sexual and gender minorities at their school, $b = 1.646$, $p = 0.006$. Furthermore, students who reported having close LGBTQ+ friends outside of school were associated with a more negative view of school climate, $b = -2.293$, $p = 0.020$

However, the inclusion of interaction terms into the model accounted for additional variance, $\Delta R^2 = 0.044$, $F(2, 147) = 5.086$, $p = 0.007$. It illustrates that the effect of adults being perceived as caring about students was only present for males, simple effect $b = 3.138$, $p < 0.001$, but not for females, simple effect $b = -0.212$, $p = 0.80$. For individuals identifying as nonbinary, the size of the simple effect coefficient appeared to be substantial, $b = 3.048$, but did not approach statistical significance, $p = 0.28$.

3.3.1.3. Relationships with school peers. In comparison to the other two models, few variables predicted relationships with school peers. Identifying as non-binary though predicted a negative perception of ones' relationship with school peers, $b = -0.966$, $p = 0.003$. Perception that adults at school cared about them was a predictor of positive relations with school peers, $b = 0.325$, $p < 0.001$. The inclusion of interactions explained a small amount of additional variance ($\Delta R^2 = 0.026$, $F(2, 147) = 3.017$, $p = 0.052$; see Table 4, right-most column). It revealed that gender qualified this conclusion for males vs. females, $b = 0.266$, $p = 0.043$, but not for non-binary individuals although this approached statistical significance, $b = 0.603$, $p = 0.093$. Whereas females' perceptions of the adults caring about them was not related to their relationships with school peers, $b = 0.163$, $p = 0.11$; however, it was for males, simple effect $b = 0.429$, $p < 0.001$, and for nonbinary students, simple effect $b = 0.765$, $p = .028$

3.4. Mediation analyses

An additional set of analyses sought to understand why LGB students perceived the school climate to be much less positive than was the case for non-LGB students. Using (Hayes, 2025; Model 4) PROCESS Macro Version 5.0 for SPSS we carried out a mediation analysis in which we tested to what extent the difference between LGB and non-LGB students in the perception of school climate could be accounted for by differences in relationships with peers. Our mediation analysis used 20,000 bootstrapping resamples to produce 95% confidence intervals. The analysis also controlled for grade-level (Year 8, 9 or 10), reported religion (non-religious, Christian, Muslim or Hindu), demographic background (parental employment), as well as sexual identity (questioning, nonbinary) and attitudinal covariates (personal views towards members of the LGBTQ+ community).

This analysis revealed that students reported relationships with their school peers partially mediated LGB students' assessment of their School Climate, indirect effect $ab = 0.69$, 95% CI [0.043, 1.670] (partially standardized 0.14 95% [.01, 0.31]), accounting for 8.5% of the total effect. The direct effect of LGB identification on school climate squared was also reliable, effect = 7.418, 95% CI [4.740, 10.095].[5] The variables in this model explained 28.5% of the variance in school climate perceptions.

Although the relationships with school peers accounted for why LGB and non-LGB students experienced school climate differently, there were no statistically meaningful differences between LGB and non-LGB on this variable (see also McCormack, 2011; White et al., 2018). Though not a precondition for the validity of our mediation findings, this pattern points to a somewhat subtle process which is not easily discernible to the naked eye.[6]

Contrary to what we expected, given regression model results, a parallel mediation analysis which treated the Adults at school care about me variable as mediator of the effect of LGB status on school climate, did not show a reliable indirect effect.

4. Discussion

This study examined the predictive and mediating roles of peer and adult connectedness, given the mental wellbeing concerns about LGBTQ+ students (e.g., Amos et al., 2020; McDermott et al., 2025; Stonewall, 2017) and their relative lack of quantitative exploration in UK secondary contexts. We found that student-reported meaningful relationships with school adults—when controlling for SES, religion, gender, immigrant background, grade, LGBTQ+ friends/family, and curriculum integration—predicted (a) more positive attitudes toward the LGBTQ+ community, (b) more favorable perceptions of school climate for LGBTQ+ students, and (c) stronger peer relationships. LGB students reported more negative perceptions of school climate for LGBTQ+ peers than non-LGB students, while nonbinary students reported poorer peer relationships overall. Mediation analyses confirmed that peer relationships partially mediated LGB/non-LGB differences in climate perceptions, whereas adult relationships did not.

As expected, based on the literature reviewed, we confirmed that attitudes toward queer people are less positive among certain subgroups of individuals at school, including students with lower socioeconomic status, heterosexual males and religion (Camodeca et al., 2018; Hooghe et al., 2010, Roggemans et al., 2015). Muslim identification significantly predicted negative attitudes (e.g., Sanjakdar, 2011), with Christian affiliation not being a reliable predictor.

Unlike other studies (e.g., Weber & Gredig, 2018), in our analyses, student immigrant background does not, in itself, predict attitudes toward LGBTQ+ groups or any of our other dependent variables, although this may be explained by time in country (see Wuestenenk et al., 2022), generation status, acculturation processes, or the role of contact with LGBTQ+ people, for which we did not control. Also, in contrast to other studies (e.g., Knepp, 2022), having LGBTQ+ school friends did not predict more positive general attitudes toward the LGBTQ+ community. Nonetheless, having LGBTQ+ friends outside of one's school did negatively predict perceptions of school climate for LGBTQ+ peers. One might speculate that this invited student comparisons between different school contexts or perhaps students who seek out friendships with LGBTQ+ students outside of school are more likely to notice LGBTQ+ discrimination, and be sensitive to this, in their own schools. Another possible explanation could be that LGBTQ+ -identifying students may be more likely to seek out friendships external to their own school when they do not perceive their own schools as positive or welcoming environments. Both of these hypotheses merit investigation in future qualitative studies.

Contrary to previous findings (e.g., Goldfarb & Lieberman, 2021; Helmer, 2015), perceptions of how LGBTQ+ materials relate to curriculum at school did not predict more positive attitudes towards LGBTQ+ -identifying persons, nor did it affect perceptions of school climate. As

[5] As mentioned previously, we used the square of the reversed School Climate to remedy a skewed distribution of this dependent variable.

