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An examination of classes of school climate perceptions among Latinx middle school students☆

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ABSTRACT

Several studies have replicated the finding that Latinx students tend to have less favorable perceptions of school climate than their White peers. However, because most research compares Latinx students to a White standard, little is known about variation within the Latinx group and thus the opportunity to produce strength-defining counter-narratives has been missed. Using latent class analysis, this study identified meaningful classes of school climate perceptions within 20,050 Grade 7 Latinx students in California. Five climate classes were identified, lending support to the hypothesis that substantial heterogeneity of school climate perceptions exists within the Latinx student population. The results support the utility of latent class modeling for examining school climate perceptions beyond traditional variable-centered approaches. Countering the prevailing deficit narrative, the results indicate that nearly half of all Latinx respondents reported generally positive perceptions of school climate. Conversely, supporting the need for environmental supports that encourage Latinx students to voice their concerns and make decisions regarding systems that affect them, over three-quarters of the responses suggested that Latinx students perceive meaningful participation at school negatively. The results suggest the possibility of a cascade effect in the development of the psychological experience of the school, such that some dimensions of school climate perceptions may be antecedents to others. Implications for further research and intervention are discussed.

1. Introduction

Latinx youth are the fastest growing segment of the school-aged population within the United States and now represent over a quarter of public school students (National Center of La Raza [NCLR], 2016; U.S. Census Bureau, 2017). Despite the importance that this large and growing group's prosperity has for the vitality of the culture and economy of the United States, measures of school success, such as academic achievement and high school graduation rates, suggest attenuated growth with only anemic gains over the most recent decade. In the same period that school outcomes of Latinx youth have languished, federal initiatives such as Safe and Supportive Schools (U.S. Department of Education) and Safe Schools/Healthy Students (U.S. Department of Health and Human Services) have fueled the expansion of scholarship describing the value of student perceptions of school climate. The field is newly awash with studies describing instruments for measuring school climate, between-group differences in school climate perceptions, and the impact of school climate perceptions on a variety of academic and wellbeing indicators (Berkowitz, Moore, Astor, & Benbenishty, 2016; Wang & Degol, 2016). Much of this research has affirmed that although school climate is frequently described as

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an organizational attribute, student perceptions of climate vary widely within schools, with some students experiencing their school as safe and supportive whereas others feel threatened and disaffected. The preponderance of evidence has shown that even within the same school, Latinx students have more negative school climate perceptions than their White peers (Konold, Cornell, Shukla, & Huang, 2017; Voight, Hanson, O'Malley, & Adekanye, 2015).

Although the literature on race- and ethnicity-related variations in school climate perceptions has expanded, gaps remain. Study designs often treat racial-ethnic groups as monolithic, ignoring within-group variation. This approach relies on a false premise: the psychological experience of the school setting is homogeneous within racial-ethnic groups (Okazaki & Sue, 1995). Current school climate scholarship is also largely anchored to a White standard: most studies make comparisons to a White reference group, implying that Whiteness is the norm and that the difference between groups is relevant only when the contrast exists with White students (Grossman & Charmaraman, 2009). This is particularly problematic because when young people from historically underrepresented groups are compared to a White standard, they often appear deficient, and the opportunity to expose strength-defining counter-narratives is lost.

Despite substantial variation among Latinx-identifying youth across a variety of personal characteristics (e.g., nation of origin, ethnicity, race, immigration status), most school climate research to date has treated Latinx students as a single set, comparing their average perceptions to the average perceptions of students from other racial-ethnic groups. This practice has, of course, provided valuable insights, but within-group variation has been largely ignored. The present study seeks to address this gap in the school climate literature by using latent class analysis—a person-centered approach—to examine within-group variation in school climate perceptions among a large sample of seventh grade Latinx students in California.

1.1. The Latinx school experience

Any description of the Latinx school experience should be prefaced by a description of the challenges in defining exactly what it means to be a member of this group. Categorizing students as Latinx in surveys—including those used in this and other education research—disguises vast variation in this pan-ethnic and pan-racial set of individuals (Fergus, 2016). The difficulty with assigning a racial category to this decidedly heterogeneous set of people is reflected in the U.S. Census Bureau's (2018) policy guidance on classifying individuals by race, which specifies that people who identify as Hispanic, Latinx, or Spanish may be of any race. Latinx youth are undeniably hyperdiverse; individuals identifying as Latinx comprise different nations of origin, ethnicities, races, and immigration statuses (Delvecchio Good & Hannah, 2015).

As the United States' population of school-aged youth identifying as Latinx continues to expand and diversify, the validity of drawing broad conclusions from studies treating Latinx youth as a single indivisible group increasingly is undergoing scrutiny. In fact, school experiences and education-related outcomes vary when the general Latinx student group is stratified by more narrow demographic variables, such as family income (Galindo & Fuller, 2010), caregiver education (NCLR, 2016), family structure (NCLR, 2016), family language proficiency (Bachman, Elliott, Scott, & Novarro, 2020), caregiver nativity and generational status (NCLR, 2016; Ryan & Ream, 2016), student language broker status (Benner & Graham, 2011), and student nativity and generational status (Córdova & Cervantes, 2010; Lopez, Krogstad, & Flores, 2018; Ryan & Ream, 2016; Sulkowski, Bauman, Wright, Nixon, & Davis, 2014).

Although intra-group variation is undoubtedly obscured by methodological issues related to the categorization of youth as Latinx, several national education trends deserve mention. The most recent 2019 data from the National Assessment of Educational Progress (NAEP) suggested a slight upward trend in mathematics achievement and, to a lesser extent, reading achievement, for Latinx youth since 1990, but the average achievement scores in both disciplines remained below proficient ranges as compared to their native English-speaking counterparts. For those Latinx youths who are learning English, NAEP scores are lower still; average scores remain below the basic range (NAEP, 2019). This trend suggests that English language learner status confers an extra set of educational barriers that extends through high school, a hypothesis that is affirmed by the disturbing reality that the national 2016–17 adjusted cohort graduation rate for Latinx youth was 80%, but only 66.4% for students with limited English proficiency (not Latinx specific; NCES, 2019).

Scholars from a variety of disciplines have speculated about mechanisms underlying these education trends. Researchers have described several educational obstacles encountered by Latinx students, including school mobility as a result of housing and employment insecurity (Ream, 2010), limited access to high-resource neighborhoods and schools (Galster, Santiago, & Stack, 2015), and tracking of Latinx students into course sequences that limit college pathways (Callahan, 2005; Ulmansky, 2016). In their expansive book on the topic of Latinx education experiences in the United States, Gándara and Contreras (2009) described how limited access to dominant, white, middle-class forms of cultural and social capital hinders the ability of Latinx families to promote the success of their children in American schools. Moreover, Latinx students regularly encounter microaggressions (i.e., implicit messages that communicate hostility) at school that undermine their success (Fergus, 2016; Sue et al., 2007). Among the indignities described in the literature are practices and policies that imply a misunderstanding among educators about variation in Latinx individuals' self-ascribed racial and ethnic identities. Examples include assumptions about students' identities based on skin color or other hereditary characteristics (Fergus, 2016), the use of language implying educators' lowered expectations and deficit thinking regarding Latinx students' academic and personal success (Marrero, 2016; Tenenbaum & Ruck, 2007), the use of coded language to refer to race and ethnicity (Fergus, 2016), and the communication of narratives among educators implying that Latinx family culture is a barrier to academic success (Irizarry, 2015; Marrero, 2016).

