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At the Crossroads: Intersection of Ethnic and Socioeconomic Backgrounds in the Interplay of Perceived Teacher Discrimination, Intergroup Attitudes, and Socioemotional Outcomes

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ABSTRACT

Introduction: Perceived ethnic discrimination from teachers is associated with poorer adolescent adjustment, yet the mechanisms underlying these associations and the extent to which responses vary across the intersection of multiple social identities remain unclear. Guided by an Intersectionality-Informed Ecological Approach, this study investigated the associations between perceived teacher discrimination and students' socioemotional outcomes, both directly and indirectly through intergroup attitudes (i.e., interest in learning about other cultures and support for immigrants' equal rights). We also explored variations in these associations based on intersections of students' ethnic (ethnic minoritized vs. majoritized) and SES (high vs. low) backgrounds.

Methods: Data were drawn from the 2018 Programme for International Student Assessment (PISA), focusing on adolescents ($N = 5{,}451$, $M_{age} = 15.83$, 67.5% ethnic majoritized) in Germany.

Results: Structural Equation Model (SEM) demonstrated that perceived teacher discrimination was directly and negatively associated with both subjective well-being and school belonging. The association with school belonging operated both directly and indirectly via attitudes towards immigrants' equal rights. These relational patterns were largely consistent across intersectional groups, although the negative association between teacher discrimination and subjective well-being was significant among high-SES ethnic majoritized students compared with low-SES ethnic majoritized students.

Conclusions: Findings highlight intergroup attitudes as a potential mechanism to mitigate the adverse impacts of teacher discrimination. Moreover, students appear not to be passive recipients of discrimination; rather, the socioeconomic resources available to them may shape their responses.

1 | Introduction

What are the costs of discrimination in a place meant to be inclusive? Schools are expected to be inclusive environments; however, ethnic discrimination remains a persistent feature of many students' experiences (Killen and Rutland 2022). In increasingly ethnically and culturally diverse schools, teachers play a vital role as key socializing agents, shaping how students

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understand the meaning and significance of their ethnic and cultural group memberships (Saleem and Byrd 2021). Therefore, students' perceptions of their teachers' discriminatory beliefs, attitudes, and behaviors (i.e., perceived teacher discrimination) may be detrimental to their academic performance and socioemotional outcomes (e.g., Benner et al. 2022; Civitillo et al. 2024).

Although substantial evidence links perceived teacher discrimination to poorer educational and psychological outcomes (e.g., Baysu et al. 2023; Heppt et al. 2025), the mechanisms underlying these associations remain unclear. Unlike an inclusive school climate where teachers' diversity-sensitive practices foster harmonious interactions amongst students from diverse ethnic and cultural backgrounds (e.g., Karataş et al. 2023a), students' engagement in such interactions may be diminished when they experience teacher discrimination on the basis of their ethnic and cultural backgrounds. Because intergroup contact plays a central role in shaping intergroup attitudes (Wölfer et al. 2016), discriminatory treatment by teachers may undermine students' openness to learning about other cultures and weaken their support for immigrants' equal rights (i.e., positive intergroup attitudes). Such attitudinal shifts might, in turn, affect students' socioemotional outcomes, including their subjective well-being (Prati 2024) and sense of school belonging. Accordingly, the present study examines whether intergroup attitudes help explain associations between perceived teacher discrimination and adolescents' socioemotional outcomes. Specifically, it investigates the associations between perceived teacher discrimination and socioemotional outcomes, not only directly but also indirectly through intergroup attitudes, among both ethnic minoritized[1] and majoritized students in Germany. Recognizing that students possess multiple social identities for which they may be disadvantaged (e.g., ethnic background, socioeconomic status [SES]), we adopt an Intersectionality-Informed Ecological Approach (Cooper et al. 2022; Hudson et al. 2024), which integrates intersectionality theory and ecological perspective to further examine whether and how direct and indirect associations (through intergroup attitudes) between teacher discrimination and socioemotional outcomes may vary across intersections of ethnic and SES backgrounds.

1.1 | Perceived Teacher Discrimination and Students' Socioemotional Outcomes

According to the Bioecological Model of Human Development (Bronfenbrenner and Morris 2006), schools represent a central contextual system shaping adolescent development and learning through proximal processes—that is, sustained and reciprocal interactions between the adolescent, their teachers, peers, and the broader socio-cultural context. Byrd (2015, 2017) has indeed proposed intergroup contact between minoritized and majoritized students and their teachers, alongside ethnic-racial socialization practices enacted in schools, as central and interrelated processes that shape the school's cultural diversity climate. Extending this framework, the School Ethnic Racial Socialization Transmission Model (Saleem and Byrd 2021) placed a particular emphasis on the roles of teachers (and staff), peers, and school policies and practices in transmitting both implicit and explicit information about the meaning and value of students' ethnic and cultural group memberships.

Among these transmitters, teachers are widely regarded as the primary agents of cultural diversity practices in schools (see also, e.g., Karataş et al. 2023a; Schachner 2019). Through their beliefs, behaviors, and enactment of institutional diversity policies, teachers play a central role in shaping students' everyday school experiences (Saleem and Byrd 2021). Consistent with this view, Gray et al. (2018) positioned teachers at the center of educational opportunity structure, highlighting their capacity to promote minoritized students' competence and school belonging across interpersonal, instructional, and institutional domains. Within their framework, teachers facilitate social relationships, align instruction with students' cultural meaning systems, and address structural barriers such as discrimination in diverse school contexts. In doing so, they can contribute to an inclusive school diversity climate, which is beneficial for socioemotional outcomes, such as school belonging (see also Byrd et al. 2026). However, teachers may also act as agents of discrimination (e.g., Civitillo et al. 2024), thereby contributing to a divisive school climate.