[6] Note that a test of mediation does not hinge on a significant association between the predictor and the mediator, or the association between the predictor to the outcome variable being statistically significant ahead of the testing of a mediational model (Hayes, 2009). Rather, the statistical significance of an indirect path is exclusively determined by the sampling distribution of the product a x b, where a is the coefficient when the mediator is regressed on the predictor, and b is the coefficient the outcome variable is regressed on the mediator.

our items were somewhat general, it is possible more detailed items might have been able to capture more specific effects of the inclusion of LGBTQ+ matters in the school curriculum or "dosage" effects (i.e., the intensity, quality, or fidelity of LGBTQ+ -related content).

More importantly, results documented that LGB students have a much more negative perception of their school's climate than non-LGB students, in line with Atteberry-Ash (2019) for example. We employed a mediation analysis to elucidate the causal factors in explaining this difference in the perception of school climate. Our mediation results are consistent with the idea that the perception of overall school climate for LGB others is shaped at least in part by whether LGB students themselves have a positive relationship with their peers. Nevertheless, although Adults at school care about me proved to be a significant predictor of all dependent variables, including school climate, it did not mediate LGBTQ+ perceptions of school climate. This suggests that it was not causally responsible for why LGB and non-LGB students viewed their own school's climate differently. This, however, can be conceived of as encouraging: The fact that Adults at school care about me does not mediate the different perceptions of LGB and non-LGB students of school climate means that differential adult attention does not exacerbate how LGB students feel about their school environment.

To the contrary, adults at school caring about students was related to a range of positive outcomes. This variable predicted more positive views of the LGBTQ+ community, perceptions of positive school climate for LGBTQ+ students and relationships with school peers (the latter two, especially for males). That adult relationships in school are an important factor in LGBTQ+ student wellbeing is in general agreement with the literature (see Marraccini et al., 2022; Seelman et al., 2015). This variable seems to refer to a general perception of school adults, but it is not clear whether this means that students feel that most or all adults care about them (or not), or whether there is only one adult who cares about the student in a way that plays an outsized role in the student's life at school (see Harris et al., 2025; De Pedro et al., 2017). Future research might clarify what contributes to this positive perception of adult support at school.

An interesting observation in our research was that, in line with Parodi et al. (2022), nonbinary students seem to have a much more negative perception of their relationships with school peers. These individuals face unique challenges in feeling accepted in school peer communities that perhaps do not fully recognizing their nonbinary identification (see Harris et al., 2025; Parodi et al., 2022, see also Atteberry-Ash, 2019).

Being cared for by teachers (adults) might be most critical for those who see themselves as marginalized relative to the mainstream student population. Notably, this is true for males in their perceptions of LGBTQ+ school climate and their own relations with peers. According to educational research (e.g., McDaniel, 2012), males are much more socially fragile than females and much more subject to social circumstances like an absent father or other social instability at home. More research is needed to understand this phenomenon, especially in regard to our findings in how this might relate to their relationships with peers and adults in schools and attitudes toward members of the LGBTQ+ community.

McDermott et al. (2024) demonstrate that early trusting relationships with service staff, peers, and other significant adults are crucial in supporting LGBTQ+ youth wellbeing. Importantly, their findings suggest that support is most effective when young people can relate to those providing it, for example through shared or visible LGBTQ+ identities, and when services actively facilitate peer connections. This perspective may help explain why a general perception that the Adults at School Care About Me Scale predicts positive outcomes in our study, even if it does not mediate differences between LGB and non-LGB students' perceptions of school climate. Adult support may function less as a uniform institutional feature and more as a relational resource, unevenly experienced depending on trust, identification, and opportunities for meaningful connection.

Study results also challenge the unidimensionality of Goodenow's (1993) Psychological Sense of School Membership (PSSM) scale by revealing distinct underlying factor structures with differential implications for LGBTQ+ students' experiences for adult- and peer-focused items. This separation aligns with prior critiques highlighting that such items often load on separate factors rather than a single construct (see Parodi et al., 2022, for a review). Our findings thus support such calls to refine the PSSM for greater nuance in relational dynamics within schools and present a viable solution (see Appendix A1).

4.1. Limitations

Our findings must be interpreted while considering study limitations. Firstly, LGBTQ+ youth constitute a diverse group, and school experiences are shaped by other intersecting social identities beyond religion and SES that have not been explored here, like race or disability (e.g., Atteberry-Ash, 2019; Morgan et al., 2025; Woodhead et al., 2025). It is also important to acknowledge the unique stressors and traumatic events of transgender students are evident in the literature (e.g., Atteberry-Ash, 2019; Källström at el., 2022), however, our sample included few students who identified as transgender ($n = 2$), not allowing us to specifically analyse this group as a subset. Also, the data were derived from a cross-sectional survey, which prevents us from drawing any firm conclusions about temporality and causality. The reader is reminded that our mediation analyses allowed us to examine whether causal hypotheses are consistent with the data, and which ones are not. However, even when we found some causal hypotheses supported in our mediation analyses, this does not imply that we have identified all causal factors that might be at play. Although our regression and mediation modeling strategies follow common practice in school-based survey research, the number of covariates relative to sample size may attenuate power and increase the risk of unstable estimates. Therefore, replication studies with larger samples are needed.

Furthermore, sexual orientation was measured at one moment in time among young adolescents, a period when identity development can be especially fluid. The relatively large proportion of students selecting "unsure" in our survey likely reflects this, and it is important to note that cross-sectional data cannot distinguish between developmental uncertainty, non-disclosure, and genuine questioning or fluid identities (see Galupo et al., 2014; Klein et al., 1985). Finally, as mentioned before, more detailed Curriculum integration measures might have captured this variable more effectively, which is a goal for future studies.