1.2. Latinx students in the California context

Latinx youth are a large and growing demographic and this is especially true in border states, such as in California, where Latinx youth comprise more than half of all school-age children (Dataquest, 2018). Over three million Latinx students attended California public schools during the 2017–2018 academic year, comprising the majority (54%) of all K-12 students enrolled, which is more than double the next largest racial/ethnic student group in the state (i.e., 23.2% White; DataQuest, 2018). No other region in the United States educates such a high proportion of Latinx students, the vast majority of whom are United States' citizens of Mexican descent (NCES, 2018; Stepler & Brown, 2016). Therefore, for its sheer size and diversity, a California sample of Latinx students is valuable for discerning meaningful within-group variation in school climate perceptions.

Despite being well represented in the state's population, California's Latinx youth experience disproportionate obstacles to their school success. The inequitable educational experience starts early; for example, 44.8% of Latinx youth are not enrolled in preschool, as compared to 33.7% of White children (KidsData, 2018). In K-12, Latinx students often attend segregated schools; in California over half of Latinx students attend schools that predominantly enroll children of color (Orfield, Ee, Frankenberg, & Siegel-Hawley, 2016). Over five decades of empirical evidence has clearly indicated that racially and economically segregated schools serving children of color tend to have fewer instructional resources, such as highly qualified teaching staff and rigorous curricular opportunities, and that academic achievement in these schools also tends to be lower than in racially diverse schools (Coleman et al., 1966; Fuller et al., 2019; Orfield et al., 2016; U.S. Department of Education, 2011). It stands to reason, then, that these precursors contribute to the fact that 20% of Latinx youth do not graduate from high school on time and only one-third who graduate meet requirements to enter California's public universities (DataQuest, 2018).

1.3. School climate perceptions and their correlates

School climate is the psychological experience of the school setting, derived from an individual's experience of day-to-day school life (Cohen, McCabe, Michelli, & Pickeral, 2009). Most theoretical and measurement models describe school climate as a higher-order construct that explains substantial variance in students' perceptions of lower-order constructs, such as school safety, school connectedness, and student-teacher relationships (O'Malley, Voight, & Izu, 2013). Moreover, because day-to-day experiences can vary widely between students within a single school, evidence indicates that most of the variance in school climate perceptions can be explained at the individual level as compared to the school level (Koth, Bradshaw, & Leaf, 2008). School climate research is rooted in a bioecological transactional model of change that accounts for biological, social, and psychological forces in development and emphasizes the interwoven nature of a child and the child's environment (Bronfenbrenner, 1992; Sameroff, 2006). As it relates to school climate, the bioecological transactional model predicts that as a young person transacts with peers, adults, and other instructional and social assets and constraints within the school ecology, the setting and the young person shape each other irrevocably over time (Bronfenbrenner, 1992; O'Malley et al., 2013).

Researchers from all regions of the United States have documented relations between students' school climate perceptions and myriad favorable school-related outcomes. Improvements in students' school climate perceptions are linked to increases in school achievement across a variety of metrics, including self-reported grades (Cornell, Shukla, & Konold, 2016; O'Malley, Voight, Renshaw, & Eklund, 2015), teacher-assigned grades (Wang et al., 2014), end-of-year standardized test scores (Benbenishty, Astor, Roziner, & Wrabel, 2016; Heck, Larsen, & Marcoulides, 1990), and graduation rates (Jia, Konold, & Cornell, 2016). Also documented are relationships between students' school climate perceptions and improvements in school attendance and academic engagement (Wang & Eccles, 2013; Wang & Holcombe, 2010), decreases in school disciplinary actions (Gage, Larson, Sugai, & Chafouleas, 2016; Romero, 2018; Voight et al., 2015; Wang, Selman, Dishion, & Stormshak, 2010), reductions in racial-ethnic discrimination and incivility at school (Bellmore, Nishina, You, & Ma, 2012), and greater willingness among students to report threats at school (Elliot, Cornell, Gregory, & Fan, 2010; Syvertsen, Flanagan, & Stout, 2009). Moreover, school climate perceptions predict a variety of wellbeing indicators, such as increases in life satisfaction and decreases in suicidal thoughts (LaSalle, Wang, Parris, & Brown, 2017; Shim-Pelayo & De Pedro, 2018; Suldo, McMahon, Chappel, & Loker, 2012). Such results suggest a compelling case for the value that students' school climate perceptions have on outcomes of interest to families, educators, and policy makers.

1.3.1. School climate perceptions in middle schools

Middle school is regularly characterized as a particularly challenging period of adolescent development, marked by increases in peer victimization and incivility at school (Salmon, Turner, Taillieu, Fortier, & Affi, 2017). Several studies have demonstrated that school climate perceptions tend to decline during middle school (Hanson & Voight, 2014; Wang et al., 2010; Way, Reddy, & Rhodes, 2007). These declines are concurrent with drops in achievement, motivation and engagement, and increases in discipline (Akos, Rose, & Orthner, 2015; Galván, Spatzier, & Juvoven, 2011; Lee, 2010). Moreover, gaps in school climate perceptions by race tend to be largest during the middle school years (Voight et al., 2015).

1.3.2. School climate perceptions among Latinx youth

With few exceptions (e.g., Parris, Neves, & La Salle, 2018), most existing studies have found that, on average, Latinx students perceive their school climates less favorably than their White peers (Anyon, Zhang, & Hazel, 2016; Berkowitz et al., 2016; Bottiani, Bradshaw, & Mendelson, 2014; De Pedro, Gilreath, & Berkowitz, 2016; Fan, Williams, & Corkin, 2011; Voight et al., 2015). Recent studies have examined the dynamics of Latinx school climate perceptions using increasingly complex study designs. Benner and Graham (2011) used path analysis to show that when Latinx school climate perceptions are depressed due to discrimination

experiences across time, academic achievement and school attendance among Latinx adolescents suffers. Other recent studies have explored the possibility that school climate perceptions have an equity-driving effect for Latinx middle school students. LaSalle et al. (2017) found that the relationship between increases in school climate perceptions and decreases in suicidal thoughts and behaviors was stronger for Latinx students than for Black students. Moreover, Voight et al. (2015) found that the achievement gap between Latinx students and their White peers was lower in California middle schools where school climate perception gaps between the two groups were less extreme.

Advances in statistical modeling have provided opportunities for exploring heterogeneity in populations by identifying groups of individuals who tend to respond similarly across variables (Nylund, Asparouhov, & Muthén, 2007). Using data from middle and high school respondents to the 2009–2011 California Healthy Kids Survey (CHKS), De Pedro et al. (2016) identified four latent classes of school climate (i.e., some caring, connectedness, and safe; negative climate; high caring, participation, and safe; and positive climate). Compared to White students, Latinx students' responses were nearly 2.5 times more likely to fit into the least desirable school climate class (i.e., negative climate; De Pedro et al., 2016). In their examination of latent classes among a mixed sample of approximately four thousand elementary, middle, and high school-aged youth, Gage et al. (2016) found that the most positive school climate class (i.e., primary class) was roughly equivalent in terms of White and Latinx representation, but that the less positive school climate classes (i.e., secondary class and tertiary class) contained substantially higher proportions of Latinx students than White students, with Latinx students having (a) significantly reduced math, reading, and written language achievement; (b) higher office discipline rates; and (c) higher in-school and out-of-school suspension rates. No analyses identifying latent classes of school climate perceptions with a Latinx-only sample could be found in the extant literature.