Exposure to teacher discrimination can create a divisive climate that may generate (racial) stress among ethnically and culturally minoritized youth (Saleem and Byrd 2021) and undermine their psychosocial and educational outcomes (for meta-analyses, see Benner et al. 2018; Byrd et al. 2026; Civitillo et al. 2024). Perceptions of teacher discrimination arise not only from direct experiences but also from witnessing discriminatory treatment (Jaurique et al. 2019). Consequently, students' perceptions of teacher discrimination may affect not only minoritized students but also majoritized peers who witness or perceive discriminatory practices.

When students perceive discrimination in schools, they may feel disconnected from peers and teachers, and experience social isolation and higher levels of stress. Such experiences can erode their sense of acceptance, respect, and inclusion within the school (i.e., school belonging; Goodenow 1993), as well as their enjoyment of day-to-day activities and overall life satisfaction (i.e., subjective well-being; Diener et al. 2017). Although the detrimental effects of teacher discrimination have been well documented for sense of school belonging during adolescence, less attention has been paid to its impact on subjective well-being. For instance, a recent study conducted with PISA 2018 data in Germany showed that teacher discrimination was negatively associated with school belonging, with higher levels of discrimination being reported among older students, boys, and ethnic minoritized youth—particularly among those from highly stigmatized ethnic and cultural groups, such as Turkish students (Heppt et al. 2025). Similarly, a cross-national study by Baysu et al. (2023) found that teacher discrimination was negatively related to math and reading performance among both minoritized and majoritized students across most PISA countries, with these associations partially mediated by school belonging and attitudes towards learning. Moreover, Byrd (2015) found that adolescents who perceived negative

[1]The term ethnically and culturally minoritized refers to students who were born outside of the destination country or with at least one parent who was born outside of the destination country (European Commission 2020).

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stereotyping by teachers and peers (a form of ethnic discrimination) reported lower school belonging. Consistently, a recent meta-analysis documented that students who experience greater discrimination, whether personally experienced or through negative interactions, tend to report lower school belonging (Byrd et al. 2026). Moving beyond school belonging, yet leaving subjective well-being unexamined, another meta-analysis showed that teacher discrimination is negatively associated not only with students' sense of school belonging but also with their psychological, physical, and behavioral well-being (Civitillo et al. 2024). Extending this literature, the present study examines the associations of teacher discrimination with not only school belonging but also subjective well-being among both ethnic minoritized and majoritized adolescents. Moreover, because perceived teacher discrimination may also undermine students' intergroup attitudes, which might, in turn, be linked to socioemotional outcomes, this study also aims to explore whether intergroup attitudes constitute a potential mechanism through which teacher discrimination associates with lower levels of subjective well-being and school belonging.

1.2 | Unpacking the Associations Between Perceived Teacher Discrimination and Students' Socioemotional Outcomes: The Role of Intergroup Attitudes

Intergroup attitudes refer to individuals' "feelings, opinions, expectations, and beliefs about traits that members of a given group possess" (Brauer 2024, p. 281). In the present study, these attitudes are operationalized as students' interest in learning about other cultures and their support for immigrants' equal rights. Interest in learning about other cultures captures affective and evaluative components of intergroup attitudes, reflecting openness and curiosity toward outgroups. Support for immigrants' equal rights may reflect students' opinions, beliefs, and expectations regarding how immigrants should be treated and what rights they should have in society. Combined, these indicators capture key dimensions of intergroup attitudes among both ethnic minoritized and majoritized adolescents, which are known to develop in response to adolescents' everyday experiences of intergroup contact (e.g., Wölfer et al. 2016). Importantly, these attitudes may be affected by perceptions of teacher discrimination, as teachers' approaches to cultural diversity serve as a salient social reference point in shaping students' intergroup relations (e.g., Karataş et al. 2023a) and attitudes (e.g., Bardach et al. 2024).

The Common Ingroup Identity Model (CIIM; Dovidio et al. 2007) provides a helpful theoretical framework for understanding how intergroup interactions shape intergroup attitudes. Building on Social Identity Theory (Tajfel and Turner 1979) and Self-Categorization Theory (Turner et al. 1987), the CIIM emphasizes the process of "dual recategorization," where individuals come to see themselves as members of a shared superordinate group while maintaining their subgroup identities. Identification with a common ingroup might reduce the "us versus them" distinction and promote more positive intergroup attitudes (for a review, see Thijs and Verkuyten 2014). These attitudinal shifts can be reinforced through positive intergroup interactions (Wölfer et al. 2016), which might play a central role in fostering openness and mutual acceptance across groups.

In ethnically and culturally diverse schools, both ethnic minoritized and majoritized students may develop a shared sense of belonging to an inclusive superordinate group, such as classmates (Albarello et al. 2021), when contextual conditions emphasize this overarching identity while also allowing students to maintain their subgroup (i.e., ethnic) identifications. Discrimination, however, might strengthen ethnic group identification (Branscombe et al. 1999). Although stronger identification is beneficial for well-being, it might still pose a risk of heightening the salience of group boundaries and deepening social divides. In such a divisive climate, students may feel less comfortable interacting with outgroup peers and show reduced interest in intergroup contact (Schachner et al. 2015), thereby undermining the development of positive intergroup attitudes.