4.2. Practical and research implications

Despite limitations, our study substantiates, as some others do (e.g., Kuhlemeier et al., 2023; see also Marraccini et al., 2022), the strong predictive role of adult support for the general wellbeing of LGBTQ+ and non-LGBTQ+ students, thus underscoring the need to study the effectiveness and feasibility mentor training and use of the Adults Care About Me Scale, proposed here, to set benchmarks for monitoring interventions that focus on professional development for teachers and staff in mentoring, which may be especially valuable in cultivating an inclusive climate (see Langarita, et al., 2024). Longitudinal RCTs/EMA studies could be designed to this end to advance the field beyond standard tracking. Such studies should determine if there are effects of meaningful adult support in schools as a potential protective factor, ideally adult support that is multitiered and diverse (Seelman et al., 2015; Weinberg & McGrory Cooper, 2023). Thus, future research should evaluate whether broad support networks—comprising caring, connected teachers and staff—can reduce discrimination against LGBTQ+ youth and improve school experiences for both LGBTQ+ and other students.

Furthermore, this study highlights disparities in perceptions of school climate among LGB students, and reports of more negative peer relationships among nonbinary students; therefore, care to see that these

students receive adult mentoring and support may be especially crucial. These negative experiences call for explicit recognition of gender and sexual orientation diversity when contemplating school policies, teacher training, and anti-bullying measures. The prioritization of oversamples from nonbinary and other gender-minority groups, in the studies proposed in the previous paragraph, would be necessary to ensure robust representation from a population, that, based on our data here (and that of other studies, e.g., Bower-Brown et al., 2023 [UK-based]; Parodi et al., 2022), seems especially disadvantaged regarding peer relations in schools.

Future studies should also consider Adults care about me and Relationships with peers as separate variables (i.e., not together as a school belonging variable), given that our study shows these are distinct factors (see, for example, Table A1 in the Appendix).

5. Conclusion

Schools play a crucial role in public mental health prevention and early intervention, particularly for sexual and gender minority students, who should be a priority for targeted support (Morgan et al., 2024). Today, LGBTQ+ students in schools have a level of visibility that was absent two decades ago, especially regarding gender minority students such as those who identify as transgender or nonbinary (Payne & Smith 2013; Neary 2021). All students may be faced with school realities where peer and staff are visibly out, and where some staff may intend to create more inclusive environments. Greater exposure can increase more favourable attitudes, but it can also sharpen and highlight more negative ones. Improved understanding of the school contexts that LGBTQ+ and non-LGBTQ+ youth inhabit, and the factors that impact their experiences, and may improve them, such as meaningful relationships with adults, might aid us in finding ways to improve these experiences and, therefore, potential quality of these students' lives.

This is especially important given the contemporary context for UK LGBTQ+ youth, especially those who are transgender or nonbinary. Current policy under the Labour government is continuing trends set by the previous Conservative administration. For example, trans youngsters in the UK have been denied access to puberty blockers, based on the outcomes of the Cass Review (Cass, 2024) despite medical evidence existing of the benefits of such gender affirming care (Herrera Jerez et al., 2024). In addition, new RSE guidelines (DfE, 2025) forbid teachers from teaching that people have a 'gender identity', claiming this is disputed. The DfE (2026) has also stared a consultation on new safeguarding guidance. The fact that 'gender questioning' (rather than transgender) children are included in a document about safeguarding is a notable repositioning regarding such children. The document also explicitly states "schools must not allow pupils into toilets, changing rooms, or boarding or residential accommodation designated for the opposite sex, with no exceptions" (DfE, 2026, p. 69). It is clear that many LGBTQ+ students do need additional levels of support in navigating their identity, yet the current policy context is making this harder for schools to address this.

Nevertheless, based on the results of this arguably preliminary study, and given the potential dire consequences that these policy modifications could have on some LGBTQ+ youth in schools, we recommend future research designed around DfE-aligned interventions that aim to strengthen students' connections with supportive staff, including structured "trusted adult" mentor training and implementation of the Adults Care About Me scale developed in this study as a benchmarking tool. This tool could be implemented in monitoring inclusive support in line with the UK Equality Act for *all* students. In addition to embedding these practices within whole-school policies and staff development, schools and policymakers in the UK could routinely use such measures to track progress over time and identify groups of students who remain least well-served.

Given the limited generalizability of a five-school sample, future research should be conducted across a larger and more diverse range of schools and regions, ideally using longitudinal designs that can test directionality, sustainability, and scalability of adult-support-focused interventions. To ensure that such work reflects the heterogeneity of LGBTQ+ youth in the UK, subsequent studies should incorporate an explicit intersectional lens and recruit sufficient numbers of transgender, nonbinary and other gender-diverse students, as well as youth at the intersections of sexuality, gender, ethnicity, race, disability, faith, and lower socioeconomic status.

6. Ethics

This project was approved by the Institute of Education at the University of Reading's Ethics Committee, approval date: November 5th, 2021.

Funding

Data gathering for this project was funded by the Society for the Psychological Study of Social Issues "Grants-in-Aid" program. Final revisions of this article were supported by the Spanish Ministry of Science and Innovation (MICINN) within project PID2023-148079NB-I00.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

The authors would like to thank the anonymous reviewers of the original submitted manuscript for their detailed reading of the text and helpful feedback.

Appendix A

Table A1
Principal axis factor analysis with Varimax rotation of main variables.

Variable names	Items	Factor				
		1	2	3	4	5
Personal views of LGBTQ+	F11. I would be comfortable being in a group of LGB individuals.	**0.870**	−0.029	0.022	0.065	0.032
	F4. I would be comfortable being in a group of transgender individuals.	**0.811**	0.002	0.029	0.039	−0.009
	F10. Although most of humanity is male or female, there are also identities in between that should be recognized.	**0.777**	0.060	−0.052	0.110	0.066

(*continued on next page*)

Table A1 (*continued*)