1.4. The current study

An increasing number of scholars and policymakers have well-founded concerns about the role that schooling experiences play in diminishing future opportunities for Latinx youth to contribute to the civic and economic vitality of the nation (Gándara & Contreras, 2009; Public Policy Institute of California, 2018). However, while there has been an explosion of research on school climate, there is a remarkable paucity of school climate studies with a singular focus on Latinx students. This study begins to address this by using latent class analysis to uncover within-group differences in the school climate experiences of Latinx middle school students. Specifically, we ask whether there is evidence of heterogeneity in Latinx student school climate perceptions, suggesting that distinct latent classes of climate experience exist? If so, how many climate classes exist and how prevalent is each climate class? We describe the climate classes we uncover, how they differ from one another, and consider evidence of class construct validity (Cronbach & Meehl, 1955). Answering these questions will provide important insights into variation in Latinx students' experience of school and will establish the requisite groundwork for future investigations exploring the implications of these climate classes.

2. Method

Latent class analysis (LCA) is particularly appropriate for exploring the diversity in Latinx student perceptions of school climate. LCA, a type of finite mixture modeling, is considered a person-centered approach that enables identification of latent classes, or subpopulations of respondents, who share common patterns of responses that are not otherwise readily observable through more traditional variable-centered approaches (Marcoulides & Heck, 2013; Masyn, 2013; Nylund-Gibson & Choi, 2018). Variable-centered approaches assume that a single homogeneous population distribution exists and that relationships among variables are the same for all members of the population (Masyn, 2013). In contrast, LCA assumes population heterogeneity and models it as classes with distinct distributions (Marcoulides & Heck, 2013), allowing differences in outcomes to be examined by class (Nylund-Gibson & Masyn, 2011). Although we hypothesize that a complex set of school climate perceptions exists among Latinx students, we adopt an exploratory approach and do not offer an a priori hypothesis about the number, or types of climate classes, that will emerge.

2.1. Instrument

The CHKS is a health and wellbeing survey sponsored by the California Department of Education (Hanson & Voight, 2014) that is typically administered biannually to middle school students in the seventh grade. Participation in the CHKS is voluntary and the timing of the survey administration is customized by each school. Guardian consent is obtained by local education agencies using the survey. Student assent language is included at the start of the survey, indicating that the survey is voluntary and participants may skip any question they wish. The CHKS includes a core module administered by all schools, as well as customizable supplemental modules. For the purpose of this study, only schools that administered the core module and the supplemental school climate module were included.

2.2. Participants

The sample used in this study was drawn from cross-sectional results from the 2016–2017 CHKS and included 20,050 Grade 7 Latinx students enrolled in 351 different schools. We deliberately selected participants who indicated they were Hispanic or Latino and who reported speaking either Spanish or English at home.

Table 1
Student perception of school climate.

CHKS items	Mean	Standard deviation
I feel close to people at this school (C)	3.81	0.96
I am happy to be at this school (C)	3.79	1.07
I feel like I am a part of this school (C)	3.62	1.07
The teachers at this school treat students fairly (C)	3.57	1.23
At my school there is an adult who really cares about me (R)	2.70	0.96
At my school there is an adult who tells me I do a good job (R)	2.95	0.94
At my school there is an adult who notices when I'm not there (R)	2.71	1.02
At my school there is an adult who wants me to do my best (R)	3.28	0.87
At my school there is an adult who listens to me when I have something to say (R)	2.89	0.99
At my school there is an adult who believes I will be a success (R)	3.11	0.97
How safe do you feel when you are at school (reversed) (S)	3.73	0.94
At school, I do interesting activities (M)	2.60	1.02
At school, I help decide things like class activities or rules (M)	1.92	1.00
At school, I do things that make a difference (M)	2.19	1.00

Note. Letter in parenthesis indicates dimension of school climate. C = school connectedness, R = relationships with adults, S = safety, M = meaningful participation.

2.3. Measures

2.3.1. School climate

School climate is a multidimensional construct frequently measured across four common dimensions, including caring relationships, opportunities for meaningful participation, school connectedness (O'Malley et al., 2015), and school safety perceptions. For the purpose of this analysis, 14 well-established categorical variables were selected (see Table 1; De Pedro, Astor, Gilreath, Benbenishty, & Berkowitz, 2015; O'Malley et al., 2015; Voight, Hanson, O'Malley, & Adekanye, 2015). Six items reflecting caring relationships with adults included: *At my school* (a) *there is an adult who really cares about me*, (b) *tells me I do a good job*, (c) *notices when I'm not there*, (d) *tells me to do my best*, (e) *believes I will be a success*, and (f) *listens to me when I have something to say* ($\alpha = 0.87$). Values ranged from 1 for "not at all true" to 4 for "very much true." Three items were used as indicators of meaningful participation: *At school*, (a) *I do interesting activities*, (b) *I help decide things like class activities or rules*, and (c) *I do things that make a difference* ($\alpha = 0.72$). Values ranged from 1 for "not at all true" to 4 for "very much true." Four items were used to measure school connectedness: (a) *I feel close to people at this school*, (b) *I am happy to be at this school*, (c) *I feel like I am a part of this school*, and (d) *The teachers at this school treat students fairly* ($\alpha = 0.77$). Values ranged from 1 for "strongly disagree" to 5 for "strongly agree." Safety was measured using one item: *How safe do you feel when you are at school?* To be consistent with the other variables, values were reverse coded so that higher values reflected more positive responses, ranging from 1 for "very unsafe" to 5 for "very safe."

We dichotomized these variables prior to climate class enumeration. Responses of agree/strongly agree and true/very much true were considered evidence of item endorsement and coded as 1. For example, students who said they felt "safe" or "very safe" were coded as 1. We dichotomized the class indicators for two reasons. First, all variables were significantly skewed because relatively few students provided negative responses. Using safety as an example, only 5.6% of students indicated feeling unsafe, whereas 40.8% of students said they felt safe. Skew values that fell outside of ± 2 times the standard error of the skew were considered significantly non-normal. Second, dichotomized class indicators facilitate interpretation of emergent classes and are a common practice in LCA (see, for example, Masyn, 2013; Nylund-Gibson & Choi, 2018; Quirk, Nylund-Gibson, & Furlong, 2013).

2.3.2. Covariates

Covariates included (a) student self-reported parent level of education as a proxy for socio-economic status and (b) self-reported grades. Parent education (*What is the highest level of education your parents or guardians completed?*) varied from 1, "did not finish high school" to 4, "graduated from college", and included an option for "don't know" which was treated as missing. Grades (*In the past 12 months, how would you describe the grades you mostly received in school?*) varied from 1, for "mostly A's" to 8 for "mostly F's." This variable was reverse coded so that higher values were consistent with higher grades.

2.4. Analytic approach

SPSS 25 was used for data management and descriptive analyses. Mplus 8.1 was used to conduct LCA. Mplus was chosen not only because of its facility with LCA but also because of its ability to handle the nested structure of the data. Failure to account for the nested nature of the data can result in incorrectly computed standard errors (Stapleton, 2006). Maximum likelihood with robust standard error estimation and 500 random starts to avoid (incorrectly) converging on a local solution was used (Masyn, 2013; Nylund-Gibson & Choi, 2018). Missing data were handled using Full Information Maximum Likelihood estimation.

We used a three-step modeling approach in which an unconditional latent class measurement model is selected, and then, in a separate step, is incorporated into a structural model with covariates of interest (Vermunt, 2010). This approach ensures that the measurement model specified in the first step is not disturbed by the addition of the covariates. It also accounts for the classification

error inherent in estimation; as such, it is superior to a "classify-analyze" approach which treats the modal class assignment as a manifest variable measured without error (Asparouhov & Muthén, 2014; Nylund-Gibson, Grimm, & Masyn, 2019).