Intergroup attitudes weakened by teacher discrimination may contribute to a vicious cycle of adverse socioemotional outcomes, including diminished subjective well-being and weakened school belonging. To date, research has predominantly focused on the effects of negative intergroup attitudes on subjective well-being. For example, Prati (2024) documented reciprocal negative associations between the two constructs. Although these findings provide insights into the potential benefits of positive intergroup attitudes for adolescents' subjective well-being, less is known about how positive intergroup attitudes relate to school belonging. Yet, a similar relational pattern can be expected, given that school belonging is closely linked to adolescent subjective well-being, both cross-sectionally (Arslan 2021) and longitudinally (Arslan et al. 2020). Along this line of thought, teacher discrimination may undermine students' socioemotional outcomes both directly and indirectly by weakening the development of positive intergroup attitudes. Specifically, students' perceptions of teacher discrimination may reduce their interest in other cultures and weaken their support for immigrants' equal rights (i.e., intergroup attitudes), thereby undermining their subjective well-being and school belonging (i.e., socioemotional outcomes).

Although perceived teacher discrimination adversely affects students' outcomes (e.g., Baysu et al. 2023; Heppt et al. 2025), its implications may differ depending not only on students' ethnic backgrounds but also on other dimensions of their lived experiences, such as SES (e.g., Chavous et al. 2008). Therefore, accounting for the potential heterogeneity in the interplay of teacher discrimination with intergroup attitudes and socioemotional outcomes is crucial, particularly across intersections of students' ethnic (ethnic minoritized vs. majoritized) and SES (high vs. low) backgrounds.

1.3 | Capturing Heterogeneity: Intersections of Ethnic and SES Backgrounds in the Interplay of Teacher Discrimination, Intergroup Attitudes, and Socioemotional Outcomes

Students hold multiple social identities (e.g., ethnic and SES backgrounds) that can jointly shape their school experiences, including experiences of discrimination (Hudson et al. 2024). Accounting for these intersecting dimensions of inequality, Crenshaw's (1989) concept of intersectionality highlighted that systems of inequality cannot be understood as merely additive models. Rather than representing separate and cumulative dimensions of disadvantage,

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intersecting identities give rise to qualitatively distinct forms of marginalization. Extending this framework, Collins (2015, 2019) conceptualized intersectionality as a critical social theory in which social positions such as ethnic and SES backgrounds are understood as mutually constitutive and embedded within broader systems of power. Within educational contexts, this perspective underscores how students' experiences are shaped by institutional structures that reproduce inequalities through practices such as tracking, teacher expectations, and unequal access to resources. In a nutshell, the concept of intersectionality highlights how combinations of social identities jointly shape individuals' experiences, particularly in the context of educational inequalities (Hudson et al. 2024; McMaster and Cook 2019).

Although minoritized and majoritized students can both be negatively affected by teacher discrimination, higher levels of perceived discrimination are reported among ethnic minoritized (Baysu et al. 2023) and lower-SES students (Heppt et al. 2025). Thus, socioeconomic disadvantage may amplify the negative consequences of ethnic discrimination (Mansel and Spaiser 2010), whereas greater socioeconomic resources may provide access to social and cultural capital, which could potentially buffer the negative effects of discrimination. Indeed, this expected pattern was partly observed in a study conducted with African-American minoritized male students (Chavous et al. 2008), as the negative link between discrimination and academic success was stronger among those with low-SES backgrounds. Although this pattern did not appear among low-SES minoritized females, and it was even inconsistent across other educational outcomes, these findings nonetheless suggest that SES might amplify the detrimental consequences of discrimination. The current study therefore adopts an intersectional approach to examine how ethnic and SES backgrounds jointly condition the associations of teacher discrimination with intergroup attitudes and socioemotional outcomes.

Given the relatively higher perceived teacher discrimination among ethnic minoritized students and students with lower-SES backgrounds, it is plausible to expect stronger associations of teacher discrimination with intergroup attitudes and socioemotional outcomes among low-SES ethnic minoritized students. However, as perceptions of teacher discrimination could also be associated with age and gender (Heppt et al. 2025) and its effects may vary across gender subgroups (Chavous et al. 2008), these demographic factors are accounted for to determine whether heterogeneity in the expected associations was driven primarily by students' ethnic and SES backgrounds.

1.4 | Educational Context in Germany

Given cross-national differences in how educational systems respond to the needs of ethnic minoritized students, the present study focused on students' perceptions of teacher discrimination in Germany. According to the Organization for Economic Co-operation and Development (OECD 2023), Germany is one of the leading countries in terms of migration reception and consistently ranks among the top destination countries for permanent migration flows. Despite increasing diversity in Germany, its education system continues to struggle to address the needs of minoritized students (Georgi 2024).

Compared to countries with comprehensive educational systems, such as the Scandinavian countries, the education system in Germany remains relatively more segregated. Accordingly, Germany has been characterized as only moderately responsive to the specific needs of ethnic minoritized students across education levels (see Migrant Integration Policy Index; Solano and Huddleston 2020). In particular, the educational system in Germany is considered to provide comparatively limited support to ensure equal access and to address ethnic minoritized students' specific needs through measures such as targeted orientation, language support, and teacher training (Solano and Huddleston 2020). As a result, ethnic minoritized students face an elevated risk of being disproportionately placed in lower secondary school tracks (e.g., vocational pathways), reflecting the combined influence of socioeconomic disadvantage, institutionalized tracking, and potentially biased teacher evaluations and recommendations (e.g., Sprietsma 2013).