Variable names	Items	Factor				
		1	2	3	4	5
	F8. Humanity is only male or female; there is nothing in between.[R]	**−0.757**	−0.052	0.017	−0.132	−0.067
	F6. Transgender individuals should be treated with the same respect and dignity as any other person.	**0.726**	−0.149	−0.043	0.091	0.007
	F9. I would feel uncomfortable working with a transgender person on a school project.[R]	**−0.693**	0.091	0.026	−0.012	−0.031
	F7. I would find it highly objectionable to see a transgender person being teased or mistreated.	**0.692**	−0.038	0.002	0.122	−0.056
	F1. It would not be a big deal for me if one of my friends came out as lesbian, gay or bisexual.	**0.639**	0.029	−0.025	0.193	−0.019
	F3. Sexual orientations are categories with clear and sharp boundaries: People are either homosexual or straight. [R]	**−0.589**	−0.012	−0.022	−0.130	−0.110
Positive school climate (for LGBTQ+ students)	C5. LGBTQ+ students at my school are called names by peers (name calling, derogatory comments, etc.). [R]	−0.039	**0.869**	0.087	−0.112	−0.052
	C9. Students use the word 'gay' in a negative way at my school. [R]	0.040	**0.741**	0.025	−0.080	−0.034
	C4. LGBTQ+ students at my school receive physical abuse from peers (pushing, shoving, thrown objects, etc.). [R]	−0.025	**0.734**	0.193	−0.142	−0.074
	C3. Students at my school make mean comments and jokes when talking about their LGBTQ+ peers. [R]	0.032	**0.725**	0.164	−0.093	−0.053
	C6. LGBTQ+ students at my school receive death threats from peers. [R]	−0.132	**0.576**	0.177	−0.204	−0.141
Relationships with school peers	B5. I feel distant from other students at school.[R]	0.054	0.233	**0.777**	−0.005	−0.046
	B4. Even around the students I know at school, I don't feel that I really belong. [R]	−0.042	0.207	**0.728**	−0.057	−0.063
	B6. I don't really interact with anyone at this school.[R]	−0.023	−0.021	**0.656**	−0.179	−0.094
	B1. In general, I relate well to other students at this school.	0.049	−0.067	**−0.630**	0.126	0.015
	B7. Other students here like me the way I am.	−0.057	−0.139	**−0.595**	0.249	0.073
Adults at school care about me	A4. Adults who work at my school care about me.	0.200	−0.124	−0.200	**0.744**	0.034
	A8. Generally, the adults in my school respect my opinion.	0.132	−0.258	−0.270	**0.653**	0.107
	A13. The teachers here respect me.	0.284	−0.181	−0.268	**0.620**	0.080
	A6. Adults at my school care about how well I do at my school.	0.164	−0.124	−0.047	**0.600**	0.071
Curriculum integration	E1. My teachers often integrate LGBT topics in the curriculum.	0.073	−0.066	−0.108	0.081	**0.962**
	E2. My teachers often integrate trans topics in the curriculum.	0.051	−0.196	−0.125	0.121	**0.612**

Note. Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser normalization. Rotation converged in 5 iterations. The Kaiser–Meyer–Olkin (KMO) value was 0.84 and Bartlett's test of sphericity: $\chi 2 = 2536.12$ ($df = 300$, $p < 0.001$, explains 64.6% of variance).
[R] Reversed item. Coefficients with values under 0.300 are shown in light grey. The combination of letter and number at the beginning of each item refers to the section code and item number in our online materials (survey and dataset), which can be found here: https://osf.io/tbr7h/files/osfstorage.

Data availability

We have published our survey, data, syntax and other relevant materials through OSF https://osf.io/tbr7h/.

References

Alvarado-Leiton, F., Lee, S., & Davis, R. E. (2026). Controlling acquiescent response style through negated versus polar opposite items: Design considerations for balancing measurement scales. *Journal of Survey Statistics and Methodology, smaf022*. https://doi.org/10.1093/jssam/smaf022

Amos, R., Manalastas, E. J., White, R., Bos, H., & Patalay, P. (2020). Mental health, social adversity, and health-related outcomes in sexual minority adolescents: A contemporary national cohort study. *The Lancet Child & Adolescent Health, 4*(1), 36–45. https://doi.org/10.1016/S2352-4642(19)30339-6

Ancheta, A. J., Bruzzese, J. M., & Hughes, T. L. (2021). The impact of positive school climate on suicidality and mental health among LGBTQ adolescents: A systematic review. *The Journal of School Nursing, 37*(2), 75–86. https://doi.org/10.1177/1059840520970847

Aragon, S. R., Poteat, V. P., Espelage, D. L., & Koenig, B. W. (2014). The influence of peer victimization on educational outcomes for LGBTQ and Non-LGBTQ high school students. *Journal of LGBT Youth, 11*(1), 1–19. https://doi.org/10.1080/19361653.2014.840761

Atteberry-Ash, B., Kattari, S. K., Speer, S. R., Guz, S., & Kattari, L. (2019). School safety experiences of high school youth across sexual orientation and gender identity. *Children and Youth Services Review, 104*, Article 104403. https://doi.org/10.1016/j.childyouth.2019.104403

Badshah, N. (2022). Attorney general says schools do not have to accommodate children's gender wishes. *The Guardian, 27*. https://www.theguardian.com/society/2022/may/27/attorney-general-says-schools-do-not-have-to-accommodate-childrens-gender-wishes.

Bandini, N. (4 May 2025). *Labour promised trans people dignity. I am not sure it knows the meaning of the word.* The Guardian. https://www.theguardian.com/commentisfree/2025/may/04/labour-trans-people-dignity.

Bower-Brown, S., Zadeh, S., & Jadva, V. (2023). Binary-trans, non-binary and gender-questioning adolescents' experiences in UK schools. *Journal of LGBT Youth, 20*(1), 74–92. https://doi.org/10.1080/19361653.2021.1873215

Bradlow, J., & Guasp, A. (Eds.). (2020). Shut out: The experiences of LGBT young people not in education, training or work. *Stonewall.* https://www.stonewall.org.uk/system/files/shut_out_2020.pdf.

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology, Vol. 1: Theoretical models of Human Development* (6th ed., pp. 793–828). Wiley. Doi: 10.1002/9780470147658.chpsy0114.

Burish, E., Wilcox, M. M., Pollard, E. M., & Sims, K. N. (2023). Differentiating protective factors for transgender individuals who experience suicidality: The role of optimism as a mediator. *Clinical Psychology & Psychotherapy, 30*(3), 702–713. https://doi.org/10.1002/cpp.2833

Camodeca, M., Baiocco, R., & Posa, O. (2018). Homophobic bullying and victimization among adolescents: The role of prejudice, moral disengagement, and sexual orientation. *European Journal of Developmental Psychology, 16*(5), 503–521. https://doi.org/10.1080/17405629.2018.146669

Cass, H. (2024). The Cass Review, final report: independent review of gender identity services for children and young people. https://cass.independent-review.uk/wp-content/uploads/2024/04/CassReview_Final.pdf.