The first step in LCA is class enumeration, which entails estimating a series of models while progressively increasing the number of classes and evaluating and comparing model fit (Nylund et al., 2007). Both statistical indicators and substantive implications are considered in this step (Muthén, 2003). Because there is no single-best fit statistic, multiple measures are used when evaluating model fit. The Bayesian Information Criterion (BIC) is considered one of the best indicators, with lower values indicating better fit (Nylund et al., 2007). The log likelihood and the AIC (Akaike Information Criterion) are also reported, however they tend to over-estimate the number of classes (Masyn, 2013; Nylund et al., 2007). The Lo-Mendell-Rubin test (LMR) indicates whether adding additional classes improves model fit; significant results indicate that the $k + 1$ class model fits better than the k model. The correct model probability (cmP) with the largest value has the greatest probability of being the correct fit.[1] For more information about fit statistics and model selection, see Masyn (2013) and Nylund et al. (2007).

We also examined the item response probabilities to look for models with items that demonstrated class homogeneity and class separation. Item response probabilities indicate the likelihood that an item was endorsed by members of a given class and vary between 0 (0%) and 1 (100%). Items that demonstrate class homogeneity are items that "epitomize" a class with probabilities of endorsement above 0.7 or below 0.3 (Masyn, 2013). Items with good class separation distinguish classes from one another and have estimated item endorsement ratios greater than 5 or less than 0.2 (Masyn, 2013).

For each model, we looked at the sizes of the emergent classes and graphed and examined the item response probabilities to ensure that the classes were substantively meaningful. Final model selection was made based on both the statistical considerations discussed above, and on the interpretability and substantive implications of each solution (Muthén, 2003). Once a final unconditional model was selected, we added covariates. We followed this with a brief and preliminary comparison of how the climate classes differ in terms of covariates and by the four domains of school climate. Here we expected higher levels of parent education and self-reported grades to be more prevalent in more positive climate classes.

3. Results

3.1. Descriptive statistics

Consistent with the notion that Latinx youth are a diverse group, 70.6% of respondents reported their race as mixed, 12% White, 3.7% Native American, and 1.3% Black or African American. Among respondents, 53.5% reported that Spanish was spoken most of the time in their home; however, 85.6% of respondents reported that they understood English "very well." Gender of participants was 52.8% female and 47.2% male. The majority of students (59.0%) reported receiving free or reduced rate lunch, 18.3% of respondents indicated they "didn't know" if they received free or reduced rate lunch, and 22.4% of respondents said that they did not receive free or reduced rate lunch. Specific to parental education level, 33.4% of students reported that they did not know their parents' level of education, 13.4% said that their parents did not finish high school, 17.2% said their parents graduated from high school, 11.4% reported that their parents attended college but did not graduate, and 24.3% reported that their parents graduated from college.

Means and standard deviations for variables reflective of school climate are provided in Table 1. Although this provides a snapshot of overall, or mean, Latinx student perceptions of school climate, it does not provide insights into underlying patterns of perceptions that may exist within the group. LCA was then used to uncover this within-group variation and gain insight into the varieties of Latinx experience of school climate.

3.2. Latent classes

As planned, a series of models were fit while incrementally increasing the number of climate classes. We fit eight models, ranging from one climate class to eight climate classes. Fit statistics from each model were saved to evaluate and compare model fit. For each of the eight models, we saved and graphed the item response probabilities by climate class, along with the relative sizes of the climate classes.

As can be seen in Table 2, each added climate class resulted in a decline in the information criteria indexes. Notably, the BIC is the lowest in the eight-class solution. Likewise, the p-value of the LMR and the cmP suggest the eight-class solution. However, it is not uncommon for the information criteria indexes to continue to decline, rather than reaching a minimum; therefore, we followed Masyn's (2013) suggestion to plot the BIC to look for diminishing gains. Within Fig. 1, we see that the BIC scores dropped continuously, with the biggest marginal gain made by adding a second climate class. Marginal gains continued to be made with the addition of more climate classes; however, after five climate classes the line leveled out and little was gained by adding six, seven, or eight climate classes. We viewed and considered the item probability plots for each of the models; the models with more than five climate classes were more complex, but not substantively interpretable. We also noted that the seven and eight climate class solutions had some undesirably small class sizes (reported in Table 2).

After considering the fit statistics, interpretability, diminishing class sizes, and parsimony, the five-class model was selected for further investigation. The entropy for this model (0.74) is considered acceptable. Entropy is an indicator of how well the model classifies individuals into latent classes, but it is not a fit statistic; therefore, we reported it for only the model selected (Nylund et al., 2007).

[1] The BLRT (Bootstrap Likelihood Ratio Test) is not used in this analysis because it is not available for use with nested data.

Table 2
Fit statistics for classes 1–8.

Number of classes	Log likelihood	AIC	BIC	ABIC	*p*-Value of LMRT	cmP	Smallest class
1	−175,234.29	350,496.58	350,607.26	350,562.77	NA	0.00	
2	−152,198.24	304,454.49	304,683.76	304,591.60	0	0.00	0.416
3	−147,898.69	295,885.37	296,233.24	296,093.41	0	0.00	0.220
4	−146,206.31	292,530.61	292,997.06	292,809.56	0.0332	0.00	0.189
5	−144,842.91	289,833.83	290,418.87	290,183.70	0.0006	0.00	0.145
6	−144,115.44	288,408.88	289,112.51	288,829.67	0	0.00	0.083
7	−143,679.74	287,567.47	288,389.68	288,059.18	0	0.00	0.064
8	−143,328.93	286,895.86	287,836.66	287,458.49	0	1.00	0.066

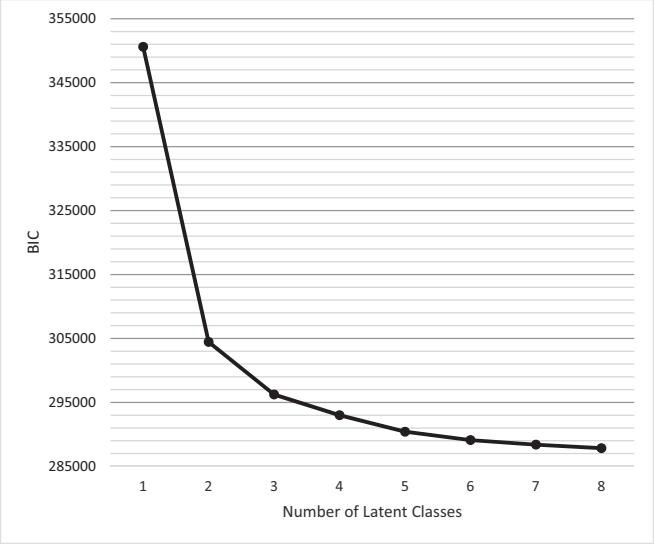

Fig. 1. BIC values by class.

An item probability plot of the five-class solution is provided in Fig. 2. The 14 indicators are arrayed across the x-axis, along with the corresponding dimension of school climate they represent. The y-axis denotes the probability of item endorsement and ranges from zero to one (0–100% likelihood of being endorsed). The five grayscale lines are latent climate classes, or more specifically, the response probabilities conditioned by class.

Item response probabilities were examined for evidence of class homogeneity and class separation to aid in climate class interpretation. As discussed previously, we looked for items with probabilities of endorsement above 0.7 or below 0.3 (Fig. 2), which indicates that the items demonstrated good class homogeneity. Class homogeneity is desirable; it means, as would be expected, that members of the same class responded similarly (either affirmatively or negatively). We also looked for items with estimated item endorsement ratios of greater than five or less than 0.2, as these values indicate good class separation and show that members of different climate classes responded differently (Masyn, 2013).