For example, using data from the German extension of the Progress in International Reading Literacy Study (PIRLS), Lüdemann and Schwerdt (2013) documented that second-generation minoritized youth received lower grades and less favorable track recommendations than ethnic majoritized German students. Crucially, these disparities could not be explained by differences in standardized achievement tests or students' general intelligence. Indeed, an experimental study with pre-service teachers provided further support for these findings, showing that a minoritized Turkish student was evaluated less favorably than a majoritized German student despite equivalent performance under standardized assessment conditions (Holder and Kessels 2017). Similarly, Lorenz et al. (2016) demonstrated that in-service teachers held lower academic expectations for Turkish students in German language instruction at the beginning of the school year, even when students' prior performance was comparable.

Together, these findings suggest that teacher biases can contribute to systematic inequalities in educational evaluations and trajectories for ethnic minoritized students in Germany. Although this body of research points to an elevated risk of racialization for ethnic minoritized students in Germany, a recent systematic review (Batruch et al. 2023) indicated that teachers' biases in tracking recommendations are less consistently linked to students' ethnic and cultural background than to their SES. In contrast, teachers may show a more consistent tendency to assign higher tracking recommendations to students from high-SES families. These findings underscore the importance of considering potential heterogeneity in students' experiences at the intersection of ethnic and SES backgrounds. To this end, we drew on cross-sectional data from ethnic minoritized and majoritized students enrolled in the Programme for International Student Assessment 2018 (PISA 2018) in Germany, as this cycle included the relevant measures.

1.5 | The Current Study

Guided by an Intersectionality-Informed Ecological Approach, this study examines whether and how students' perceptions of teacher discrimination are associated with socioemotional outcomes, namely subjective well-being and school belonging, both directly and indirectly through intergroup attitudes, operationalized as

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interest in learning about other cultures and support for immigrants' equal rights. Considering the detrimental effects of teacher discrimination on students' socioemotional outcomes, we hypothesize that perceived teacher discrimination would be negatively associated with students' subjective well-being and school belonging (*H1, Direct Effect Hypothesis*). Furthermore, we assume that teacher discrimination might hinder identification with a common group, thereby weakening positive intergroup interactions and attitudes. Accordingly, we expect the negative associations of teacher discrimination with students' subjective well-being and school belonging to be mediated by students' interest in learning about other cultures and their attitudes towards immigrants' equal rights (*H2, Indirect Effect Hypothesis*). Given that ethnic and SES backgrounds may jointly condition these associations, we further hypothesize that both direct and indirect associations would be stronger among low-SES ethnic minoritized students (*H3, Intersectional Hypothesis*). However, because evidence on subgroup differences in the processes linking teacher discrimination to socioemotional outcomes remains limited, *H3* remains largely exploratory. Altogether, the current study aims to go beyond examining the consequences of discrimination to better understand how discriminatory experiences may weaken the social foundations of solidarity-oriented attitudes, specifically by examining support for immigrants' equal rights and interest in other cultures as underlying mechanisms, while considering adolescents' intersecting social identities.

2 | Method

2.1 | Participants

In this study, we drew on data collected for PISA 2018 in Germany. Participants were 5,451 adolescents ($M_{age} = 15.83$, $SD_{age} = 0.29$, age range: 15.33–16.33, 46.3% female) living in Germany. The majority of students (90.0%) were in 9th or 10th grade. Regarding the students' ethnic background, 67.5% were ethnic majoritized, and 19.3% were ethnic minoritized students (13.8% second generation). Information about ethnic and cultural background of the remainder (13.3%) was not provided. Regarding the language spoken at home, the most prevalent languages were German (72.6%), Turkish (3.2%), Russian (2.1%), and Polish (1.0%). Apart from the 11.7% of participants with missing data on this variable, the remaining participants reported speaking Kurdish (0.8%), Italian (0.7%), Croatian (0.5%), Serbian (0.4%), or Greek (0.3%) at home.

2.2 | Measures

The following section provides a brief description of the measures and indices of interest. A detailed description of these scales and their psychometric properties, including construct validity and scale reliability, is available in the PISA 2018 Technical Report (see Chapter 16; OECD 2019). In this study, Confirmatory Factor Analyses (CFAs) were conducted to further ensure the structural validity of each measure. The findings are presented in Table S1. The wording of all items is also presented in Table S1.

2.2.1 | *Perceived Teacher Discrimination*

Students were asked to think about whether their teachers treat students from all cultural groups equally, without stereotypes, prejudice, or discrimination. This scale consists of 4 items, in response to the following prompt: "Thinking about teachers in your school: to how many of them do the following statements apply?". A sample item is: "They say negative things about people of some cultural groups". Each item can be answered in a 4-point Likert scale 1 = *to none or almost none of them*, 4 = *to all or almost all of them*. Cronbach's alpha coefficient was 0.84.

2.2.2 | *Intergroup Attitudes*

Students' interest in learning about other cultures and attitudes towards immigrants' equal rights were considered as the main indicators of intergroup attitudes among ethnic minoritized and majoritized students. *Interest in Learning about Other Cultures* was assessed with a 4-item scale, rated on a 5-point Likert scale (1 = *very much like me*, 5 = *not at all like me*). All items were reverse coded before scaling. A sample item reads: "I am interested in finding out about the traditions of other cultures." Cronbach's alpha coefficient was 0.90. *Attitudes towards Immigrants' Equal Rights* were assessed with a scale initially developed in the International Civic and Citizenship Education Study (Schulz et al. 2011). This scale comprises 4 items rated on a 4-point Likert scale (1 = *Strongly disagree*, 4 = *Strongly agree*). A sample item is: "Immigrants should have all the same rights that everyone else in the country has." Cronbach's alpha coefficient was 0.85.