Corliss, H. L., Belzer, M., Forbes, C., & Wilson, E. C. (2007). An evaluation of service utilization among male to female transgender youth: qualitative study of a clinic-based sample. *Journal of LGBT Health Research, 3*(2), 49–61.

Craig, S. L., McInroy, L. B., & Austin, A. (2018). "Someone to have my back": Exploring the needs of racially and ethnically diverse lesbian, gay, bisexual, and transgender high school students. *Children & Schools, 40*(4), 231–239. https://doi.org/10.1093/cs/cdy016

Day, J. K., Snapp, S. D., & Russell, S. T. (2016). Supportive. Not punitive. Practices reduce homophobic bullying and improve school connectedness. *Psychology of Sexual Orientation and Gender Diversity, 3*(4), 416–425. https://doi.org/10.1037/sgd0000195

De Pedro, K. T., Esqueda, M. C., & Gilreath, T. D. (2017). School protective factors and substance use among lesbian, gay, and bisexual adolescents in California public schools. *LGBT Health, 4*(3), 210–216. https://doi.org/10.1089/lgbt.2016.013

De Pedro, K. T., Shim-Pelayo, H., & Bishop, C. (2019). Exploring physical, nonphysical, and discrimination-based victimization among transgender youth in California public schools. *International Journal of Bullying Prevention, 1*, 218–226. https://doi.org/10.1007/s42380-019-00016-8

DfE (2021, 2025). Statutory guidance on relationships education, relationships and sex education (RSE) and health education [includes original and latest update: 19 December 2025]. https://www.gov.uk/government/publications/relationships-education-relationships-and-sex-education-rse-and-health-education.

DfE (2026). Keeping children safe in education 2026 Statutory guidance for schools and colleges. Draft for consultation 12 February 2026. https://consult.education.gov.uk/independent-education-and-school-safeguarding-division/keeping-children-safe-in-education-2026-revisions/supporting_documents/keeping_children_safe_in_education_2026_draft_for_consultationpdf-1.

Dragioti, E., Radua, J., Solmi, M., Arango, C., Oliver, D., Cortese, S., & Fusar-Poli, P. (2022). Global population attributable fraction of potentially modifiable risk factors for mental disorders: A meta-umbrella systematic review. *Molecular Psychiatry, 27*(8), 3510–3519. https://doi.org/10.1038/s41380-022-01586-8

Dunlap, A. (2016). Changes in coming out milestones across five age cohorts. *Journal of Gay & Lesbian Social Services, 28*(1), 20–38. https://doi.org/10.1080/10538720.2016.1124351

Eisenberg, M. E., Gower, A. L., Rider, G. N., McMorris, B. J., & Coleman, E. (2019). At the intersection of sexual orientation and gender identity: Variations in emotional distress and bullying experience in a large population-based sample of US adolescents. *Journal of LGBT Youth, 16*(3), 235–254. https://doi.org/10.1080/19361653.2019.1567435

Fish, J. N. (2020). Future directions in understanding and addressing mental health among LGBTQ youth. *Journal of Clinical Child & Adolescent Psychology, 49*(6), 943–956. https://doi.org/10.1080/15374416.2020.1815207

Flores, A. R. (2015). Attitudes toward transgender rights: Perceived knowledge and secondary interpersonal contact. *Politics, Groups, and Identities, 3*(3), 398–416. https://doi.org/10.1080/21565503.2015.1050414

Galupo, M. P., Mitchell, R. C., Grynkiewicz, A. L., & Davis, K. S. (2014). Sexual minority reflections on the kinsey scale and the klein sexual orientation grid: Conceptualization and measurement. *Journal of Bisexuality, 14*(3–4), 404–432. https://doi.org/10.1080/15299716.2014.929553

Goldfarb, E. S., & Lieberman, L. D. (2021). Three decades of research: The case for comprehensive sex education. *Journal of Adolescent Health, 68*(1), 13–27. https://doi.org/10.1016/j.jadohealth.2020.07.036

Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools, 30*(1), 79–90. https://doi.org/10.1002/1520-6807(199301)30:1<79::AID-PITS2310300113>3.0.CO;2-X

Gower, A. L., Rider, G. N., Brown, C., McMorris, B. J., Coleman, E., Taliaferro, L. A., & Eisenberg, M. E. (2018). Supporting transgender and gender diverse youth: Protection against emotional distress and substance use. *American Journal of Preventive Medicine, 55*(6), 787–794. https://doi.org/10.1016/j.amepre.2018.06.030

Haas, A. P., Eliason, M., Mays, V. M., Mathy, R. M., Cochran, S. D., D'Augelli, A. R., & Clayton, P. J. (2010). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: Review and recommendations. *Journal of Homosexuality, 58*(1), 10–51. https://doi.org/10.1080/00918369.2011.534038

Harris, R., Wilson-Daily, A. E., & Fuller, G. (2022). I just want to feel like I'm part of everyone else': how schools unintentionally contribute to the isolation of students who identify as LGBT+. *Cambridge Journal of Education, 52*(2), 155–173.

Harris, R., Wilson-Daily, A. E., Kemmelmeier, M., & Copsey-Blake, M. (2025). You're just not real". LGBTQ+ youth and the struggle for identity in school. *Educational Review, 77*(4), 1085–1104.

Haslam, N., & Levy, S. R. (2006). Essentialist beliefs about homosexuality: Structure and implications for prejudice. *Personality and Social Psychology Bulletin, 32*(4), 471–485.

Hatchel, T., Espelage, D. L., & Huang, Y. (2018). Sexual harassment victimization, school belonging, and depressive symptoms among LGBTQ adolescents: Temporal insights. *American Journal of Orthopsychiatry, 88*(4), 422–430. https://pubmed.ncbi.nlm.nih.gov/28617003/.

Hatzenbuehler, M. L., & Keyes, K. M. (2013). Inclusive anti-bullying policies and reduced risk of suicide attempts in lesbian and gay youth. *Journal of Adolescent Health, 53*(1), S21–S26.

