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The paradoxical effect of emotional acculturation in discriminatory contexts: School adjustment of immigrant minority youth

Alba Jasini[1*+], Anouck Cochez[1+], & Batja Mesquita[1*]

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[1]University of Leuven.
*Corresponding authors. Please address correspondence to Alba Jasini, alba.jasini@kuleuven.be or Batja Mesquita, mesquita@kuleuven.be, Center for Social and Cultural Psychology, University of Leuven, Tiensestraat 102, box 3727, 3000, Leuven, Belgium.
+Alba Jasini and Anouck Cochez contributed equally to this work and share first authorship.

When individuals of immigrant-descent engage in the majority culture, they acculturate. Most research has focused on explicit acculturation processes (i.e., acculturation orientations towards the majority and heritage cultures) and found their effects on adjustment to be modest and inconsistent. The current study sheds light on the understudied impact of *implicit* acculturation of emotions - i.e., the extent to which immigrant minorities adopt the majority culture emotion norms, without necessarily being aware that they do – on minorities' adjustment *over time*. In addition, it considers the role of perceptions of discrimination in the acculturation *context*. A 2-year longitudinal study with 1588 minority in 68 secondary schools in Belgium revealed that emotional acculturation positively predicted minorities' majority contact over time, yet it negatively predicted their school engagement over time (i.e., motivation, behavioral engagement, school compliance), particularly among immigrant-descent students who perceived high levels of discrimination at school. Therefore, emotional acculturation may have liabilities, in addition to benefits. Future research should further investigate the (context-dependent) impact of implicit acculturation processes, such as emotional acculturation. It is particularly important to understand under what circumstances, and why, implicit acculturation turns a potential benefit into a liability.

Keywords: emotional acculturation, immigrant minority, discrimination, adjustment, school

1. INTRODUCTION

Immigrants and immigrant-descent minority individuals undergo acculturative changes when they come in contact with a new/dominant culture. Two types of acculturative changes have been distinguished (Doucerain, 2019; Mesquita et al., 2019). On the one hand, immigrant minorities position themselves explicitly with regard to both the dominant culture and the culture of heritage; they adopt positive/negative attitudes towards, and identify/disidentify with the majority and heritage cultures (Berry & Sam, 1997; Haritatos & Benet-Martínez, 2002; Phinney, 1999). We have referred to these processes as 'explicit acculturation' (Mesquita et al., 2019). On the other hand, as immigrants repeatedly engage in the tasks and interactions of a new culture, their minds appear to wire themselves to better meet the requirements of these new contexts (Doucerain, 2019; Kitayama et al., 2009; Mesquita et al., 2019). Psychological changes of basic processes such as cognition, motivation, personality, and emotion are the result. These psychological adaptations that occur in response to the challenges of the new cultural context may not be subject to conscious awareness. This is why we have referred to them as 'implicit acculturation.'

A major research assumption has been that processes of acculturation influence the psychological and social adjustment of immigrants and immigrant-descent minority individuals to the majority culture (Berry, 1997; Berry & Sam, 1997; Ward & Kennedy, 1994). Yet, most of the existing research has focused on the outcomes of *explicit* acculturative changes only (e.g., Abu-Rayya et al., 2023; Berry, Phiney, et al., 2006; Ward & Kennedy, 1994; Ward & Szabó, 2023) , and the evidence is modest at best, and inconsistent (e.g., Berry, Phiney, et al., 2006; Bierwiaczonek & Kunst, 2021; Mesquita et al., 2019; Nguyen & Benet-Martinez, 2013; Ward & Kennedy, 1994). Furthermore, evidence consists of predominantly cross-sectional and correlational data and is, therefore, inconclusive with regard to the direction of the association between acculturation processes and psychological and social adjustment (Kunst, 2021).

In this paper, we study the adjustment outcomes of *emotional* acculturation, an aspect of implicit acculturation, over time. We are broadly interested in the benefits and potential costs of emotional fit among youth of immigrant minority background attending ethnically diverse schools. As in previous research, we conceptualize emotional fit as the fit between minorities' emotional patterns and the normative emotional patterns in the majority culture (e.g., De Leersnyder et al., 2011; Jasini, De Leersnyder, Ceulemans, et al., 2023).

1.1 Emotional Acculturation and its Associated Adjustment Outcomes

Emotional acculturation can be understood against the background of cultural differences in the prevalent emotional patterns (e.g., Kitayama et al., 2006; Mesquita et al., 2016). There is an initial misfit between the prevalent emotion patterns in the culture of origin (or heritage) and those in the new or dominant culture. We have found that the degree to which individuals from immigrant-descent engage with the dominant culture (e.g., time in the new culture, number of dominant culture friends) is in fact associated with their emotional acculturation; i.e. the fit of their patterns of emotions with the normative patterns of the dominant culture (De Leersnyder et al., 2011; Jasini et al., 2019; Jasini, De Leersnyder, Ceulemans, et al., 2023; Jasini, De Leersnyder, Gagliolo, et al., 2023).

There is good reason to assume that emotional acculturation benefits the psychological and social adjustment outcomes of immigrant minorities. Emotion acculturation –i.e., having emotions that match the norm of the majority culture—may provide minorities with tools to understand and fulfil the cultural demands in their everyday life. Emotional fit with culture may enable minorities to view social situations

through the lenses of the majority culture members but may also give them a sense of belonging or of being part of the culture, which in turn may lead to adaptive behaviors in contexts emphasizing the majority culture values.

There are additional reasons to assume emotional acculturation may have positive outcomes. First, emotions play an important role in forging and maintaining good relationships with others (Boiger & Mesquita, 2012; Fischer & Manstead, 2016; Parkinson, 1996; Parkinson et al., 2005). Second, emotional similarity is beneficial, even outside of migration contexts. Emotional similarity, whether between close friends, the partners of romantic relationships, or the members of work teams, has been linked to relationship satisfaction and (group) identification (e.g., Anderson et al., 2003; Delvaux et al., 2015; Rosenblatt & Greenberg, 1988; Schachter, 1959). Furthermore, having emotions that fit those of a group also predicts self-categorization as a group member (Livingstone et al., 2011), which in the case of immigrant minorities, may be consequential for their sense of belonging in the majority culture group (e.g., Phinney et al., 2001). Consistent with previous research, studies on individuals from immigrant-descent have found that their fit to the normative emotions in the majority culture is associated with relational and health benefits (Consedine et al., 2014; Jasini et al., 2018, 2019; Jasini, De Leersnyder, Gagliolo, et al., 2023).

Evidence for the benefits of minorities' emotional fit with the majority culture norm is still limited in scope and largely based in cross-sectional research. One exception is longitudinal research with middle school students from immigrant-descent (Jasini, De Leersnyder, Gagliolo, et al., 2023). The study yielded bidirectional longitudinal associations between immigrant-descent minority students' emotional fit to the majority norm and their contact with majority peers the next year. Emotional acculturation (measured as fit with the majority norm) predicted contact with majority peers one year later, and was also predicted by contact with majority a year earlier. The current study both replicates and expands on these results, and does so in a school context.

1.2 Potential Benefits and Costs of Emotional Fit in Multicultural Secondary Schools

Acculturation processes are domain-specific: In the realm of explicit acculturation, both the types of acculturation orientations, and their respective links to adjustment outcomes have been found to be dependent on the specific context (e.g., Arends-Tóth & van de Vijver, 2004; Karataş, 2025). We expect implicit acculturation that results from adjustments to the task requirements of the sociocultural context, to be equally domain-specific. For this reason, and given pragmatic considerations, we chose to conduct our research in one particular domain: the school context.