2.2.3 | *Students' Socioemotional Outcomes*

Students' subjective well-being and sense of school belonging were conceived as the primary indicators of socioemotional outcomes among both ethnic minoritized and majoritized youth. *Subjective Well-being* was measured using 3 items assessing positive affect on a 4-point Likert scale (1 = *Never*, 4 = *Always*) in response to the following prompt: "Thinking about yourself and how you normally feel: How often do you feel as described below?" A sample item reads: "Happy." Cronbach's alpha coefficient was 0.84. *School Belonging* was originally assessed through 6 items in PISA 2018. However, the unidimensional structure could not be supported in this study (for details, see Table S1). Therefore, a new structure including reverse-coded 3 items rated on a 4-point Likert scale (1 = *Strongly agree*, 4 = *Strongly disagree*) was used in this study. A sample item reads: "I feel lonely at school." Cronbach's alpha coefficient was 0.78.

2.2.4 | *Intersection Between Students' Ethnic and SES Backgrounds*

To create the intersectional groups, categories indicating students' ethnic and SES backgrounds were combined. As detailed in the PISA 2018 Technical Report (OECD 2019), students' ethnic background (0 = *ethnic majoritized*, 1 = *ethnic minoritized*) was identified according to the birth countries of students and their parents. SES was determined through latent class analysis (LCA) applied to standardized indices of parents' highest occupational and educational status. As detailed in Table S2, the two-class solution (0 = *low-SES* [46%] and 1 = *high-SES* [54%]) was selected as the best fitting one. The combination of these two LCA-derived SES classes with ethnic background yielded four intersectional categories (0 = *low-SES*

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ethnic majoritized [30.8%], 1 = *high-SES ethnic majoritized* [47.4%], 2 = *low-SES ethnic minoritized* [15.2%], 3 = *high-SES ethnic minoritized* [6.6%]).

2.2.5 | *Control Variables*

Students' ages and gender (0 = *female*, 1 = *male*) were treated as covariates.

2.3 | Analytic Strategy

Descriptive statistics, missing data analyses, and bivariate correlations were conducted before the primary analyses. Next, Little's (1988) Missing Completely at Random (MCAR) test was completed. To examine the associations between perceived teacher discrimination and socioemotional outcomes (i.e., subjective well-being, school belonging) both directly and indirectly through intergroup attitudes (i.e., attitudes towards immigrants' equal rights and interest in learning about other cultures), Structural Equation Modeling (SEM) was performed in M*plus* 8.6 (Muthén and Muthén 1998–2017), using the maximum likelihood estimator with robust standard errors (MLR; Satorra and Bentler 2001). Indirect associations were estimated through the "Model Indirect" command. Finally, to assess the role of intersections between students' ethnic and SES backgrounds, pairwise comparisons with the Wald test were conducted.[2] Potential differences in the significant regression and correlation coefficients across four intersectional groups were captured through such comparisons.

3 | Results

3.1 | Preliminary Results

Descriptive statistics and bivariate correlations are reported in Table 1. The results of the MCAR test indicated that data were likely missing at random (range: 18.6%–50.8%; $\chi^2/df = 1.41$, $p < 0.001$). We therefore used Full Information Maximum Likelihood (FIML; Kelloway 2015) to handle missing data.[3]

3.2 | Primary Results

As shown in Table 2 and Figure 1 (for the complete model results, see also Table S3), findings indicated that perceived teacher discrimination was negatively associated with subjective well-being ($\beta = -0.05$, $p < 0.05$) and school belonging ($\beta = -0.24$, $p < 0.001$) (consistent with H1, *Direct Effect Hypothesis*). In addition, teacher discrimination was negatively linked to students' attitudes towards immigrants' equal rights ($\beta = -0.16$, $p < 0.001$). However, teacher discrimination was not significantly associated with students' interest in learning about other cultures ($\beta = 0.01$, $p = 0.74$), which was positively related to subjective well-being ($\beta = 0.05$, $p < 0.05$). Finally, attitudes towards immigrants' equal rights were positively linked to school belonging ($\beta = 0.10$, $p < 0.001$).

With regard to the covariates, males reported higher levels of perceived teacher discrimination ($\beta = 0.14$, $p < 0.001$) and school belonging ($\beta = 0.05$, $p < 0.01$), whereas females reported higher interest in learning about other cultures ($\beta = -0.25$, $p < 0.001$) and higher positive attitudes towards immigrants' equal rights ($\beta = -0.15$, $p < 0.001$). In addition, significant positive correlations were detected between students' interest in learning about other cultures and their attitude towards immigrants' equal rights ($r = 0.35$, $p < 0.001$) as well as between subjective well-being and school belonging ($r = 0.39$, $p < 0.001$).

Partially in line with the *Indirect Effect Hypothesis* (H2), the association between perceived teacher discrimination and school belonging was established not only directly but also indirectly through the students' attitudes toward immigrants' equal rights ($\beta_{ind} = -0.02$ [−0.02, −0.01], $p < 0.01$).

As for the *Intersectional Hypothesis* (H3), pairwise comparisons revealed that the significant direct associations largely remained consistent across intersectional groups. The only exception was the relationship between perceived teacher discrimination and subjective well-being (Wald $\chi^2(1) = 6.08$, $p < 0.05$). Comparing coefficients for high- *vs.* low-SES ethnic majoritized students yielded that the negative relationship between teacher discrimination and subjective well-being became nonsignificant for low-SES ethnic majoritized students ($\beta = 0.02$, $p = 0.75$), while it remained significant among high-SES ethnic majoritized students ($\beta = -0.12$, $p < 0.01$).