Hayes, A. F. (2009). Beyond baron and kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408–420. https://doi.org/10.1080/03637750903310360

Hayes, A. F. (2025). The PROCESS macro for SPSS, SAS, and R, version 5.0. https://processmacro.org/version-history.html.

Heinze, J. E., & Horn, S. S. (2009). Intergroup contact and beliefs about homosexuality in adolescence. *Journal of Youth and Adolescence, 38*, 937–951. https://doi.org/10.1007/s10964-009-9408-x

Helmer, K. (2015). "Everyone needs a class like this": High school students' perspectives on a gay and lesbian literature course. *The Educational Forum, 79*(4), 408–420. https://doi.org/10.1080/00131725.2015.1068421

Herrera Jerez, M. J., Castro-Peraza, M. E., Delgado Morales, N. M., & Arias Rodriguez, A. (2024). Use of hormone blockers in transgender teenagers: A scoping review. *Nursing Reports, 14*(4), 4109–4118. https://doi.org/10.3390/nursrep14040299

Hobaica, S., Kwon, P., Reiter, S. R., Aguilar-Bonnette, A., Scott, W. D., Wessel, A., & Strand, P. S. (2021). Bullying in schools and LGBTQ+ youth mental health: Relations with voting for Trump. *Analyses of Social Issues and Public Policy, 21*(1), 960–979. https://doi.org/10.1111/asap.12258

Hooghe, M., Claes, E., Harell, A., Quintelier, E., & Dejaeghere, Y. (2010). Anti-gay sentiment among adolescents in Belgium and Canada: A comparative investigation into the role of gender and religion. *Journal of Homosexuality, 57*(3), 384–400. https://doi.org/10.1080/00918360903543071

ILGA-Europe (2025). Rainbow map. https://rainbowmap.ilga-europe.org/ (Accessed: 15 January 2026).

Johnson, B. (2024). Exploring the impact of panoptic heteronormativity on UK primary teachers advocating for LGBTQ+ inclusive education. *Education, Citizenship and Social Justice, 19*(2), 202–217. https://doi.org/10.1177/17461979231151615

Källström, M., Nousiainen, N., Jern, P., Nickull, S., & Gunst, A. (2022). Mental health among sexual and gender minorities: A finnish population-based study of anxiety and depression discrepancies between individuals of diverse sexual orientations and gender minorities and the majority population. *PLoS One1, 17*(11), Article e0276550. https://doi.org/10.1371/journal.pone.0276550

Kanamori, Y., Cornelius-White, J. H., Pegors, T. K., Daniel, T., & Hulgus, J. (2017). Development and validation of the transgender attitudes and beliefs scale. *Archives of Sexual Behavior, 46*, 1503–1515. https://doi.org/10.1007/s10508-016-0840-1

Klein, F., Sepekoff, B., & Wolf, T. J. (1985). Sexual orientation: A multi-variable dynamic process. *Journal of Homosexuality, 11*(1–2), 35–49. https://doi.org/10.1300/J082v11n01_04

Knepp, M. M. (2022). Closeness of relationship to LGBTQ individuals is associated with increases in ally identity and behavior. *Journal of LGBT Youth, 19*(2), 135–151. https://doi.org/10.1080/19361653.2020.1761924

Kosciw, J. G., Greytak, E. A., & Diaz, E. M. (2009). Who, what, where, when, and why: Demographic and ecological factors contributing to hostile school climate for lesbian, gay, bisexual, and transgender youth. *Journal of Youth and Adolescence, 38*(7), 976–988. https://doi.org/10.1007/s10964-009-9412-1

Kuhlemeier, A., Shattuck, D., Willging, C., & Ramos, M. M. (2023). Associations between nonsuicidal self-injury and school-based health-promotive factors for sexual and gender minority youth and their peers. *LGBT Health, 10*(8), 617–628. https://doi.org/10.1089/lgbt.2021.0404

Kull, R. M., Greytak, E. A., Kosciw, J. G., & Villenas, C. (2016). Effectiveness of school district antibullying policies in improving LGBT youths' school climate. *Psychology of Sexual Orientation and Gender Diversity, 3*(4), 407–415. https://doi.org/10.1037/sgd0000196

Langarita, J. A., Platero, L. R., López-Sáez, M.Á., & Sadurní-Balcells, N. (2024). The impact of children's services professionals on LGBTIQ youth: Knowledge, practices and needs. *Children and Youth Services Review, 160*, Article 107544. https://doi.org/10.1016/j.childyouth.2024.107544

Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology, 48*(3), 310–318.

Lerner, R. M., Lerner, J. V., Bowers, E. P., & Geldhof, G. J. (2015) Positive youth development and relational developmental systems. In W. F. Overton & P. C. Molenaar (Eds.), *Theory and method. Volume 1 of the Handbook of Child Psychology and Developmental Science* (7th ed., pp. 607–651). Wiley. Doi: 10.4324/8791315174686-15.

Leung, E., Kassel-Gomez, G., Sullivan, S., Murahara, F., & Flanagan, T. (2022). Social support in schools and related outcomes for LGBTQ youth: A scoping review. *Discover Education, 1*, 18. https://doi.org/10.1007/s44217-022-00016-9

Madireddy, S., & Madireddy, S. (2020). Strategies for schools to prevent psychosocial stress, stigma, and suicidality risks among LGBTQ+ students. *American Journal of Educational Research, 8*(9), 659–667. https://doi.org/10.12691/education-8-9-7

Marraccini, M. E., Ingram, K. M., Naser, S. C., Grapin, S. L., Toole, E. N., O'Neill, J. C., Chin, A. J., Martinez, R. R., Jr, & Griffin, D. (2022). The roles of school in supporting LGBTQ+ youth: A systematic review and ecological framework for understanding risk for suicide-related thoughts and behaviors. *Journal of School Psychology, 91*, 27–49. https://doi.org/10.1016/j.jsp.2021.11.006

Mayberry, M. L., Espelage, D. L., & Koenig, B. (2009). Multilevel modeling of direct effects and interactions of peers, parents, school, and community influences on adolescent substance use. *Journal of Youth and Adolescence, 38*, 1038–1049. https://doi.org/10.1007/s10964-009-9425-9

McBride, R. S. (2021). A literature review of the secondary school experiences of trans youth. *Journal of LGBT Youth, 18*(2), 103–134. https://doi.org/10.1080/19361653.2020.1727815

McCann, E., & Brown, M. (2019). Homelessness among youth who identify as LGBTQ+: A systematic review. *Journal of Clinical Nursing, 28*(11–12), 2061–2072.