We examined the graph in Fig. 2, considered its substantive implications, and labeled the emergent climate classes. The solid black line at the top of the graph is labeled *High/Positive* because students in this climate class had a high probability of responding positively to all of the items. Approximately 24% of students belonged to this most positive, or healthiest, school climate class. Conversely, the light gray line at the bottom of the graph is labeled *Low/Negative* because most students responded negatively to all the school climate items. This was the most likely climate class membership for approximately 15% of students.

There are three additional climate classes between the *High/Positive* and *Low/Negative* classes. We labeled one climate class *Positive/Low Meaningful*; students in this class responded to most items positively, except for items denoting meaningful participation, where a sharp drop can be seen at the end of the dotted black line. Twenty-five percent of the students fell into this climate class. Finally, there were two climate classes with mixed climate profiles. The dashed gray line, that we labeled *Mixed/Connected* (15% of students), contains students with a high probability of feeling connected (close, happy, part of) and who generally felt safe, but who scored lower on relationships with adults and on meaningful participation. In contrast, the climate class represented by the solid gray line, *Mixed/Positive Relationships*, scored higher on variables indicative of positive relationships with adults, but distinctly lower on connectedness (22% of students). To boost confidence in the validity of the five-class solution, we re-ran the analysis using data from

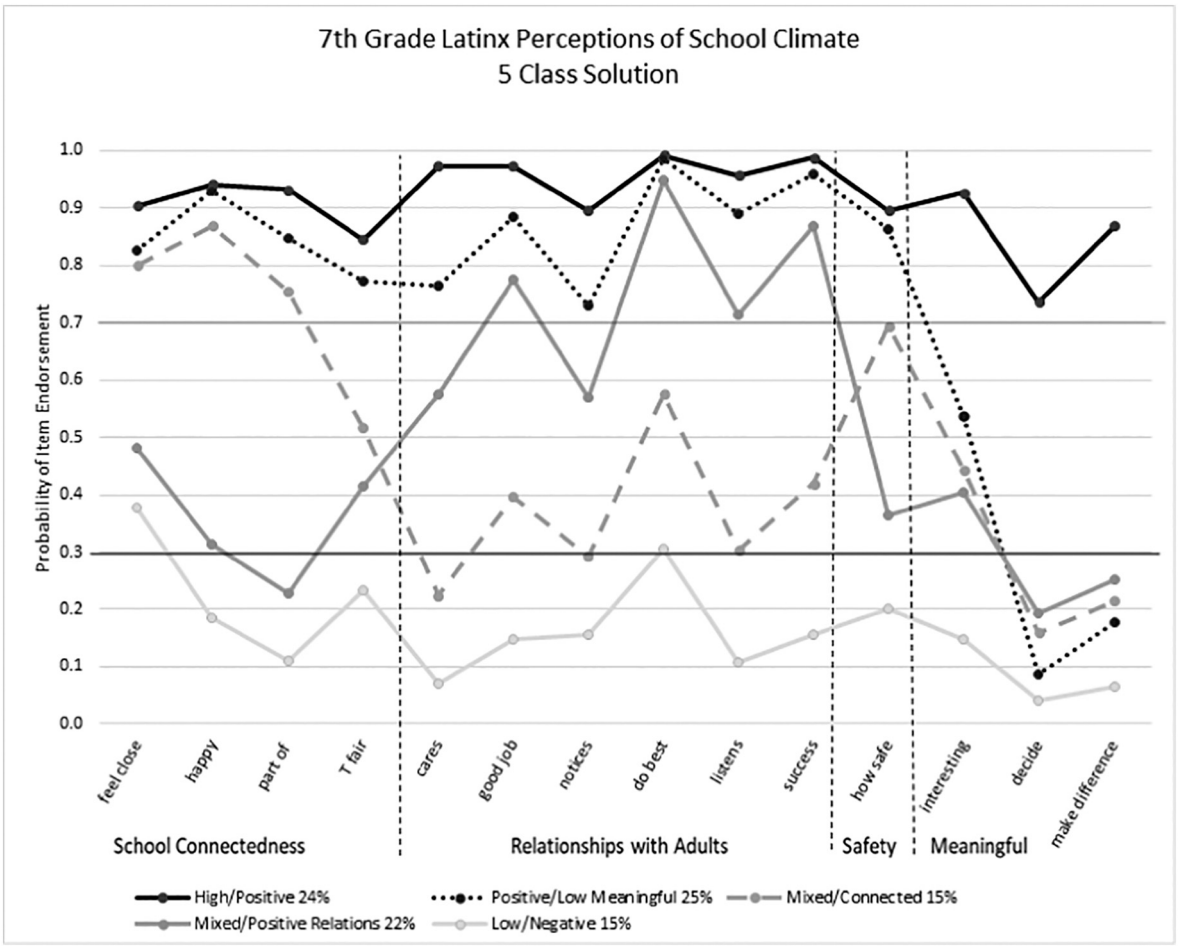

Fig. 2. Five-class item response probabilities and class prevalence.

the 2017–2018 administration of the CHKS; the five climate classes exhibited a very similar pattern of endorsements and sample proportions.[2]

Satisfied that the five classes were prima facie valid, we next used multinomial logistic regression to investigate whether there was a relationship between parent level of education, self-reported grades, and likely climate class membership. Multinomial logistic regression was employed because the latent class variable is categorical and results in coefficients that are logit values. Covariates were grand mean centered. The coefficients represent the influence parent education or grades have on the likelihood of a student being in one class versus another, requiring that a comparison class be selected. We ran the model using each of the classes as comparison groups. Table 3 displays the logit parameters, standard errors, *t*-values, and odds ratios (OR) for all possible comparisons. In what follows, rather than discussing every possible comparison, we have highlighted the most important findings.

We began with the *High/Positive* climate class as our comparison group because it was the most desirable climate class. Results (Table 3) showed that there was a significant difference both in parental level of education and grades between the *High/Positive* climate class and each of the other four climate classes, with this difference being in the expected direction with more highly educated parents and students with higher grades in the highest climate class. More specifically, when comparing the *High/Low Meaningful* climate class to the *High/Positive* climate class, there was a significant difference between parent level of education ($-0.09, p < .05$, OR $= 0.91$). This means that, for each unit increase in parent level of education, the log odds of being in the *High/Low Meaningful* (vis-à-vis the *High/Positive* climate class) decreased by -0.09 for those with average grades. Thus, students with more educated parents were less likely to be in the *High/Low Meaningful* climate class than in the *High/Positive* climate class. When considering grades, a one unit increase in grades was associated with a -0.13 decrease in the log odds of being in the lower climate

[2] The 2017–2018 CHKS sample includes responses from 24,051 Latinx 7th grade students in 290 schools. The measures used in the latent class analysis are the same. However, because schools typically administer the CHKS biannually, the sample is drawn from a different set of schools. Despite this, results again point to the 5-class solution. The five climate classes exhibit a very similar pattern of endorsements and sample proportions: 22% of students in the *high/positive* class, 25% in *High/Not Meaningful*, 15% in *Mixed/Connected*, 23% *Mixed/High* Relationship, 16% in *Low*/Negative. This compares to 24%, 25%, 15%, 22%, and 15% in the 2016–2017 dataset.

Table 3
Logit coefficients and odds for 5-classes model with parent education and grades as predictors.