Although the indirect association between teacher discrimination and school belonging via attitudes toward immigrants' equal rights was significant in the main SEM, in the multigroup analyzes, it was not significant for any of the intersectional groups (low-SES majoritized: $\beta_{ind} = -0.01$ [−0.03, 0.01], $p = 0.26$; high-SES majoritized: $\beta_{ind} = -0.01$ [−0.02, 0.01], $p = 0.23$; low-SES minoritized: $\beta_{ind} = -0.03$ [−0.07, 0.01], $p = 0.06$; high-SES minoritized: $\beta_{ind} = -0.05$ [−0.10, 0.01], $p = 0.11$). Therefore, pairwise comparisons were not conducted.

4 | Discussion

The negative consequences of perceived teacher discrimination are well documented (e.g., Baysu et al. 2023; Civitillo et al. 2024; Heppt et al. 2025). Extending this body of research, the present cross-sectional study examined associations between perceived teacher discrimination, subjective well-being, and school belonging among ethnic minoritized and majoritized students from high- versus low-SES backgrounds in Germany, while also investigating the role of intergroup attitudes as a potential explanatory mechanism. The findings indicate that perceived teacher discrimination is negatively associated with both socioemotional outcomes. Moreover, its association with school belonging operates not only directly but also indirectly through students' attitudes towards immigrants' equal rights. By revealing the role of positive attitudes towards immigrants' equal rights in

[2]To avoid convergence issues in SEM analyses, the measurement model was constrained to remain equal across intersectional groups, while the structural model was allowed to vary. To achieve this, the measurement invariance of each study measure was initially tested. As shown in Table S4, metric invariance was established for all measures, except for the school belonging measure. Therefore, the findings related to school belonging should be taken with *strong caution* due to the absence of (partial or full) metric invariance.

[3]Given that 1220 participants had missing data on all variables, the SEM model was tested with 4231 participants.

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TABLE 1 | Descriptive statistics and bivariate correlations.

	M	SD	Range	1	2	3	4
1. Perceived teacher discrimination	1.64	0.61	1.00/4.00	—			
2. Interest in learning about other cultures	3.28	1.06	1.00/5.00	−0.01	—		
3. Attitudes towards immigrants' equal rights	3.11	0.72	1.00/4.00	−0.14***	0.32***	—	
4. Subjective well-being	3.33	0.56	1.00/4.00	−0.06**	0.06***	0.06***	—
5. School belonging	3.39	0.69	1.00/4.00	−0.21***	0.04*	0.11***	0.328***

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

TABLE 2 | Standardized estimates of SEM.

Regression paths	Standardized estimates (Errors)
Perceived teacher discrimination → Interest in learning about other cultures	0.01 (0.02)
Perceived teacher discrimination → Attitudes towards immigrants' equal rights	−0.16*** (0.03)
Perceived teacher discrimination → Subjective well-being	−0.05* (0.03)
Perceived teacher discrimination → School belonging	−0.24*** (0.03)
Interest in learning about other cultures → Subjective well-being	0.05* (0.02)
Interest in learning about other cultures → School belonging	0.02 (0.02)
Attitudes towards immigrants' equal rights → Subjective well-being	0.05 (0.03)
Attitudes towards immigrants' equal rights → School belonging	0.10*** (0.03)
Covariates	
Age → Perceived teacher discrimination	−0.02 (0.02)
Age → Interest in learning about other cultures	0.01 (0.02)
Age → Attitudes towards immigrants' equal rights	−0.04 (0.02)
Age → Subjective well-being	−0.01 (0.01)
Age → School belonging	0.01 (0.02)
Gender → Perceived teacher discrimination	0.14*** (0.02)
Gender → Interest in learning other cultures	−0.25*** (0.02)
Gender → Attitudes towards immigrants' equal rights	−0.15*** (0.02)
Gender → Subjective well-being	0.02 (0.02)
Gender → School belonging	0.05** (0.02)
Correlations	
Interest in learning about other cultures ↔ Attitudes towards immigrants' equal rights	0.35*** (0.02)
Subjective well-being ↔ School belonging	0.39*** (0.02)

Note. Students' age and gender (0 = *female*, 1 = *male*) were treated as covariates. For the sake of clarity, only standardized estimates of the structural model are presented. Complete SEM results, including both the measurement and structural models, are provided in Table S3.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

this link, this study advances understanding of solidarity as a relational mechanism through which experiences of exclusion influence social connectedness in schools. Finally, the present study also offers novel insights into subgroup differences, demonstrating that the negative association between teacher discrimination and subjective well-being is more pronounced among high-SES ethnic majoritized students compared to their low-SES counterparts in Germany.

4.1 | Perceived Teacher Discrimination and Its Negative Link With Socioemotional Outcomes

Drawing on the PISA 2018 dataset, the present study confirms previous evidence documenting the adverse effects of perceived teacher discrimination on students' sense of school belonging (Baysu et al. 2023; Heppt et al. 2025). Moreover, the results broaden existing knowledge by showing how ethnic discrimination experienced at schools can undermine subjective well-being among both minoritized and majoritized students. Although ethnic minoritized youth are more frequently the targets of discrimination in schools, the present findings underscore that teacher discrimination might also be detrimental for ethnic majoritized students (see Jaurique et al. 2019). This may occur when all students are aware of, can identify and reflect on, and even act against their teachers' discriminatory treatment. In a nutshell, these findings highlight the importance of addressing biased teacher expectations and misconceptions about specific student groups, increasing awareness of potential teacher discrimination and encouraging students to actively challenge such