Understanding the consequences that emotional acculturation may have for minority youth in school contexts is important considering that the school may be the primary and most significant majority culture context for minority youth. School is the context that provides continuous opportunity for contact with majority culture members and exposure to the majority culture norms (Schachner et al., 2018; Vedder & Motti-Stefanidi, 2016). Here we focus specifically on the link between minorities' emotional fit and social outcomes in the context of secondary schools. Acculturation research has referred to these outcomes as 'sociocultural adjustment' – i.e., the extent to which one has the cultural competence to navigate effectively and function well in the social networks and social situations in the majority culture (Berry, Phiney, et al., 2006; Searle & Ward, 1990; Ward & Kennedy, 1999).

In the context of the school, emotional fit may help minorities to meet the cultural tasks in that particular context and function well in peer relationships, the learning domain, as well as in the students' relationship with the school in

general (i.e., complying with the values, norms and expectations of the school). Alongside the previously documented role of emotional fit in peer relationships (Jasini, De Leersnyder, Ceulemans, et al., 2023) we expect emotional fit to positively predict the extent to which minorities like being in school and are motivated to learn, feel active and engaged rather than passive and disengaged in the learning process, and show behaviors that are in line with the prescribed school norms (cf. Stephens et al., 2012). School motivation, school behavioral engagement and disengagement, and norm-related behaviors at school are considered some of the most important indicators of socio-cultural adjustment of minority youth in schools (Bond et al., 2007; Chase et al., 2014; Dotterer & Lowe, 2011; Finn & Rock, 1997). While the role of explicit acculturation processes on these indicators has been studied (Baysu et al., 2014; Benner et al., 2018; Civitillo et al., 2024), this study is the first to examine the role of implicit acculturation processes such as emotional acculturation on sociocultural adjustment.

Finally, we explore whether sociocultural adjustment outcomes of emotional acculturation differ depending on perceived school climate. Perceived discrimination may harm minority students' willingness to interact with majority culture members as well as to engage in educational tasks (Civitillo et al., 2023, 2024; Cooper & Sánchez, 2016; Hood et al., 2017; Titzmann & Jugert, 2015; Verkuyten et al., 2019). Relatedly, previous research has shown that whereas a strong orientation towards the majority can be positively associated with school adjustment (e.g., high motivation, good school engagement, and low school maladaptive behaviors; Berry, Phinney, et al., 2006; Hillekens et al., 2023; Schachner et al., 2016, 2018), in contexts where students report high levels of perceived discrimination, having a strong orientation towards both the majority culture and the heritage culture, can become a liability, and is associated with lower academic adjustment and achievement (Baysu et al., 2011). One reason may be that perceptions of discrimination become more hurtful as minority youth adopt the majority culture norms and belong, as they may start comparing themselves to their majority peers, noticing their disadvantage to them (Verkuyten, 2024). This may lead to disengagement.

1.3 The Present Study

In the present study, we focus on the longitudinal sociocultural adjustment consequences of emotional acculturation for immigrant-origin minority youth in a school context. We are interested in both benefits and costs of emotional acculturation in immigrant minority youth and how these relate to varying levels of perceived discrimination at school. Our *first hypothesis* is that emotional fit with the majority culture is positively associated with sociocultural adjustment over time. As part of testing this hypothesis, we seek to replicate findings from previous research that the emotional acculturation of minority students of immigrant-descent predicts their contact with majority peers over time. As another part, we test the role of minority students' emotional acculturation in longitudinally predicting their school motivation/engagement, another aspect of their sociocultural adjustment that has not been studied in conjunction with emotional acculturation. Our *second hypothesis* is that the longitudinal association between minority students' emotional fit and their sociocultural adjustment outcomes is negatively affected to the extent they perceive discrimination in school. Emotional acculturation may be less adaptive or even disruptive when perceived discrimination is high.

2. METHOD

2.1 Participants

Participants were 1588 minority students who attended waves 1 and 2 of the Leuven-CILS

study.[1] Minority students were classified as such when they, or at least one of their parents or [2]grandparents, were born in a non-neighboring country to Belgium. We specifically focused on non-neighboring minorities based on findings from previous research showing that whereas minorities from neighboring countries to Belgium (i.e., France, Germany, Luxembourg, the Netherlands, the UK) do not differ in their emotional fit to the majority culture compared to the majority group (Jasini et al., 2019), minorities from non-neighboring countries had on average a lower emotional fit than the majority culture members.

To account for potential contact with majority members within the school context, we excluded participants from schools where 60% or more of the student body consisted of minority students (*N* = 626 minority students excluded). Additionally, to ensure consistency in the school context over the course of the study, we excluded participants who changed schools between the two data collection waves (*N* = 13 minority students excluded).

The final sample included in the analyses is 949 minority students from 53 secondary schools. On average, participants were 14.93 years old in wave 1 of data collection (range 12.57 – 19.41 years old; *SD* = 1.27). Fifty-five % of the participants identified themselves as female (*N* = 519), 43% identified themselves as male (*N* = 412) and 2% of the participants did not report their gender (*N* = 18). Of the final sample, 28% were foreign-born (i.e., 1st generation minorities, *N* = 264). Another 34% were second generation minorities, with both parents born outside of Belgium (*N* = 326). A total of 25% were classified as 2.5 generation, with one parent born abroad and one born in Belgium (*N* = 234). Additionally, 7% were third generation, with parents born in Belgium and at least one foreign-born grandparent (*N* = 64). For 6% of the minority participants, generational status could not be determined due to missing data (*N* = 61). In terms of country of origin, most participants came from Poland (37%, *N* = 353), Turkey (24%, *N* = 224), and Morocco (21%, *N* = 197). The remaining participants originated from a range of other countries (e.g., Italy, Congo; 15%, *N* = 144). For 3% of participants (*N* = 31), the country of origin could not be determined due to missing data. About half of the participants reported that their mothers and fathers had a lower than higher vocational education or university degree (52% of mothers completed high school [*N* = 493]; 51% of fathers completed high school [*N* = 488]).

2.2 Procedure

For this study, we utilized data from the first two waves of the Leuven-CILS study (Leuven Children of Immigrants Longitudinal Study; Phalet et al., 2018). The Leuven-CILS study, which took place from 2012 throughout 2015, had a three-wave longitudinal design (i.e., with one year between two consecutive data collection waves) and aimed to uncover the processes behind the achievement gap between majority and immigrant minority students in Flemish secondary schools. Both majority and minority students were recruited through a stratified random sampling method, departing from a list of secondary schools provided by the Flemish Ministry of Education (Phalet et al., 2018). Before data collection, the ethical considerations and guidelines were approved by the ethical committee for the social sciences at KU Leuven. Informed active consent was obtained from participants as well as from their parents, teachers, and school administrators. Participants completed questionnaires in Dutch, their language of instruction, during class time and under the supervision of a teacher and a research assistant.

[1] A sample of 1419 majority youth from the same schools was also recruited for this study. Their data was used to compute minorities' emotional fit scores.

2.3 Materials

2.3.1 Emotional Fit With Majority Culture

Participants' emotional fit with the majority emotion norms was assessed in each wave using the Emotional Patterns Questionnaire (EPQ; De Leersnyder et al., 2011). Participants were asked to recall two emotional experiences in the school context that aligned with two out of four different prompts. The prompts varied in two main dimensions of emotional experience (i.e., Kitayama et al., 2000); valence (positive or negative) and social engagement of the situation (i.e., socially engaging or a socially disengaging). Half of the participants received two socially engaging prompts (i.e., "Think about an event that you experienced at school not so long ago, as a result of which you felt good/bad about your relationships with other people"). The other half were asked to recall two socially disengaging emotional situations (i.e., "Think about an event that you experienced at school not so long ago, as a result of which you felt good/bad about yourself").

For each of the two recalled emotional experiences, participants were asked to rate the degree in which they experienced a list of 15 emotions on a Likert scale ranging from 1 (*very much*) to 5 (*not at all*): I felt good, happy, sad, proud, guilty, connected, frustrated, elated, ashamed, angry, surprised, indebted, reliant, disappointed, and respectful. This specific list was constructed to capture positive vs. negative emotions, as well as socially engaging (emotions that mark relatedness; e.g., "I felt ashamed") and socially disengaging emotion words (emotions that mark individuality; e.g., "I felt proud").