McCormack, M. (2011). The declining significance of homohysteria for male students in three sixth forms in the south of England. *British Educational Research Journal, 37*(2), 337–353. https://doi.org/10.1080/01411921003653357

McDaniel, A. (2012). Women's advantage in higher education: Towards understanding a global phenomenon. *Sociology Compass, 6*(7), 581–595. https://doi.org/10.1111/j.1751-9020.2012.00477.x

McDermott, E., Hughes, E., & Rawlings, V. E. (2016). *Queer futures final report: Understanding Lesbian, Gay, Bisexual and Trans (LGBT) adolescents' suicide, self-harm and help-seeking behaviour*. Lancaster University. https://www.queerfutures.co.uk/wp-content/uploads/2016/06/Queer-Futures-Final-Report.pdf.

McDermott, E., Eastham, R., Hughes, E., Pattison, E., Johnson, K., Davis, S., & McNulty, F. (2024). Early mental health intervention and supported self-care for LGBTQ+ young people in the UK: A mixed-methods study. *Health and Social Care Delivery Research, 12*(47), 1–102. https://doi.org/10.3310/KYWA6382

McDermott, E., Cahill, L., Nath, R., Reid, B., Schaub, J., Stander, W. J., & Taylor, A. (2025). Understanding protective and risk factors in preventing suicide among LGBTQ+ youth in the UK. *International Journal of Mental Health (Online First)*. https://doi.org/10.1080/00207411.2025.2575422

McKeon, C. (2023). Rishi Sunak tacks to right with comments on sex education and transgender rights. *The Independent*. https://www.independent.co.uk/news/uk/politics/rishi-sunak-gender-speech-transphobic-b2424369.html.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674.

Mitchell, K. J., Ybarra, M. L., & Korchmaros, J. D. (2014). Sexual harassment among adolescents of different sexual orientations and gender identities. *Child Abuse & Neglect, 38*(2), 280–295. https://doi.org/10.1016/j.chiabu.2013.09.008

Morgan, A., Cunningham, E., Dyrud, J., Elliott, L., Ige, L., Knowles, G., & Woodhead, C. (2024). Intersectionality informed and narrative-shifting whole school approaches

for LGBTQ+ secondary school student mental health: A UK qualitative study. *PLoS One1, 19*(7), Article e0306864. https://doi.org/10.1371/journal.pone.0306864

Naser, S. C., Clonan-Roy, K., Fuller, K. A., Goncy, E. A., & Wolf, N. (2022). Exploring the experiences and responses of LGBTQ+ adolescents to school-based sexuality education. *Psychology in the Schools, 59*(1), 34–50. https://doi.org/10.1002/pits.22471

Neary, A. (2021). Trans children and the necessity to complicate gender in primary schools. *Gender and Education, 33*(8), 1073–1089.

Parodi, K. B., Holt, M. K., Green, J. G., Katz-Wise, S. L., Shah, T. N., Kraus, A. D., & Xuan, Z. (2022). Associations between school-related factors and mental health among transgender and gender diverse youth. *Journal of School Psychology, 90*, 135–149. https://doi.org/10.1016/j.jsp.2021.11.004

Parra, L. A., Bell, T. S., Benibgui, M., Helm, J. L., & Hastings, P. D. (2018). The buffering effect of peer support on the links between family rejection and psychosocial adjustment in LGB emerging adults. *Journal of Social and Personal Relationships, 35*(6), 854–871. https://doi.org/10.1177/0265407517699713

Patalay, P., & Fitzsimons, E. (2021). Psychological distress, self-harm and attempted suicide in UK 17-year olds: Prevalence and sociodemographic inequalities. *The British Journal of Psychiatry, 219*(2), 437–439. https://doi.org/10.1192/bjp.2020.258

Payne, E., & Smith, M. (2013). LGBTQ kids, school safety, and missing the big picture: How the dominant bullying discourse prevents school professionals from thinking about systemic marginalization or… why we need to rethink LGBTQ bullying. *QED: A Journal in GLBTQ Worldmaking, 1*, 1–36. https://www.jstor.org/stable/10.14321/qed.0001.

Perales, F., & Campbell, A. (2020). Health disparities between sexual minority and different-sex-attracted adolescents: Quantifying the intervening role of social support and school belonging. *LGBT Health, 7*(3), 146–154. https://doi.org/10.1089/lgbt.2019.0285

Poteat, V. P., & Vecho, O. (2016). Who intervenes against homophobic behavior? Attributes that distinguish active bystanders. *Journal of School Psychology, 54*, 17–28. https://doi.org/10.1016/j.jsp.2015.10.002

Poteat, V. P., Calzo, J. P., Richburg, A., Marx, R. A., & Yoshikawa, H. (2024). How gender-sexuality alliances cultivate a sense of school belonging from week to week for LGBTQ+ youth. *Journal of School Psychology, 105*, Article 101329. https://doi.org/10.1016/j.jsp.2024.101329

Rawlings, V. (2019). 'It's not bullying', 'It's just a joke': Teacher and student discursive manoeuvres around gendered violence. *British Educational Research Journal, 45*(4), 698–716. https://doi.org/10.1002/berj.3521

Reck, J. (2009). Homeless gay and transgender youth of color in San Francisco: "No one likes street kids"—Even in the Castro. *Journal of LGBT Youth, 6*(2/3), 223–242. https://doi.org/10.1080/19361650903013519

Rimes, K. A., Ion, D., Wingrove, J., & Carter, B. (2019). Sexual orientation differences in psychological treatment outcomes for depression and anxiety: National cohort study. *Journal of Consulting and Clinical Psychology, 87*(7), 577–589.