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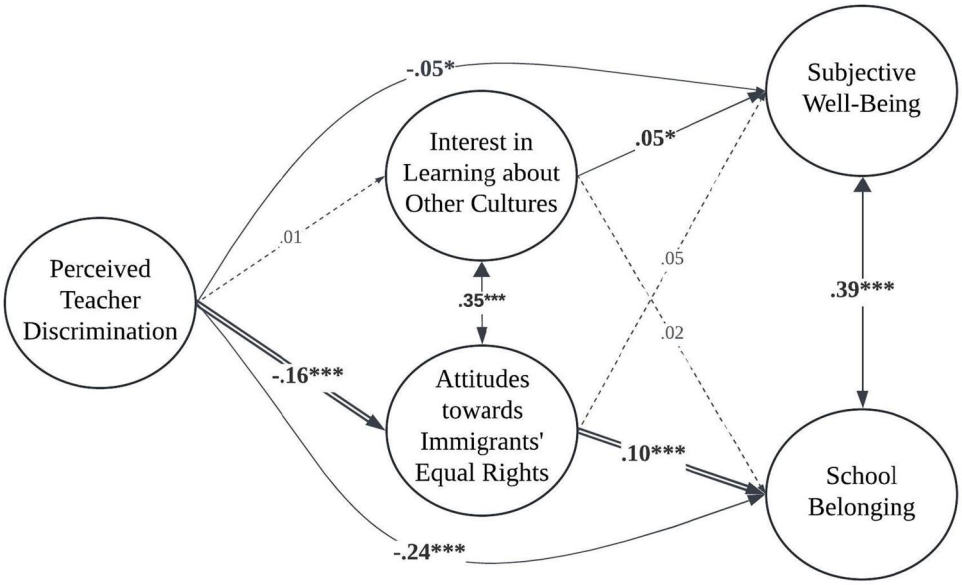


FIGURE 1 | *SEM Results*. The effects of age and gender were accounted for. The model fit the data very well ($\chi^2(151) = 447.415$, CFI = 0.987, RMSEA [90% CI] = 0.022 [0.019, 0.024], SRMR = 0.022). Dashed arrows indicate nonsignificant paths, whereas double-line arrows display significant indirect paths. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

practices in diverse schools. Doing so may foster greater solidarity among students and support their collective well-being and thriving.

The findings furthermore show that students' attitudes towards immigrants' equal rights (partially) mediate the negative associations between teacher discrimination and school belonging. Specifically, when students perceive teacher discrimination, they tend to endorse less positive views towards immigrants' equal rights, which in turn are associated with a weaker sense of school belonging. This noteworthy pattern should, however, be interpreted with caution, given the cross-sectional nature of the data. Nonetheless, the findings are consistent with our assumptions, suggesting that perceptions of teacher discrimination may undermine positive attitudes towards immigrants' equal rights among both ethnic minoritized and majoritized students—likely due to reduced opportunities for harmonious intergroup interactions. This cascading process may ultimately hinder students from developing a strong sense of school belonging. Future longitudinal research should therefore examine the role of both the quantity and quality of direct intergroup contact alongside teacher discrimination.

Altogether, these findings suggest that school systems that encourage students to perceive themselves as part of a broader, more inclusive collective group, such as a shared sense of humanity (e.g., Albarello et al. 2021), may foster more positive intergroup attitudes toward outgroup members and stronger solidarity across ethnic and cultural differences. In other words, ethnically and culturally diverse school environments that are free from discrimination by teachers and other institutional actors may weaken salient group boundaries and support students' identification with an inclusive superordinate group of humanity. Given that identification with such broader, inclusive groups has been shown to reduce negative intergroup attitudes (i.e., prejudice; Bobba et al. 2024) and to promote social well-being (Albarello et al. 2021), examining the role of superordinate group identification in diverse school settings represents a promising direction for future research.

Consistent with previous research (Heppt et al. 2025), male students reported higher levels of teacher discrimination. A similar gender pattern was also observed for school belonging, although prior evidence has shown that females tend to have a higher sense of belonging (see Allen et al. 2018, for a meta-analysis). In line with studies showing that females report more positive and fewer negative intergroup contact experiences (Bagci and Gungor 2019; Karataş et al. 2023b), female students in our sample scored higher on both indicators of intergroup attitudes. These gender differences together underscore the need for future research to adopt an intersectional perspective that simultaneously considers gender, ethnic background, and SES (e.g., Chavous et al. 2008) when examining the interplay of discrimination, intergroup attitudes, and socioemotional outcomes.

The positive effects of intergroup attitudes on students' socioemotional outcomes also warrant attention. Specifically, students' positive attitudes toward immigrants' equal rights are positively associated with school belonging, whereas interest in learning about other cultures is associated with subjective well-being. While previous research has documented positive associations between opportunities to learn about other cultures and school belonging (Byrd 2015, 2017), the present findings suggest that this indicator of positive intergroup attitudes is more closely linked to students' subjective well-being. In contrast, support for immigrants' equal rights appears to be uniquely tied to school belonging. This divergence may reflect different underlying mechanisms: recognizing that all individuals in diverse school settings deserve equal rights may foster mutual trust among peers and teachers, thereby strengthening students' sense of belonging, whereas interest in learning about other cultures may capture personal dispositions such as curiosity and openness, which are more directly associated with subjective well-being.