The "I felt good" and "I felt sad" emotion items were omitted as they served as general checks (i.e., whether participants described an emotional prompt that aligned with the prompt in terms of valence). We conducted a Simultaneous Component Analysis (SCA; De Roover et al., 2012) to assess the measurement equivalence of the remaining 13 emotion items across the majority and minority group. The results showed that "I felt surprised" was not structurally equivalent across both groups and was therefore omitted from further analyses (see Jasini et al., 2019; Jasini, De Leersnyder, Gagliolo, et al., 2023 for an overview of the analysis).

We computed participants' emotional fit scores at each wave by means of profile correlations. In a first step, for each type of situation, we computed the average 12-emotion item profile of all the majority participants in the sample by calculating the average intensity on each of the 12 emotion items across the majority sample. Next, we correlated each participant's emotional profile with the average majority profile of the corresponding situation. Thus, up to two emotional fit scores were computed for every participant, one emotional fit score for positive situations, and one for negative situations. We calculated emotional fit scores only for participants who rated at least nine out of 12 emotion items (i.e., for participants with valid data on 75% of the variables needed for the correlation analysis) to ensure that we get reliable correlation scores. We further transformed these two correlation scores into Fisher z-values and computed their average. At the end of this procedure, each participant had one final emotional fit score that was included in the analyses.

2.3.2 Perceived Discrimination at School

We captured participants' perceived discrimination at school at wave 1 via four items, introduced by the prompt "In my school…": (1) "different cultures and religions are treated with respect", (2) "they take strong action against racism and discrimination", (3) "teachers treat all students equally regardless of their religion or descent", and (4) "teachers say that you shouldn't discriminate against students with another culture or origin" (α = .66; adapted from Teachers' Multicultural Attitude Scale, Thijs et al., 2012; and used in previous studies, Baysu et al., 2024). All items were rated on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*). These items were averaged to denote the

participants' individual perceptions of discrimination at school.

2.3.3 Majority Contact

Contact with majority members was measured with two items: (1) "How many of your friends are of Belgian origin" (rated on a Likert scale ranging from 1 [*almost all or all*] to 5 [*almost none or none at all*]) and (2) "How often do you spend your school breaks with students of Belgian origin?" (rated on a Likert scale ranging from 1 [*every day*] to 5 [*never*]). The ratings were reverse-scored and combined into a composite index (Spearman-Brown coefficients were .71 at wave 1 and .66 at wave 2) with higher scores reflecting higher majority contact.

2.3.4 School Engagement

School engagement was assessed separately for *motivation in school* ([1] "I like to learn new things in class", [2] "I feel good in class", and [3] "I like to be in class"; wave 1 α = .71, wave 2 α = .73), *behavioral engagement* ([1] "I work as hard as I can in class", [2] "I listen carefully during the class", and [3] "I pay attention in class"; wave 1 α = .80, wave 2 α = .83), *behavioral disengagement* ([1] "In class my thoughts easily wander away", [2] "I often think of other things during class", and [3] "I do not really do my best at school"; wave 1 α = .63, wave 2 α = .61) (the items of these three scales were adapted from the Engagement versus Disaffection with Learning scale; Skinner et al., 2008). The items were rated on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For each of the three constructs, the ratings were averaged so that each participant had one score for motivation in school, one score for behavioral engagement, and one score for behavioral disengagement. We furthermore assessed *non-compliant behavior at school* by means of three items (How often do you [1] "get a punishment in school?", [2] "skip a lesson without permission?", and [3] "come late to school?"; wave 1 α = .55, wave 2 α = .54) which were adapted from (Wang et al., 2011). The items were rated on a Likert scale ranging from 1 (*never*) to 5 (*every day*). The ratings were averaged to denote participants' non-compliant behavior at school.

2.3.5 Control Variables

We controlled for participants' age reported at wave 1 and gender (dummy-coded with "boy" as a reference group).[3]

2.4 Analytical Strategy

We tested two hypotheses for each outcome using multilevel regressions where students were nested in schools. In each regression model, we used outcome variables that were measured at the second wave, and predictors and control variables that were measured at wave 1.

To test H1, we included emotional fit at wave 1 as a predictor of the outcome variables (i.e., majority contact and school engagement), while we controlled for age, gender, and the outcome variable measured at wave 1. To test H2, we carried out multilevel moderation analyses, in which we included an interaction term between perceived discrimination at wave 1 and emotional fit at wave 1 as predictor of outcomes at wave 2, controlling for age, gender, and outcome variable measured at wave 1. Perceived discrimination was modeled at the individual level. For all analyses, we centered the continuous predictors around the grand mean. In these analyses, we aimed to test only the time-lagged effect of emotional fit and perceived discrimination on adjustment outcomes and therefore, we did not control for the autoregressive effects

[3]In exploratory analyses, we controlled for the majority proportion in school, which was computed as a fraction representing the number of majority participants in the study sample in wave 1, relative to all participants in wave 1. The analyses showed the same pattern of results, with the exception that the association between emotional fit and majority contact becomes marginally significant in the predictor-and-control model (Hypothesis 1)

between emotional fit at wave 1 and 2, and between perceived discrimination at wave 1 and 2. We established that the hypotheses were met when (i) the model with predictors or the interaction fit the data better than the preceding model and (ii) when the associations (i.e., as indicated by regression coefficients) were found to be significant and in the hypothesized direction.

To account for potential school-level influences, we also conducted additional analyses in which perceived discrimination was modeled at the second level rather than the individual level. First, we examined whether school-level perceptions of discrimination moderated the association between emotional fit and the outcomes. Next, we examined the original individual-level interaction model and included the school-level interaction as an additional control. The pattern of findings remained consistent and the conclusion reported below were unaffected by the inclusion of school-level perceptions. The results of these analyses are reported in the supplementary materials at https://github.com/AnouckCochez/Paradoxical-Effect-of-Emotional-Acculturation.

All statistical analyses[4] were conducted in R version 4.3.2 (R Core Team, 2023). The multilevel moderation analyses were performed using the lme4 package (version 1.1-35.5; Bates et al., 2015). Simple slope analyses were conducted with the interactions package (version 1.2.0; Long, 2023). Data preprocessing and centering were performed using dplyr (version 1.1.4; Wickham et al., 2023) and misty (version 0.6.8; Revelle & Wilcox, 2021). Additional packages used for descriptive statistics, visualization, and reporting included psych (version 2.4.6.26; Revelle, 2022), ggplot2 (version 3.5.1; Wickham, 2016), patchwork (version 1.3.0; Pedersen, 2020), cowplot (version 1.1.3; Wilke, 2020), and gridExtra (version 2.3; Auguie, 2017). Data were imported using the readxl package (version 1.4.3; Wickham & Bryan, 2023).

2.5 Power Considerations

We did not perform power analyses prior to the data collection. However, our sample size is appropriate for estimating multilevel regression models (Hox et al., 2017; Snijders & Bosker, 2012). In this study, we followed a 2-level design with a final sample of 949 minority students nested in 53 schools, with an average of 18 minority students per school. Even though we did not conduct posthoc and sensitivity power analyses since they may often lead to biased results and interpretations (Dziak et al., 2021), following several rules of thumb, we expected the total sample size and its distribution across schools to allow for an unbiased estimation of the level-1 fixed effects. Specifically, our sample exceeds the number of 30 – 50 level-2 clusters (i.e., schools), which is the commonly accepted threshold for ensuring accurate estimation of the standard errors of fixed effects (Hox et al., 2017; Snijders & Bosker, 2012). The number of clusters in combination with the large sample of participants allow for the detection of small level-1 main effects (Maas & Hox, 2005; Snijder et al., 2005). With regard to level-1 interaction effects, the average cluster size is slightly smaller than the recommended thresholds for a balanced design (e.g., at least 20-30 units per cluster for at least 30-50 clusters), especially in the case of relatively high intraclass correlation (Scherbaum & Ferreter 2009). However, given the large sample size spread in an adequate number of clusters, we expect our study to be sufficiently powered to detect small to medium interaction effects at level 1. Very small interaction effects may have not been detected.