Comparison class	Perceived climate class	Variable	Logit	SE	t-Value	Odds ratio
High/Positive	*High/Low Meaningful*	Par Ed	−0.09	0.03	< .01*	0.91
		Grades	−0.13	0.03	< .01*	0.88
	Mixed/Connected	Par Ed	−0.11	0.04	< .01*	0.90
		Grades	−0.28	0.03	< .01*	0.76
	Mixed/Positive Relations	Par Ed	−0.12	0.03	< .01*	0.89
		Grades	−0.26	0.02	< .01*	0.77
	Low/Negative	Par Ed	−0.18	0.04	< .01*	0.84
		Grades	−0.41	0.03	< .01*	0.66
High/Low Meaningful	*High/Positive*	Par Ed	−0.09	0.03	< .01*	1.10
		Grades	−0.13	0.03	< .01*	1.14
	Mixed/Connected	Par Ed	−0.01	0.03	0.74	0.99
		Grades	−0.15	0.03	< .01*	0.86
	Mixed/Positive Relations	Par Ed	−0.03	0.03	0.44	0.98
		Grades	−0.14	0.03	< .01*	0.87
	Low/Negative	Par Ed	−0.08	0.03	.01*	0.92
		Grades	−0.29	0.03	< .01*	0.75
Mixed/Connected	*High/Positive*	Par Ed	−0.11	0.04	< .01*	1.11
		Grades	−0.28	0.03	< .01*	1.32
	High/Low Positive	Par Ed	−0.01	0.03	0.74	1.01
		Grades	−0.15	0.03	< .01*	1.16
	Mixed/Positive Relations	Par Ed	−0.01	0.04	0.70	0.99
		Grades	0.01	0.02	0.56	1.01
	Low/Negative	Par Ed	−0.07	0.04	0.06	0.93
		Grades	−0.14	0.02	< .01*	0.87
Mixed/Positive Relations	*High/Positive*	Par Ed	0.12	0.03	< .01*	1.13
		Grades	0.26	0.02	< .01*	1.30
	High/Low Positive	Par Ed	0.03	0.03	0.44	1.03
		Grades	0.14	0.03	< .01*	1.15
	Mixed/Connected	Par Ed	0.01	0.04	0.70	1.01
		Grades	−0.01	0.02	0.56	0.99
	Low/Negative	Par Ed	−0.06	0.03	0.08	0.95
		Grades	−0.15	0.02	< .01*	0.86
Low/Negative	*High/Positive*	Par Ed	0.18	0.04	< .01*	1.19
		Grades	0.41	0.04	< .01*	1.51
	High/Low Positive	Par Ed	0.08	0.03	0.44	1.09
		Grades	0.29	0.03	< .01*	1.33
	Mixed/Connected	Par Ed	0.07	0.04	0.02	1.07
		Grades	0.14	0.03	< .01*	1.15
	Mixed/Positive Relations	Par Ed	−06	0.03	0.08	1.06
		Grades	−15	0.02	< .01*	1.16

* Signifies significance at $p \leq .01$.

class (−0.13, $p < .05$, OR = 0.88), implying that students with higher grades were also more likely to be in the higher climate class.

Similarly, the negative logit values and the odds ratios of less than one for the *Mixed/Connected* (Par Ed: −0.11, $p < .05$, OR = 0.90; Grades: −0.28, $p < .05$, OR = 0.90) climate class, *Mixed Positive Relations* climate class (Par Ed: −0.12, $p < .05$, OR = 0.89; Grades: −0.26, $p < .05$, OR = 0.77), and the *Low/Negative* climate class (Par Ed: −0.18, $p < .05$, OR 0.84; Grades: −0.41 $p < .05$, OR = 0.66) indicated that students with more educated parents and better grades were more likely to be in the *High/Positive* climate class than each of these other classes, and the greatest difference was between the *High/Positive* and the *Low/Negative* climate class.

Next, we used the *High/Low Meaningful* climate class as our reference group. There was a significant difference between grades in this climate class in comparison to each of the other climate classes. Although this climate class was likely to have students with lower grades than the *High/Positive* climate class (−0.13, $p < .05$, OR = 0.88), it was likely to have students with higher grades than in either of the *Mixed* climate classes (*Mixed/Connected*: −0.15, $p < .05$, OR = 0.86, *Mixed Positive Relations*: −0.14, $p < .05$, OR = 0.87) or the *Low/Negative* climate class (−0.29, $p < .05$, OR = 0.75). There was also a significant difference in the level of parent education between this climate class and both the *High/Positive* climate class (−0.09, $p < .05$, OR = 0.91) and the *Low/Negative* climate class (−0.08, $p < .05$, OR = 0.92). However, there was not a significant difference in parent level of education between this climate class and the two *Mixed* climate classes. Last, when comparing just the two mixed climate classes there was not a significance difference between either students' parent level of education or grades in these two climate classes.

Finally, although climate class differences across each of the school climate constructs (i.e., school connectedness, relationships with adults, safety, and meaningful participation) can be seen in Fig. 2, we provide an additional graph more focused on these four dimensions. To create Fig. 3, we averaged the item level probability of endorsement by class (displayed in Fig. 2) across each of the climate constructs. The x-axis, in the center of the graph, marks the 50% probability, representing an equal likelihood that a construct was endorsed or not endorsed (on average). Thus, when looking at the *Low/Negative* climate class, the bars representing

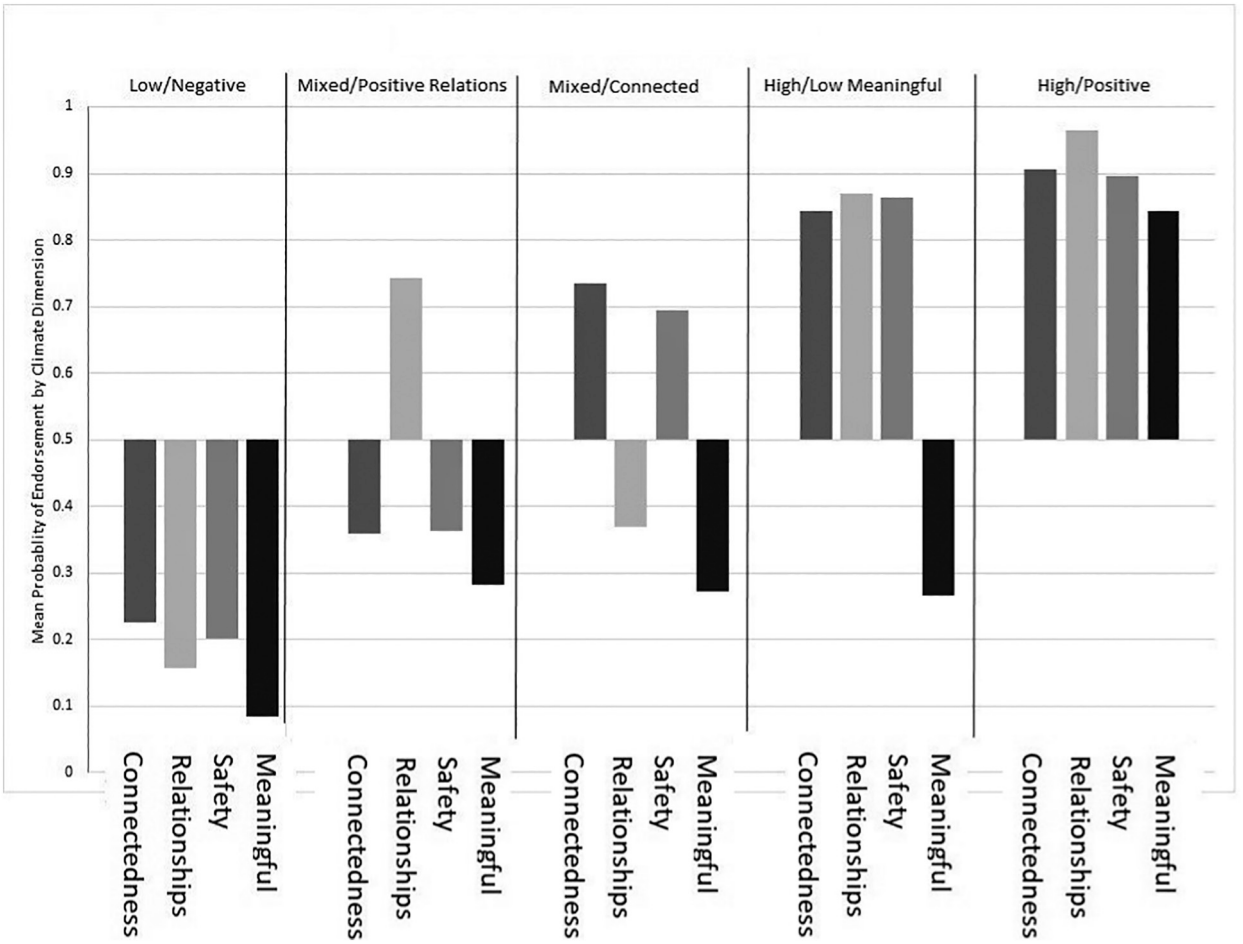

Fig. 3. School climate dimension by class.