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4.2 | Addressing Heterogeneity Among Ethnic Majoritized Students With High- Versus Low-SES Backgrounds

The findings further indicated that among ethnic majoritized students, the negative association between perceived teacher discrimination and subjective well-being is more pronounced for those from high-SES background compared to their low-SES counterparts. While these subgroup differences suggest that majoritized students' affective responses to teacher discrimination are significantly shaped by the socioeconomic and personal resources available to them, this pattern may also reflect differences in expectations, resources, and coping strategies shaped by SES. In fact, Lareau (2003) showed that children from working-class homes tend to have limited interactions with institutions and rely more heavily on informal support networks rather than contesting institutional judgments. Furthermore, Reay (2006) proposed the enduring ambivalence towards education among working-class students, arising from the tension between education as a potential route to socioeconomic advancement and experiences of alienation, cultural loss, and subordination within the educational field. Taken together, it may be that low-SES ethnic majoritized youth adopt protective strategies that involve distancing themselves from institutional experiences and expectations, which may buffer against the negative affective consequences of discrimination.

The indirect association between teacher discrimination and school belonging through attitudes toward immigrants' equal rights was not statistically significant within any of the specific intersectional groups. This pattern may be explained by at least two factors. First, students identifying with different intersectional groups may have reported similar levels of perceived teacher discrimination, and such within-group homogeneity could have attenuated the statistical significance of the indirect effects. Second, the measure used to assess students' sense of school belonging lacks full, or partial, metric measurement invariance across intersectional groups, suggesting that students from different intersectional groups may have attributed different meanings to the latent construct of school belonging. In addition, the measure in this study relied on reverse-coded items assessing the extent to which students feel like an outsider, awkward, and lonely in their schools. Extending ongoing debates on negatively worded items in ethnic identity measures (see Meca et al. 2022), the use of reverse-coded items to assess school belonging may risk capturing merely the absence of these negative experiences rather than a higher sense of school belonging. Thus, future longitudinal studies that employ positively worded items reflecting core dimensions of school belonging—such as feeling included, cared for, and safe (see Gray et al. 2018)—and that leverage both within- and between-person variation may help overcome these limitations and advance understanding of indirect associations across intersectional groups.

Contrary to our expectations, none of the significant paths were stronger among the low-SES ethnic minoritized students. Notably, the replication of direct associations across both high-SES and low-SES ethnic minoritized students aligns with previous research showing that minoritized youth from relatively privileged SES backgrounds may also encounter substantial institutional barriers that hinder their socioemotional adjustment. These findings underpin the importance of school systems that actively promote awareness of discrimination and implement targeted interventions to reduce teacher discrimination and its harmful consequences. In this regard, comprehensive teacher training is essential, with a focus on contextually grounded, reflexive, and inclusive pedagogical practices that help recognize and challenge biases to foster equitable learning environments.

4.3 | Limitations and Recommendations for Future Research

The findings of this study should be interpreted in light of at least five limitations. First, due to the cross-sectional nature of the PISA 2018 data, caution is required when assessing the directionality of the observed associations. In fact, the observed associations may reflect reverse or reciprocal relations, and longitudinal studies are required to establish temporal ordering. Second, given the lack of metric measurement invariance across intersectional groups, the findings related to school belonging should be considered with considerable caution. Third, the assessment of ethnic discrimination is based solely on students' perceptions of teachers' discriminatory attitudes and behaviors. Therefore, future research should adopt a broader perspective, incorporating other school staff (e.g., principals, counselors; Saleem and Byrd 2021), school-level discriminatory practices (e.g., admission policies; Bourabain et al. 2023), and institutional regulations regarding clothing, cultural symbols, or the use of mother tongues in educational settings (Celeste et al. 2019). Beyond discrimination in schools, young people may also face ethnic discrimination in their peer groups (e.g., Del Toro et al. 2021; Karataş et al. 2026). Future research with adolescents could therefore explore how teacher and peer discrimination may jointly shape adolescents' socioemotional outcomes both directly and indirectly through intergroup attitudes. Fourth, the measure used to assess interest in learning about other cultures captures students' generic interest in other cultures. Future research could benefit from assessing students' attitudes toward the cultures of the largest immigrant groups within a given society (e.g., Turkish culture in Germany). Fifth, students' ethnic and cultural background is defined exclusively based on the birth countries of students and their parents. To better capture heterogeneity in students' ethnic and cultural backgrounds, future research should consider incorporating cultural self-identification (e.g., Karataş et al. 2023c) or psychometrically robust measures of students' ethnic and national identities.

5 | Conclusion

Despite these limitations, the present study not only replicates the negative associations between perceived teacher discrimination and school belonging, but also expands the knowledge by demonstrating its adverse links with students' subjective well-being. Importantly, the findings reveal an indirect association between teacher discrimination and school belonging through attitudes towards immigrants' equal rights, highlighting the importance of solidarity-oriented attitudes as a

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mechanism connecting experiences of exclusion to socio-emotional adjustment. The observed differences between high-SES and low-SES ethnic majoritized students in the association between teacher discrimination and subjective well-being further indicate that majoritized students' affective responses to discrimination may be shaped by the socioeconomic resources available to them. Broadly, these findings also underscore that teacher discrimination carries costs beyond those directly targeted. Sustaining inclusive, culturally responsive approaches that promote harmonious intergroup relations within schools can therefore be conceived as a key pathway for fostering socioemotional adjustment among ethnic minoritized and majoritized adolescents.

Author Contributions

Savaş Karataş: conceptualization, methodology, software, data curation, investigation, writing – original draft, writing – review and editing, formal analysis, funding acquisition, visualization. **Thomas Wilke:** conceptualization, investigation, writing – original draft, writing – review and editing, funding acquisition. **Ingrid Schoon:** conceptualization, investigation, funding acquisition, writing – original draft, writing – review and editing.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The dataset used in this study is available from the OECD PISA 2018 Database: https://www.oecd.org/en/data/datasets/pisa-2018-database.html.

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