3. RESULTS

We tested two hypotheses (H1 and H2) for each of the five outcome variables. The results are organized by outcome variable below.

[4] The R script needed to reproduce the analyses can be found on https://github.com/AnouckCochez/Paradoxical-Effect-of-Emotional-Acculturation.git

Descriptive statistics and multilevel correlations among the study variables are presented in Table 1.

3.1 Majority Contact

3.1.1 Hypothesis 1: Emotional Fit Positively Predicts Minorities' Contact With Majority Over Time.

The model with emotional fit at wave 1 as predictor of majority contact at wave 2, controlling for participants' age, gender, and their majority contact at wave 1, fit the data better than the controls-only model (Δ-$2LL(1) = 4.16$, $p = .042$). Minorities' emotional fit positively predicted their contact with majority in the following year $t(472.24) = 2.05$ (see Table 2, Predictor model).

3.1.2 Hypothesis 2: Perceived Discrimination at School Alters the Longitudinal Association Between Minorities' Fit and Their Contact With Majority.

The model with the interaction effect between perceived discrimination at school at wave 1 and emotional fit at wave 1, did not fit the data better than the predictor-and-controls model (Δ-$2LL(2) = 2.98$, $p = .226$). No significant interaction effect was found between perceived discrimination and minorities' emotional fit on their majority contact over time, $t(486.22) = .65$ (See Table 2, Moderation model).

3.2 Motivation at School

3.2.1 Hypothesis 1: Emotional Fit Positively Predicts Minorities' Motivation at School Over Time.

The model with emotional fit at wave 1 as predictor of minorities' motivation at school at wave 2, controlling for participants' age, gender, and their motivation at school at wave 1, fit the data better than the controls-only model (Δ-$2LL(1) = 6.98$, $p = .008$). Minorities' emotional fit negatively predicted their motivation at school in the following year, $t(507.09) = -2.65$ (see Table 3, Predictor model).

3.2.2 Hypothesis 2: Perceived Discrimination at School Alters the Longitudinal Association Between Minorities' Fit and Their Motivation at School.

The model with the interaction effect between perceived discrimination at school at wave 1 and emotional fit at wave 1, fit the data better than the predictor-and-controls model (Δ-$2LL(2) = 8.73$, $p = .013$). A significant interaction effect was found between perceived discrimination and minorities' emotional fit on their motivation at school over time, $t(483.43) = -2.78$ (See Table 3, Moderation model). A plot of the interaction (see Panel A of Figure 1) and simple slopes analyses showed that minorities' emotional fit negatively predicted minorities' motivation at school only when the discrimination at school at wave 1 was perceived to be moderate ($\beta = -.17$, $p = .010$, 95% CI [-.30, -.05]) and high ($\beta = -.35$, $p < .001$, 95% CI [-.53, -.18]), but not when the discrimination at wave 1 was perceived to be low ($\beta = .00$, $p = .970$, 95% CI [-.18, .18]).

3.3 Behavioral Engagement at School

3.3.1 Hypothesis 1: Emotional Fit Positively Predicts Minorities' Behavioral Engagement at School Over Time.

The model with emotional fit at wave 1 as predictor of minorities' behavioral engagement at school at wave 2, controlling for participants' age, gender, and their behavioral engagement at school at wave 1, fit the data better than the controls-only model (Δ-$2LL(1) = 7.06$, $p = .008$). Minorities' emotional fit negatively predicted their behavioral engagement at school in the following year, $t(506.78) = -2.67$ (see Table 4, Predictor model).

Table 1

Descriptive Statistics and Multilevel Correlations

	Variable	*M*	*SD*	Range	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Emotional fit at wave 1	0.70	0.47	(-0.92, 2.06)													
2.	Perceived discrimination at wave 1	2.24	0.80	(1, 5)	-.05 [-.14, .03]												
3.	Majority contact at wave 2	3.39	1.21	(1, 5)	.10* [.02, .19]	-.15*** [-.21, -.08]											
4.	Motivation at school at wave 2	3.61	0.75	(1, 5)	-.12** [-.20, -.04]	-.15*** [-.21, -.08]	.13*** [.06, .19]										
5.	Behavioral engagement at wave 2	3.55	0.70	(1, 5)	-.11* [-.19, -.02]	-.13*** [-.19, -.06]	.07* [.01, .14]	.54*** [.49, .58]									
6.	Behavioral disengagement at wave 2	2.99	0.78	(1, 5)	.04 [-.04, .13]	.07* [.01, .14]	-.02 [-.09, .04]	-.26*** [-.32, -.20]	-43*** [-.48, -.38]								
7.	Non-compliant behavior at wave 2	1.64	0.54	(1, 4)	.09* [.00, .17]	.05 [-.01, .12]	-.10** [-.16, -.03]	-.21*** [-.27, -.14]	-.31*** [-.36, -.25]	.26*** [.20, -.32]							
8.	Age	14.93	1.27	(12.57, 19.41)	.04 [-.05, .12]	.03 [-.04, .10]	-.02 [-.09, .04]	.06 [.00, .13]	.06 [.00, .13]	-.03 [.20, -.32]	.03 [-.04, .09]						
9.	Gender			(0, 1)	.03 [-.06, .11]	-.01 [-.08, .05]	-.04 [-.10, .03]	-.01 [-.08, .05]	.02 [-.04, .09]	-.04 [-.10, .03]	-.15*** [-.21, -.09]	.08* [.01, .14]					
10.	Majority contact at wave 1	3.49	1.27	(1, 5)	.03 [-.06, .11]	-.11*** [-.18, -.05]	.50*** [.45, .55]	.09** [.02, .16]	.06 [.00, .13]	-.03 [-.10, .03]	-.09* [-.15, -.02]	-.08* [-.14, -.01]	-.04 [-.11, .02]				
11.	Motivation at school wave 1	3.84	0.73	(1, 5)	-.03 [-.11, .06]	-.25*** [-.31, -.18]	.10** [.03, .16]	.46*** [.40, .51]	.31*** [.26, .37]	-.18*** [-.24, -.11]	-.14*** [-.20, -.07]	-.02 [-.09, .04]	.02 [-.04, .09]	.08* [.02, .15]			
12.	Behavioral engagement wave 1	3.78	0.68	(1, 5)	.02 [-.07, .10]	-.19*** [-.25, -.12]	.03 [-.04, .09]	.28*** [.22, .34]	.52*** [.47, .56]	-.34*** [-.39, -.28]	-.25*** [-.31, -.19]	.00 [-.07, .06]	.10** [.04, .17]	.07* [.00, .14]	.47*** [.41, .51]		
13.	Behavioral disengagement at wave 1	2.69	0.79	(1, 5)	.01 [-.07, .10]	.13*** [.07, .20]	.04 [-.03, .10]	-.24*** [-.30, -.18]	-.34** [-.40, -.28]	.45*** [.39, .50]	.23*** [.16, .29]	-.02 [-.05, .08]	-.08* [-.15, -.02]	-.00 [-.07, .07]	-.29*** [-.35, -.23]	-.49*** [-.53, -.44]	
14.	Non-compliant behavior wave 1	1.53	0.52	(1, 5)	.02 [-.07, .10]	.17*** [.10, .23]	-.02 [-.09, .04]	-.17*** [-.24, -.11]	-.25*** [-.31, -.19]	.26*** [.19, -.32]	.57*** [.52, .61]	.10** [.04, .17]	-.16*** [-.22, -.09]	-.04 [-.11, .03]	-.27*** [-.33, -.21]	-.36*** [-.42, -.30]	.37*** [.31, .42]

Note. *M* and *SD* represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. *$p < .05$, ** $p < .01$, ***$p < .001$.