connectedness, relationships with adults, safety, and meaningful participation were all below the x-axis, whereas the bars in the *High/Positive* climate class were all above the axis. We discuss this issue in more depth below.

4. Discussion

4.1. Interpretation of findings

This study explored within-group differences in the school climate experiences of a robust sample of Latinx middle school students from the western region of the United States. Our findings support the hypothesis that substantial heterogeneity exists in Latinx school climate perceptions. Five distinct latent classes were enumerated (Fig. 2). First, and most encouraging, was the finding that nearly 25% of all Latinx respondents belonged to the most positive, or healthiest, school climate class (i.e., *High/Positive* class) — providing a positive endorsement of all school climate items — and another 25% of respondents belonged to a similarly positive climate class (i.e., *Positive/Low Meaningful*) that contrasted only in their ratings of meaningful participation. These findings suggest that nearly half of Latinx middle school youth in this large sample generally have positive perceptions of school climate. This critical finding supports the contention that many Latinx youth have positive orientations to their school experiences and counteracts the deficit narrative that gets promulgated when the average school climate perception of Latinx students is compared to the average of their White peers (Ladson-Billings & Tate, 2017).

We did not anticipate the finding that respondents in the *High/Positive* climate class were the only ones with a high probability of endorsing positive perceptions of meaningful participation. Over three-quarters of Latinx youth in this sample responded negatively to items querying whether they believe that they are doing things at school that make a difference and that they have a role in making decisions about their own school experiences. Other researchers using data from the CHKS (e.g., Bersamin et al., 2019; Voight et al., 2015) showed that, compared to other school climate constructs (i.e., school safety, school connectedness), perceptions of meaningful participation tended to be low. From an ecological transactional perspective, mechanisms for this phenomenon may include deficits in school and classroom environmental supports that provide real opportunities for Latinx student voice and decision making, and a

need to promote agency and self-determination, which are skills that can be grown and nurtured (Ryan & Deci, 2000). These results point to the need for interventions designed specifically to target students' sense that they have a meaningful role in school functions; such interventions would emphasize both changes in the school environment and skill development for self-determined behavior in young people.

Existing alongside these results was the disappointing finding that approximately one-fifth of Latinx respondents belonged to the most negative climate class (i.e., *Low/Negative* climate class), indicating pervasive negative experiences across all school climate items. Compared to all other classes, students in this most negative class self-reported significantly lower grades and lower levels of parent education. These results suggest a need for targeted and intensive wrap-around supports for this group. Within a multitiered system of supports (MTSS) model, these students and their families may benefit from high-intensity, integrated academic, social-emotional, and behavioral supports provided by a team of professionals, including school mental health professionals, social workers, and school administrators (for a review of characteristics of an MTSS framework, refer to the National Center on Intensive Intervention, intensiveintervention.org).

Between the *High/Positive* and *Low/Negative* climate classes were two mixed climate classes, wherein respondents either had a high probability of feeling connected and safe but scored lower on relationships with adults and on meaningful participation (i.e., *Mixed/Connected, Safe*), or scored higher on variables indicative of positive relationships with adults but distinctly lower on connectedness and safety (i.e., *Mixed/Positive Relationships*). These mixed climate classes suggest that Latinx school climate perceptions are more complicated than would be implied by a simple high/low or healthy/unhealthy continuum. An examination of the patterns of responses of four major sources of divergence, referred to herein as *keystone items*, creates a strong contrast between these two mixed climate classes. Two items showed more elevated scores for the *Mixed/Connected* climate class than for the *Mixed/Positive Relationships* climate class: “I feel like I am a part of this school” and “I am happy to be at this school.” Similarly, two different keystone items showed more elevated scores for the *Mixed/Positive Relationships* climate class than for the *Mixed/Connected* climate class: “At my school there is an adult who listens to me when I have something to say” and “At my school there is an adult who believes I will be a success.” These results may suggest two distinctive patterns of school climate experience for Latinx youth: one that emphasizes school connectedness and the other that emphasizes supportive relationships with school adults.

To begin to establish convergent validity for the five-class solution, additional analyses were performed to determine if the climate classes would vary as expected with two validated constructs: self-reported grades and parent education as a proxy for socioeconomic status. The results conformed to expectations. Compared to all other climate classes, students in the most positive climate class self-reported significantly higher grades and levels of parent education. Self-reported grades and parent education declined across less favorable school climate classes, with students in the most negative climate class reporting significantly lower grades and levels of parent education. Notably, the two mixed climate classes were statistically indistinguishable in terms of self-reported grades and parent education.

Fig. 3 illustrates in a new way the between-class differences in the probability of endorsement across the four measured domains of school climate perceptions. As displayed in Fig. 3, the pattern may suggest the presence of a cascade effect for school climate perceptions among Latinx youth, with perceptions of safety, connectedness, and relationships emerging before perceptions of meaningful participation and perceptions of meaningful participation representing a possible “end state” or ceiling feature of the development of school climate perceptions. This raises the question of whether there is a predictable developmental sequence of school climate perceptions that is neither dependent on person or context. Similarly, it is reasonable to question whether it is possible that this developmental sequence is not fully enumerated by the school climate domains measured in traditional instruments, such as the one used here within the present study. Examining new constructs within the context of school climate, such as psychological empowerment (Christens, Peterson, & Speer, 2014) or critical consciousness (Watts, Diemer, & Voight, 2011), may be important to the characterization of a broader developmental continuum of school climate perceptions for Latinx youth. Of course, answering these questions goes beyond the point-in-time analysis possible with this cross-sectional dataset and would require the availability of identifiable longitudinal data.

The sum of the results supports the utility of latent class modeling for examining school climate perceptions beyond traditional variable-centered approaches. This method holds promise for informing targeted intervention decisions for subgroups of Latinx students in a middle school setting. Our results also support the utility of collecting school climate data for the purpose of assigning targeted interventions to groups of students within a school; of course, identified school climate data would need to be collected to make this possible.

4.2. Study limitations and future research

This study identified important variations in Latinx students' experiences of school climate; nevertheless, much work remains. First, and perhaps most essentially, is the need for additional examination of the five-class solution identified here. In addition to quantitative replication work, qualitative investigations using identified student school climate perception data are needed to validate the five-class solution. Latinx students should have the opportunity to describe what aspects of their school experience account for their responses to items on the school climate surveys that they are asked to complete, and whether they personally identify with the same climate class to which they are empirically estimated to belong to. Also, as noted earlier, the term Latinx includes a diversity of individuals varying by race, ethnicity, nation of origin, and immigration status. The dataset used in this analysis, while robust, does not include demographic variables that would enable us to explore differences along these dimensions. Developers of large-scale surveys, such as the CHKS (Hanson & Voight, 2014), may consider adding more refined demographic questions to enable these types of within-group analyses. In the meantime, researchers working with specific schools may consider adding supplemental

demographic questions to existing instruments.