Roggemans, L., Spruyt, B., Van Droogenbroeck, F., & Keppens, G. (2015). Religion and negative attitudes towards homosexuals: An analysis of urban young people and their attitudes towards homosexuality. *Young, 23*(3), 254–276. https://doi.org/10.1177/1103308815586903

Russell, R. (2023). School gender guidance: Parents should be in the know – minister. *BBC, 16*. https://www.bbc.co.uk/news/education-66214848.

Russell, S. T., & Fish, J. N. (2016). Mental health in lesbian, gay, bisexual, and transgender (LGBT) youth. *Annual Review of Clinical Psychology, 12*, 465–487. https://doi.org/10.1146/annurev-clinpsy-021815-093153

Rutten, K., & Theewis, D. (2020). Sexuality, Religion, and Education: (Re) Production of Culturalist Discourse in Sexual Diversity Education in the Netherlands. In Derks, M., & van den Berg, M. (Eds.). Public Discourses about Homosexuality and Religion in Europe and Beyond (pp. 59-80). Palgrave Macmillan. Doi: 10.1007/978-3-030-56326-4_3.

Saewyc, E. M., Konishi, C., Rose, H. A., & Homma, Y. (2014). School-based strategies to reduce suicidal ideation, suicide attempts, and discrimination among sexual minority and heterosexual adolescents in Western Canada. *International Journal of Child, Youth & Family Studies (IJCYFS), 5*(1), 89–112. https://doi.org/10.18357/ijcyfs.saewyce.512014

Salkind, J., Bevan, R., Drage, G., Samuels, D., & Hann, G. (2019). Safeguarding LGBT+ adolescents. *BMJ, 364*. https://doi.org/10.1136/bmj.l245

Sanjakdar, F. (2011). Living west, facing east: The (de)construction of muslim youth sexual identities. *Counterpoints, 364*, 105–130. https://www.jstor.org/stable/42980846.

Seelman, K. L., Forge, N., Walls, N. E., & Bridges, N. (2015). School engagement among LGBTQ high school students: The roles of safe adults and gay–straight alliance characteristics. *Children and Youth Services Review, 57*, 19–29. https://doi.org/10.1016/j.childyouth.2015.07.021

Snapp, S. D., McGuire, J. K., Sinclair, K. O., Gabrion, K., & Russell, S. T. (2015). LGBTQ-inclusive curricula: Why supportive curricula matter. *Sex Education, 15*(6), 580–596. https://doi.org/10.1080/14681811.2015.1042573

Stonewall (2017). *School report: The experiences of lesbian. gay. bi and trans young people in Britain's schools in 2017.* Retrieved from https://www.stonewall.org.uk/resources/school-report-2017.

Stonewall (October 5, 2023). *New data: Rise in hate crime against LGBTQ+ people continues, Stonewall slams UK Gov 'inaction'* https://www.stonewall.org.uk/news/new-data-rise-hate-crime-against-lgbtq-people-continues-stonewall-slams-uk-gov-.

Teney, C., & Subramanian, S. V. (2010). Attitudes toward homosexuals among youth in multiethnic Brussels. *Cross-Cultural Research, 44*(2), 151–173. https://doi.org/10.1177/1069397109357136

Toomey, R. B., Ryan, C., Diaz, R. M., Card, N. A., & Russell, S. T. (2010). Gender-nonconforming lesbian, gay, bisexual, and transgender youth: School victimization and young adult psychosocial adjustment. *Developmental Psychology, 46*(6), 1580–1589. https://doi.org/10.1037/a0020705

Toomey, R. B., Ryan, C., Diaz, R. M., & Russell, S. T. (2011). High school gay–straight alliances (GSAs) and young adult well-being: An examination of GSA presence, participation, and perceived effectiveness. *Applied Developmental Science, 15*(4), 175–185. https://doi.org/10.1080/10888691.2011.607378

Tunåker, C. (2023). LGBT+ youth homelessness as a consequence of progress. In P. Behrens, & S. Becker (Eds.), *Justice After Stonewall* (pp. 28–46). Routledge.

Ueno, K. (2005). Sexual orientation and psychological distress in adolescence: Examining interpersonal stressors and social support processes. *Social Psychology Quarterly, 68*(3), 258–277.

Wang, X. X., Gan, Q., Zhou, J., Cosquer, M., Falissard, B., Corruble, E., Jousselme, C., & Gressier, F. (2023). A systematic review of the factors associated with suicide attempts among sexual-minority youth. *The European Journal of Psychiatry, 37*(2), 72–83. https://doi.org/10.1016/j.ejpsy.2022.09.003

Weber, P., & Gredig, D. (2018). Prevalence and predictors of homophobic behavior among high school students in Switzerland. *Journal of Gay & Lesbian Social Services., 30*(2), 128–153. https://doi.org/10.1080/10538720.2018.1440683

Weinberg, J. R., & McGrory Cooper, J. (2023). Examining the mental health needs of sexual and gender minority youth to articulate a multitiered system of supports for schools. *Psychology in the Schools, 60*(9), 3612–3632. https://doi.org/10.1002/pits.22933

White, A. J., Magrath, R., & Thomas, B. (2018). The experiences of lesbian, gay and bisexual students and staff at a further Education college in South East England. *British Educational Research Journal, 44*(3), 480–495. https://doi.org/10.1002/berj.3443

Wilson, C., & Cariola, L. A. (2020). LGBTQI+ youth and mental health: A systematic review of qualitative research. *Adolescent Research Review, 5*(2), 187–211.

Woodhead, C., Morgan, A., Sabra, I., Sabra, S., Konieczka, L., Knowles, G., & Rimes, K. A. (2025). "We're not one-box issue people": Intersectional perspectives on LGBTQ+ mental health in schools: A UK qualitative study with students, staff and training providers. *Acta Psychologica, 254*, Article 104783. https://doi.org/10.1016/j.actpsy.2025.104783

Wuestenenk, N., van Tubergen, F., & Stark, T. H. (2022). Attitudes towards homosexuality among ethnic majority and minority adolescents in Western Europe: The role of ethnic classroom composition. *International Journal of Intercultural Relations, 88*, 133–147. https://doi.org/10.1016/j.ijintrel.2022.04.001