Table 2

Predicting Minorities' Majority Contact at Wave 2: Effects of Emotional Fit at Wave 1 and the Interaction with Perceived Discrimination, Controlling for Age, Gender, and Majority Contact at Wave 1

Effect	Null model		Control model		Predictor model		Moderation model	
	Estimate	*p*	Estimate	*p*	Estimate	*p*	Estimate	*p*
Fixed effects								
Intercept	3.62	< .001	3.56	< .001	3.56	< .001	3.57	< .001
	[3.43, 3.83]		[3.43, 3.70]		[3.43, 3.70]		[3.44, 3.71]	
Gender			-0.13	.119	-0.14	.090	-0.15	.082
			[-0.30, 0.03]		[-0.31, 0.02]		[-0.32, 0.02]	
Age			0.04	.294	0.04	.308	0.04	.295
			[-0.03, 0.11]		[-0.03, 0.10]		[-0.03, 0.11]	
Majority contact at wave 1			0.62	< .001	0.62	< .001	0.61	< .001
			[0.55, 0.70]		[0.55, 0.70]		[0.54, 0.69]	
Emotional fit at wave 1					0.18	.041	0.17	.051
					[0.01, 0.36]		[0.00, 0.35]	
Perceived discrimination at wave 1							-0.09	.113
							[-0.19, 0.02]	
Perceived discrimination at wave 1 * Emotional fit at wave 1							0.07	.515
							[-0.15, 0.30]	
Random effects								
Intercept (school)	0.52		0.11		0.10		0.13	
	[0.37, 0.71]		[0.00, 0.27]		[0.00, 0.26]		[0.00, 0.28]	
Residual	1.10		0.92		0.92		0.91	
	[1.03, 1.18]		[0.86, 0.98]		[0.86, 0.98]		[0.85, 0.97]	
Fit statistics								
-2*loglikelihood	1542.6		1322.0		1317.9		1314.9	
AIC	1548.6		1334.0		1331.9		1332.9	
BIC	1561.2		1359.2		1361.3		1370.7	

Note. Results from four linear mixed-effects models predicting minorities' majority contact at wave 2. The Null model only accounts for the grouping variable (schools). The Control model additionally controls for age, gender, and majority contact at wave 1. Unstandardized regression coefficients are presented for the fixed effects. Standard deviations are reported for the random intercept and residuals. Confidence intervals are shown in square brackets. All models include 49 schools (grouping variable) and 493 students.

Table 3

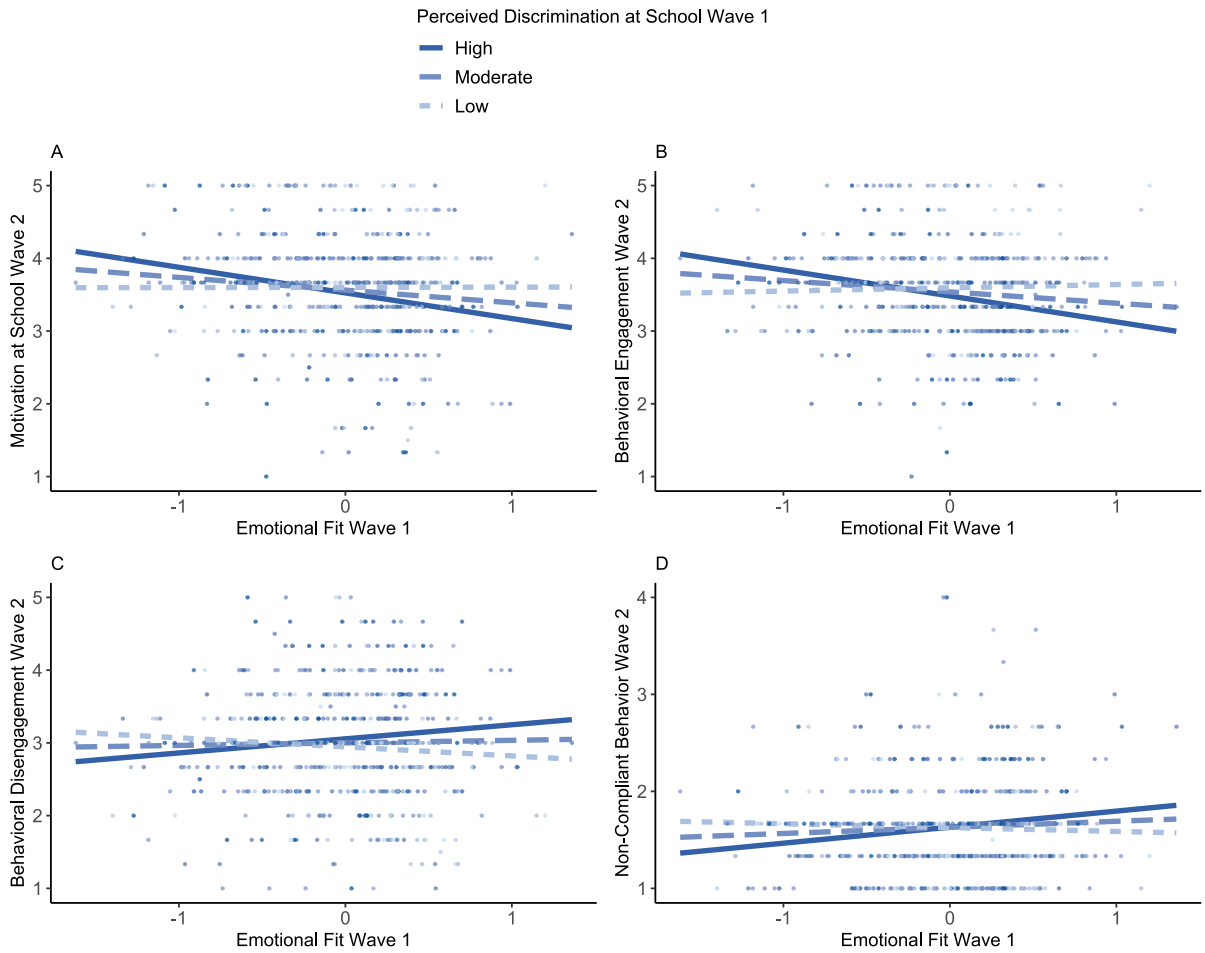
Predicting Minorities' Majority Motivation at Wave 2: Effects of Emotional Fit at Wave 1 and the Interaction with Perceived Discrimination, Controlling for Age, Gender, and Motivation at Wave 1

Effect	Null model		Control model		Predictor model		Moderation model	
	Estimate	*p*	Estimate	*p*	Estimate	*p*	Estimate	*p*
Fixed effects								
Intercept	3.56 [3.44, 3.67]	< .001	3.58 [3.47, 3.70]	< .001	3.58 [3.46, 3.69]	< .001	3.57 [3.45, 3.68]	< .001
Gender			-0.02 [-0.14, 0.11]	.789	-0.01 [-0.14, 0.11]	.849	0.00 [-0.13, 0.12]	.938
Age			0.04 [-0.01, 0.10]	.094	0.04 [-0.01, 0.10]	.085	0.05 [0.00, 0.10]	.064
Majority contact at wave 1			0.44 [0.36, 0.53]	< .001	0.44 [0.35, 0.52]	< .001	0.43 [0.34, 0.51]	< .001
Emotional fit at wave 1					-0.17 [-0.30, -0.04]	.008	-0.17 [-0.30, -0.05]	.007
Perceived discrimination at wave 1							-0.05 [-0.13, 0.03]	.216
Perceived discrimination at wave 1 * Emotional fit at wave 1							-0.23 [-0.39, -0.07]	.006
Random effects								
Intercept (school)	0.29 [0.17, 0.43]		0.20 [0.09, 0.33]		0.20 [0.09, 0.33]		0.20 [0.08, 0.32]	
Residual	0.72 [0.67, 0.77]		0.66 [0.62, 0.71]		0.65 [0.61, 0.70]		0.65 [0.61, 0.69]	
Fit statistics								
-2*loglikelihood	1146.7		1047.8		1040.8		1032.1	
AIC	1152.7		1059.8		1054.8		1050.1	
BIC	1165.4		1085.2		1084.5		1088.2	

Note. Results from four linear mixed-effects models predicting minorities' motivation at wave 2. The Null model only accounts for the grouping variable (schools). The Control model additionally controls for age, gender, and motivation at wave 1. Unstandardized regression coefficients are presented for the fixed effects. Standard deviations are reported for the random intercept and residuals. Confidence intervals are shown in square brackets. All models include 50 schools (grouping variable) and 508 students.