Additional studies should explore both covariates associated with climate class belonging, especially those covariates known to confer risk for Latinx youth, such as generational migration status and English language proficiency. Relatedly, this study used self-reported grades as a measure of academic achievement; future studies will need to examine this finding with other sources of academic achievement data, including end-of-year grades and norm-referenced academic achievement scores. Moreover, attention should be paid to the implications of these climate classes, linking class belonging to outcomes of interest to policy makers, such as school completion, mental health, and wellbeing. School climate data historically have been collected as part of point-in-time, public health-type surveys and have therefore neither been identified nor studied longitudinally. To use school climate class belonging to identify individuals for targeted intervention, education agencies would need to collect and monitor identified school climate perception data. Similarly, the study results warrant exploration of a possible cascade effect for school climate perceptions, wherein perceptions of relationships, connectedness, and safety develop before perceptions of meaningful participation. Exploration of the question of whether there is a predictable and replicable sequence — or set of developmental stages — of school climate perceptions either across all students or within Latinx students, specifically, would require the longitudinal collection of survey data from an identified set of individual students.

4.3. Implications for practice

Our results confirmed the existence of substantial within-group variation across Latinx students' perceptions of school climate, suggesting that Latinx students were not experiencing school climate on a simple continuum from low/negative to high/positive. Rather, there are at least five potential, distinct classes of school climate experienced by Latinx students, each of which may require a different set of intervention tools for meeting their needs. First, nearly a quarter of the sample had high school-climate perceptions across all dimensions. Viewed from an MTSS lens, these students' needs are likely met by "business as usual," Tier I social, emotional, academic, and behavioral supports, such as Schoolwide Positive Behavioral Interventions and Supports (SWPBIS; Sugai & Horner, 2009), and opportunities for participation in regularly occurring school-based youth development activities. In their recently-updated *PBIS Cultural Responsiveness Field Guide*, Leverson, Smith, McIntosh, Rose, and Pinkelman (2019) outlined five tenets (i.e., identity, voice, supportive environment, situational appropriateness, and data for equity) to guide schools wishing to build culturally-responsive SWPBIS systems. Using this publication as a guide, Fetterman, Ritter, Morrison, and Newman (2019) described one Spanish-language magnet school's culturally-adapted SWPBIS approach that contained elements that were included in the development and use of culturally-attuned behavior matrices, Spanish-language behavioral expectations posters, and modification of behavior support materials to incorporate symbols of students' cultural heritage.

Approximately one quarter of the sample had high school climate perceptions across all but the meaningful participation dimension. The perception that opportunities for meaningful participation were low was consistent across all but the *High/Positive* climate class. This finding suggests a need to target Tier 2 intervention resources toward building intentional opportunities for student voice and participatory decision making in California middle schools. Voight, 2015described the utility of engaging middle school students in youth participatory action research (YPAR) for the purpose of improving social norms and building social networks. Peer Leaders Uniting Students (PLUS), a promising program that incorporates YPAR methods, has recently been highlighted for its utility in giving students a platform for informing resource-obligation decisions being made by school and district leaders (Cohen et al., 2020). Other culturally-adapted social emotional interventions that intentionally promote positive racial-ethnic identity in adolescents, such as Jóvenes Fuertes, may hold promise (Castro-Olivo, 2014). More broadly, Gregory and Fergus (2017) argued that equity-oriented social emotional competency-building efforts must include not only student-targeted supports, but comprehensive ecological approaches. These types of approaches ask educators to examine their own conscious and unconscious beliefs, cultural frames, and values, and to improve their knowledge and awareness about the historical social forces that sustain systemic racism and that shape students' present day school experiences.

Targeted intervention may not be enough for students, such as the 16% of young people in the *Low/Negative* climate class. Disproportionately represented in this group are students who have lower grades and whose parents have lower levels of education. For these students, culturally-informed Tier 3 intensive wrap-around interventions aimed at improving Latinx students' school experiences would be appropriate. In addition to the continued provision of Tier 1 and Tier 2 supports, interventions for this group may require tailored supports designed to improve access to school-related resources among diverse families. Castro-Olivo, Preciado, Le, Maricante, and Garcia (2018) describe culturally-informed adaptations for wraparound interventions. Examples included translating materials and conducting meetings in Spanish, linking session materials and discussion to symbols and concepts specific to Latinx culture, providing examples for parents with limited English proficiency, including lessons on the differences between educational systems in the United States and families' countries of origin, and including descriptions of unique risk and protective factors specific to Latinx students. Examples of culturally adapted, comprehensive family interventions designed for risk reduction among middle school populations include *Familias Preparando la Nueva Generación* (Marsiglia, Ayers, Baldwin-White, & Booth, 2016), *Familias Unidas* (Perrino et al., 2015), and Fortaleciendo Familias (Strengthening Families; Orte, Ballester, March, & Amer, 2013).

School psychologists should possess the professional competencies to lead the development of a customized, Latinx-supportive MTSS structure in their schools, including guiding school needs assessments, selecting evidence-based interventions for all tiers of support, gauging individual student needs using validated instruments, assigning students to targeted interventions, and monitoring students' response to treatment. Foundational to this is a need to recognize the importance of the wellbeing of this large and growing student population, and a concomitant shift to prioritize the assignment of resources needed to address the Latinx student experience.

To better understand their context, school psychologists should first examine their school's student demographics for sources of

variation by ethnicity, race, generational status, and nation of origin, and to consider how student backgrounds differ from their own, as well as from that of the teachers, counselors, administrators, and staff with whom the students interact. Sharing these results with school staff could be helpful for building awareness and sensitivity to the diverse experiences of Latinx youth and for moving away from monolithic conceptualizations of a unidimensional Latinx student population. Of course, many schools will not have collected such data, so school psychologists may need to start by advocating for adding more refined demographic questions to student and family-report surveys. Making Latinx-sensitive decisions would mean examining whether interventions have evidence of effectiveness for Latinx populations, specifically, and whether the interventions have been culturally-adapted in such a way to make them relatable for specific Latinx subgroups (Castro-Olivo et al., 2018). Finally, school psychologists must draw upon their competencies in consultation with educators and families in order to make collectively supported decisions about appropriate interventions and to determine whether those interventions are effective for improving academic, social, and behavioral wellbeing of Latinx students.

5. Conclusion

Latinx youth currently represent over a quarter of public school students in the United States (NCLR, 2016; U.S. Census Bureau, 2017). Despite their growing representation in the United States' school-aged population, research has been slow to identify supports that ensure their academic and personal success. Although numerous studies have shown that school climate perceptions are an important predictor of academic success and personal wellbeing, few studies have explored variations in school climate perceptions with the Latinx student population. Where they have been addressed, most studies employ designs that compare Latinx youth to other racial-ethnic groups, eclipsing important within-group variation. Results from this study grow the existing literature by illustrating that Latinx students vary widely in their perceptions of school climate.

Our results rebut a deficit narrative by showing that most Latinx youth in this large sample have positive orientations to their school experiences. Furthermore, our results suggest the need for tiered supports within the Latinx group, rather than treatment of all Latinx youth as inherently at risk. School psychologists have a critical role to play in translating these results into practice by working to transform educators' attitudes about Latinx youth, helping educators move away from monolithic conceptualizations and deficit narratives, and to expand the use of culturally-adapted practices designed to improve academic and personal wellbeing among Latinx students.

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