Figure 1

Interaction Between Perceived Discrimination at Wave 1 and Emotional Fit at Wave 1 as Predictor of Outcomes at Wave 2, Controlling for Age, Gender, and Outcome Variable Measured at Wave 1



Note. This figure shows the interaction between emotional fit at wave 1 (x-axis) and perceived discrimination at school at wave 1 (moderator) on school motivation at Wave 2 (Panel A), behavioral engagement at wave 2 (Panel B), behavioral disengagement at wave 2 (Panel C), and non-compliant behavior at wave 2 (Panel D). The lines represent simple slopes of emotional fit at three levels of perceived discrimination.

3.3.2 Hypothesis 2: Perceived Discrimination at School Alters the Longitudinal Association Between Minorities' Fit and Their Behavioral Engagement at School.

The model with the interaction effect between perceived discrimination at school at wave 1 and emotional fit at wave 1, fit the data better than the predictor-and-controls model (Δ-$2LL(2) = 16.17$, $p < .001$). A significant interaction effect was found between perceived discrimination and minorities' emotional fit on their behavioral engagement at school over time, $t(491.31) = -3.60$ (See Table 4, Moderation model). A plot of the interaction (see Panel B of Figure 1) and simple slopes analyses showed that minorities' emotional fit negatively predicted minorities' behavioral engagement at school only when the discrimination at school at wave 1 was perceived to be moderate ($\beta = -.16$, $p = .010$, 95% CI [-.27, -.05]) and high ($\beta = -.36$, $p < .001$, 95% CI [-.51, -.20]), but not when the discrimination at wave 1 was perceived to be low ($\beta = .04$, $p = .570$, 95% CI [-.11, .20]).

3.4 Behavioral Disengagement at School

3.4.1 Hypothesis 1: Emotional Fit Negatively Predicts Minorities' Behavioral Disengagement at School Over Time.

The model with emotional fit at wave 1 as predictor of minorities' behavioral disengagement at school at wave 2, controlling for participants' age, gender, and their behavioral disengagement at school at wave 1 did not fit the data better than the controls-only model (Δ-$2LL(1) = 0.203$, $p = .653$). Minorities' emotional fit did not predict their behavioral disengagement at school in the following year, $t(493.98) = 0.45$ (see Table 5, Predictor model).

3.4.2 Hypothesis 2: Perceived Discrimination at School Alters the Longitudinal Association Between Minorities' Fit and Their Behavioral Disengagement at School.

The model with the interaction effect between perceived discrimination at school at wave 1 and emotional fit at wave 1, did fit the data better than the predictor-and-controls model (Δ-$2LL(2) = 8.04$, $p = .018$). A significant interaction effect was found between perceived discrimination and minorities' emotional fit on their behavioral disengagement at school over time, $t(499.91) = 2.38$ (See Table 5, Moderation model). A plot of the interaction (see Panel C of Figure 1) and simple slopes analyses showed that minorities' emotional fit positively predicted minorities' behavioral disengagement at school only when the discrimination at school at wave 1 was perceived to be high ($\beta = .19$, $p = .040$, 95% CI [.01, .38]), but not when the discrimination at school at wave 1 was perceived to be moderate ($\beta = .03$, $p = .600$, 95% CI [-.09, .16]) or low ($\beta = -.12$, $p = .190$, 95% CI [-.31, .06]).

3.5 Non-Compliant Behavior at School

3.5.1 Hypothesis 1: Emotional Fit Negatively Predicts Minorities' Non-Compliant Behavior at School Over Time.

The model with emotional fit at wave 1 as predictor of minorities' non-compliant behavior at school at wave 2, controlling for participants' age, gender, and their non-compliant behavior at school at wave 1 did not fit the data better than the controls-only model (Δ-$2LL(1) = 2.62$, $p = .106$). Minorities' emotional fit was not associated with their non-compliant behavior at school in the following year, $t(500.70) = 1.63$ (see Table 6, Predictor model).

3.5.2 Hypothesis 2: Perceived Discrimination at School Alters the Longitudinal Association Between Minorities' Fit and Their Non-Compliant Behavior at School.

The model with the interaction effect between perceived discrimination at school at wave 1 and emotional fit at wave 1, fit the data better than the predictor-and-controls model (Δ-$2LL(2) = 7.00$, $p = .030$). A significant interaction effect was found between perceived discrimination and minorities' emotional fit on their non-compliant behavior at school over time, $t(490.98) = 2.67$ (See Table 6, Moderation model). A plot of the interaction (see Panel D of Figure 1) and simple slopes analyses showed that minorities' emotional fit positively predicted minorities' non-compliant behavior at

Table 4

Predicting Minorities' Majority Behavioral Engagement at Wave 2: Effects of Emotional Fit at Wave 1 and the Interaction with Perceived Discrimination, Controlling for Age, Gender, and Behavioral Engagement at Wave 1

Effect	Null model		Control model		Predictor model		Moderation model	
	Estimate	*p*	Estimate	*p*	Estimate	*p*	Estimate	*p*
Fixed effects								
Intercept	3.55	< .001	3.56	< .001	3.56	< .001	3.54	< .001
	[3.45, 3.64]		[3.46, 3.66]		[3.46, 3.66]		[3.45, 3.64]	
Gender			-0.02	.685	-0.02	.753	-0.01	.864
			[-0.13, 0.09]		[-0.13, 0.09]		[-0.12, 0.10]	
Age			0.04	.104	0.04	.093	0.04	.062
			[-0.01, 0.08]		[-0.01, 0.08]		[0.00, 0.09]	
Majority contact at wave 1			0.50	< .001	0.50	< .001	0.49	< .001
			[0.42, 0.57]		[0.42, 0.57]		[0.42, 0.57]	
Emotional fit at wave 1					-0.15	.008	-0.16	.006
					[-0.26, -0.04]		[-0.27, -0.05]	
Perceived discrimination at wave 1							-0.07	.034
							[-0.14, -0.01]	
Perceived discrimination at wave 1 * Emotional fit at wave 1							-0.26	< .001
							[-0.39, -0.12]	
Random effects								
Intercept (school)	0.22		0.18		0.17		0.17	
	[0.12, 0.35]		[0.10, 0.27]		[0.09, 0.27]		[0.09, 0.26]	
Residual	0.67		0.58		0.58		0.57	
	[0.63, 0.71]		[0.54, 0.62]		[0.54, 0.62]		[0.53, 061]	
Fit statistics								
-2*loglikelihood	1065.1		916.8		909.8		893.6	
AIC	1071.1		928.8		923.8		911.6	
BIC	1083.7		954.2		953.4		949.7	

Note. Results from four linear mixed-effects models predicting minorities' behavioral engagement at wave 2. The Null model only accounts for the grouping variable (schools). The Control model additionally controls for age, gender, and behavioral engagement at wave 1. Unstandardized regression coefficients are presented for the fixed effects. Standard deviations are reported for the random intercept and residuals. Confidence intervals are shown in square brackets. All models include 50 schools (grouping variable) and 508 students.

Table 5

Predicting Minorities' Majority Behavioral Disengagement at Wave 2: Effects of Emotional Fit at Wave 1 and the Interaction with Perceived Discrimination, Controlling for Age, Gender, and Behavioral Disengagement at Wave 1

Effect	Null model		Control model		Predictor model		Moderation model	
	Estimate	*p*	Estimate	*p*	Estimate	*p*	Estimate	*p*
Fixed effects								
Intercept	2.99 [2.92, 3.07]	< .001	3.00 [2.90, 3.11]	< .001	3.00 [2.90, 3.11]	< .001	3.01 [2.91, 3.12]	< .001
Gender			-0.02 [-0.14, 0.11]	.801	-0.02 [-0.14, 0.11]	.785	-0.02 [-0.15, 0.10]	.714
Age			-0.02 [-0.07, 0.03]	.464	-0.02 [-0.07, 0.03]	.465	-0.02 [-0.07, 0.03]	.418
Majority contact at wave 1			0.49 [0.42, 0.57]	< .001	0.49 [0.42, 0.57]	< .001	0.48 [0.41, 0.56]	< .001
Emotional fit at wave 1					0.03 [-0.10, 0.16]	.653	0.03 [-0.09, 0.16]	.597
Perceived discrimination at wave 1							0.07 [-0.01, 0.15]	.077
Perceived discrimination at wave 1 * Emotional fit at wave 1							0.20 [0.04, 0.37]	.018
Random effects								
Intercept (school)	0.09 [0.00, 0.21]		0.10 [0.00, 0.20]		0.10 [0.00, 0.21]		0.11 [0.00, 0.21]	
Residual	0.79 [0.75, 0.85]		0.69 [0.65, 0.74]		0.69 [0.65, 0.74]		0.68 [0.64, 0.73]	
Fit statistics								
-2*loglikelihood	1214.0		1075.5		1075.3		1067.3	
AIC	1220.0		1087.5		1089.3		1085.3	
BIC	1232.7		1112.9		1118.9		1123.3	

Note. Results from four linear mixed-effects models predicting minorities' behavioral disengagement at wave 2. The Null model only accounts for the grouping variable (schools). The Control model additionally controls for age, gender, and behavioral disengagement at wave 1. Unstandardized regression coefficients are presented for the fixed effects. Standard deviations are reported for the random intercept and residuals. Confidence intervals are shown in square brackets. All models include 50 schools (grouping variable) and 508 students.

Table 6

Predicting Minorities' Majority Non-Compliant Behavior at Wave 2: Effects of Emotional Fit at Wave 1 and the Interaction with Perceived Discrimination, Controlling for Age, Gender, and Non-Compliant Behavior at Wave 1

Effect	Null model		Control model		Predictor model		Moderation model	
	Estimate	*p*	Estimate	*p*	Estimate	*p*	Estimate	*p*
Fixed effects								
Intercept	1.64 [1.57, 1.71]	< .001	1.65 [1.59, 1.71]	< .001	1.65 [1.59, 1.72]	< .001	1.66 [1.60, 1.73]	< .001
Gender			-0.05 [-0.12, 0.03]	.208	-0.05 [-0.12, 0.02]	.188	-0.05 [-0.13, 0.02]	.158
Age			0.00 [-0.03, 0.03]	.970	0.00 [-0.03, 0.03]	.966	0.00 [-0.03, 0.03]	.937
Majority contact at wave 1			0.66 [0.58, 0.73]	< .001	0.65 [0.58, 0.73]	< .001	0.65 [0.57, 0.73]	< .001
Emotional fit at wave 1					0.06 [-0.01, 0.14]	.104	0.06 [-0.01, 0.14]	.102
Perceived discrimination at wave 1							0.00 [-0.04, 0.05]	.904
Perceived discrimination at wave 1 * Emotional fit at wave 1							0.13 [0.03, 0.23]	.008
Random effects								
Intercept (school)	0.14 [0.07, 0.23]		0.09 [0.01, 0.15]		0.09 [0.02, 0.16]		0.10 [0.04, 0.17]	
Residual	0.50 [0.47, 0.53]		0.40 [0.37, 0.42]		0.40 [0.37, 0.42]		0.39 [0.37, 0.42]	
Fit statistics								
-2*loglikelihood	756.1		522.8		520.2		513.2	
AIC	762.1		534.8		534.2		531.2	
BIC	774.8		560.2		563.8		569.3	

Note. Results from four linear mixed-effects models predicting minorities' non-compliant behavior at wave 2. The Null model only accounts for the grouping variable (schools). The Control model additionally controls for age, gender, and non-compliant behavior at wave 1. Unstandardized regression coefficients are presented for the fixed effects. Standard deviations are reported for the random intercept and residuals. Confidence intervals are shown in square brackets. All models include 50 schools (grouping variable) and 508 students.

school only when the discrimination at school at wave 1 was perceived to be high (β = .17, p < .001, 95% CI [.06, .27]), but not when the discrimination at school at wave 1 was perceived to be moderate (β = .06, p = .100, 95% CI [-.01, .14]) or low (β = -.04, p = .470, 95% CI [-.15, .07]).

4. DISCUSSION

The current research provides first evidence on the role of emotional acculturation, an aspect of implicit acculturation, on the sociocultural outcomes of immigrant-descent minority students in multicultural schools. Whereas explicit acculturation processes involve a conscious stance towards both the heritage and dominant cultures, implicit acculturation refers to (possibly unconscious) attunement of the basic psychological processes to the requirements of the relevant cultural environments (Mesquita et al., 2019). A growing literature suggests that the impact of explicit acculturation may be more limited than previously assumed (Bierwiaczonek & Kunst, 2021). To date, there has been very little research on the role of implicit acculturation in sociocultural adjustment; the current study addressed this gap. We assumed that implicit acculturation – the attunement of emotions, cognitions and motivations to the requirements and expectations of the relevant cultural context(s)—may be a better predictor of sociocultural outcomes than explicit acculturation. Whereas explicit acculturation may be interpreted as a person's *willingness* to be part of a culture, implicit acculturation may be closer to their *preparedness*.

In a longitudinal study among immigrant minority youth in ethnically diverse schools, we tested the expectation that emotional fit with the majority norm benefits minorities' sociocultural adjustment in school contexts. We also examined the role of perceived discrimination at school on the relationship between emotional acculturation and sociocultural adjustment.

In line with our expectation, and replicating previous research (Jasini, De Leersnyder, Ceulemans, et al., 2023), we showed that emotional fit in one year predicts minorities' frequent contact with majority peers in the school context the next year. Minority students' emotional fit predicted majority contact over time regardless of their perceived discrimination at school.

Second, and in contradiction with our expectation, minority students' level of emotional acculturation did not positively predict their school engagement and motivation the next year. However, as hypothesized, we found an effect of perceived discrimination at school. Emotional fit with the majority culture norm was a liability for those immigrant-descent students who perceived high discrimination. When discrimination was perceived to be high, emotional acculturation predicted worse school adjustment outcomes over time; to the extent that immigrant-descendant students had fitted well emotionally with the majority culture the year before, they reported lower levels of motivation and behavioral engagement as well as higher levels of non-compliant behaviors.

Whereas immigrant-descent individuals' emotional fit with the majority norm has been associated with majority contact, friendship, and health (Consedine et al., 2014; Jasini et al., 2018, 2019; Jasini, De Leersnyder, Gagliolo, et al., 2023), and has been found to predict majority contact over time (Jasini, De Leersnyder, Ceulemans, et al., 2023), the current study failed to find a beneficial role of emotional fit for immigrant minority youth's school engagement. To the contrary, our findings suggest that when perceiving high discrimination in school, having emotions that fit well with the emotion norms in the majority culture may backfire and be detrimental to school adjustment. One way of understanding this result is that students with high emotional acculturation, whose emotions are not distinguished from those of their majority peers, may compare themselves to their majority peers, and come to recognize their disadvantaged

position (Verkuyten, 2024). The disadvantage may feel particularly hurtful to those emotionally adjusted students who have adopted and mastered intricate aspects of the majority culture, and who may therefore feel, think and behave like majority culture members.

This leaves unexplained why there are no positive associations between emotional acculturation and school engagement for immigrant-descent minority students who perceive less discrimination at school. We had expected that emotional fit with majority culture would be beneficial for immigrant-descent minority youth who did not perceive discrimination. One possibility is that minority youth who perceive less discrimination in their school may also experience a general sense of inclusion and acceptance, which itself may contribute to school engagement and motivation. If the school climate is perceived to be supportive, especially towards minority students, emotional fit might not account for any *additional* variation. In such contexts, minority students' social outcomes at school (e.g., school engagement) may depend more on other processes, such as identity development shaped largely by heritage cultural maintenance (not by destination culture adoption; see Crocetti et al., 2024), rather than emotional fit with the majority culture. Future research could examine these additional processes that may render the acquisition of majority emotional norms less significant for minority students' school engagement.

Alongside the theoretical and empirical contribution, the current research also has an applied value for teachers and school administration staff. Our findings show that perceptions of discrimination in school may affect the process by which fitting in emotionally with the majority culture is related to school outcomes. Such a finding suggests that teachers should pay attention to the climate that is created in class and how that climate is perceived as it interferes with how acquiring the majority culture norm plays out in the learning process. In addition, it is important to acknowledge that individual students' perceptions of discrimination were decisive for the sociocultural outcomes of emotional acculturation; the aggregate perceptions of discrimination at school were not (See Supplementary materials). Such finding implies the important need for teachers and school administration staff to pay close attention to the perceptions of the school climate that each student holds and uncover as well as address the potential experienced or witnessed discrimination acts that may feed into such perceptions.

4.1 Limitations and Recommendations for Future Acculturation Research

Our study has several limitations. First, in this study, we focused on individual perceptions of the discriminatory climate, but other contextual factors in schools may have stronger or similarly moderating effects on the link between emotional acculturation and adjustment, which may be complementary to the effect of perceived discrimination. Examples are school diversity beliefs (i.e., multiculturalist, assimilationist, and colorblindness) in school policies and norms (Celeste et al., 2019), teachers' multicultural approaches (Brown & Chu, 2012; Verkuyten & Thijs, 2002), the segregation of immigrant minorities in schools, etc. Previous research has suggested that individual perceptions may be unrelated to these school-level factors such as the teachers' diversity approaches (Schachner et al., 2019). Yet, future acculturation research may further investigate the combination of these different school factors in addition to perceived discrimination, to gain fuller insight into the circumstances under which minorities' emotional acculturation can be either a liability or a benefit.

Second, even though our study follows a longitudinal design and our findings hint at a temporal effect of emotional acculturation on minorities' school adjustment outcomes, the associations cannot be interpreted as causal links.

We cannot rule out that minority students' emotional acculturation is a consequence of their past school adjustment. Indeed, previous research has provided support for bidirectional effects between minorities' majority contact and emotional fit with the majority culture over time (Jasini, De Leersnyder, Ceulemans, et al., 2023). Future longitudinal research may want to examine whether such bidirectional effects exist also between minorities' emotional acculturation on the one hand and their motivation, behavioral engagement, and school compliance on the other hand.

Third, our research does not speak to the fact that emotional (mis-)fit with the majority culture norms of emotions could itself be an effect of perceived discrimination in the past. Indeed, previous research has shown that discrimination may lead minorities to distance themselves from the majority culture (e.g., Jasinskaja-Lahti et al., 2009) or orient themselves towards the heritage culture (e.g., Dimitrova et al., 2015), which may have consequences for their school adjustment (Guerra et al., 2019). Future studies may explore the mutual influences between emotional acculturation, discrimination, and school adjustment using longitudinal designs spanning multiple years.

Fourth, the current study does not take into consideration certain additional pathways or variables in the examined models. For example, the current study does not take into account that the perceived discrimination and emotional fit may change over time, and that these changes may play a role in the adjustment outcomes at wave 2. Although previous research has hinted at the possibility that both emotional fit and perceived discrimination may change over time (Baysu et al., 2024; Jasini, De Leersnyder, Ceulemans, et al., 2023), assessing the role of the developmental or dynamic changes in predicting adjustment was beyond the scope of the current research. Yet, modelling the autoregressive pathways of emotional fit and perceived discrimination may be a meaningful avenue for future research, which would build both on the present study and on research showing that accumulating discrimination experiences over time negatively predicts minority youth's adjustment outcomes (Baysu et al., 2024). Such research may especially benefit from data spanning a longer time frame than the current research.

In addition, in the current study, we did not control for the effect of several important individual characteristics such as the cultural distance and the generational status. Previous research has shown that both cultural distance and generational status are associated with minority individuals' emotional acculturation (Jasini et al., 2019), but little is known about how they affect the associations reported in this study: the longitudinal association between emotional and sociocultural adjustment, as well as the impact of perceived discrimination on this association. Future research may further explore these questions.

Fifth, it may also be possible that majority contact influences school engagement outcomes over time and vice versa. Indeed, previous work has suggested that intergroup contact, sociocultural and psychological adjustment outcomes may be related to one another in a bidirectional way over time (Kenfack et al., 2024). Future acculturation research may more closely examine the dynamic feedback loops that emerge over time between various adjustment outcomes due to emotional acculturation and perceptions of discrimination.

Sixth, the reliability of the non-compliant behavior scale was relatively low. Though the items for this scale were selected based on the best factor solution (i.e., the items loaded meaningfully on the factor) and reliability analysis (i.e., omitting any of the items did not improve the scale reliability), the concept of non-compliance may comprise of different facets that in the future could be teased apart. For example, the item "how often do you get a

punishment in school?" is an indirect way of measuring non-compliance, whereas "how often do you skip a lesson without permission?", and "how often do you come late to school?" are measuring non-compliance directly. A longer scale might have distinguished between the two. It is possible that the reliability of the scale was weakened by including related, but separable aspects of non-compliance. Future research may want to address this concern by including a larger number of items to fully represent different facets of the broader construct of non-compliant behavior.

Finally, the current study does not document the duration of the detrimental effects of emotional fit in contexts perceived to be highly discriminatory, nor does it shed light on the impact on other areas of adjustment (i.e., wellbeing at school), or other domains (e.g., peer relations). Especially, the latter question may be relevant for future investigation given that acculturation impacts adjustment differently in different domains (Arends-Tóth & van de Vijver, 2004; Bornstein, 2017; Karataş, 2025).

5. CONCLUSION

Extant empirical research on the adaptive advantages and disadvantages of acculturation has been inconclusive at best. The current research contributes to our insights into the sociocultural outcomes of implicit acculturation in school. It yielded paradoxical effects of emotional acculturation on adjustment. Whereas emotional acculturation may over time benefit minority students' contact with their majority peers regardless of the perceived school climate, it can be maladaptive for their school outcomes in environments perceived as unwelcoming.

6. CONFLICTS OF INTEREST

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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8. DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

9. AUTHOR CONTRIBUTIONS

Alba Jasini: Conceptualization; data curation; formal analysis; methodology; project administration; writing – original draft; writing – review and editing. Anouck Cochez: Conceptualization, data curation; formal analysis; methodology; project administration; writing – original draft; writing – review and editing. Batja Mesquita: conceptualization; funding acquisition; investigation; methodology; project administration; supervision; writing original draft; writing – review and editing.

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