



Language, Immigration, and Socioeconomic Status: A Latent Class Analytic Approach to Parental Predictors of Child Behavior Outcomes

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Abstract

Parent characteristics at childbirth influence children’s internalizing and externalizing behaviors, which are critical determinants of broader socioemotional outcomes. The current study employed a longitudinal, person-centered, latent class analytic (LCA) approach to examine subgroup differences among key parent characteristics and associations with children’s distal internalizing and externalizing behavior outcomes. The study sample ($n = 2460$) was drawn from baseline and Year 9 waves of the nationally representative Fragile Families and Child Wellbeing Project. LCA results supported a 3-class solution to the data, comprising a married, well-educated, wealthy, English-speaking, U.S.-born subgroup; an unmarried, English-speaking, U.S.-born subgroup with low SES and educational attainment levels; and an immigrant, Spanish-preferred, low-SES, low educational attainment subgroup with moderate marriage probability. Children of the wealthy subgroup demonstrated the lowest internalizing and externalizing behavior scores, followed by the low-SES, Spanish-preferred subgroup. Children of the low-SES, English-speaking subgroup had the highest internalizing and externalizing scores. Results suggest a protective effect for children of the immigrant, Spanish-preferred subgroup despite low parental SES and educational attainment levels.

Keywords Internalizing · Externalizing · Immigration · Language · Longitudinal

Highlights

- Latent class analysis uncovered subgroup heterogeneity and facilitated nuanced exploration of parent predictors of child behavior outcomes.
- Predictors for maladaptive child behavior outcomes (e.g., parent’s social and financial stressors) may differ across sociocultural groups.
- Results suggest a protective effect for children of Spanish-preferred immigrants despite low parental SES and educational attainment levels.

Children’s internalizing and externalizing behaviors in school settings are critical determinants of near- and short-term outcomes across a range of domains, including school performance, criminal justice system involvement, and

socioemotional functioning (e.g., Houri & Sullivan, 2019; Hindt et al., 2020; Bai & Repetti, 2018). Research suggests that parent characteristics, including marriage, nativity/language, educational attainment, and socioeconomic status (SES), are important predictors of child internalizing and externalizing behaviors (e.g., Wallenborn et al., 2019, Mack et al., 2015; Houri & Sullivan, 2019; Assari et al., 2020; Lansford et al., 2019; Kang & Cohen, 2017). However, many studies investigating associations between parent characteristics and child behavior outcomes take variable-centered analytic approaches that assume individuals are part of a single distribution; this approach may obscure meaningful differences between subgroups pertaining to

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patterns of association (Howard & Hoffman, 2017). The current study, guided by the Family Stress Model (FSM; e.g., Conger & Elder, 1994; Conger et al., 1994, 2010) as well as the Healthy Immigrant Effect (HIE; e.g., Markides & Coreil, 1986; Lu & Ng, 2019; Markides & Rote, 2019), employs longitudinal data and a person-centered analytic approach to examine subgroup differences among parent characteristics at childbirth and associations with children's downstream internalizing and externalizing behaviors.

Internalizing and Externalizing Behaviors

Children's internalizing behaviors (e.g., sadness, anxiety related to tests, school-related worries, becoming upset when obstacles in learning occur) and externalizing behaviors (e.g., arguing with other children and disciplinary problems) are important contributors to academic success (Marsh, 1990). For example, evidence shows that internalizing and externalizing behaviors are directly associated with reading achievement but are also linked to broader school and home life challenges (Houri & Sullivan, 2019; Bai & Repetti, 2018). In addition, the presence of internalizing and externalizing behaviors in the school context is associated with higher probability of Alcohol Use Disorders (AUD) in adulthood (Meque et al., 2019). Research also shows that challenging early life circumstances, including adverse childhood experiences (ACEs) and peer victimization (e.g., cyberbullying) are predictive of internalizing and externalizing behaviors among youth (Muniz et al., 2019; Fisher et al., 2016), contributing to a trajectory of early life challenges, maladaptive school behaviors, and negative downstream consequences. Moreover, the literature has noted an association between attentional focus, self-control, and low levels of externalizing behavior among kindergarten students (Houri & Sullivan, 2019). Higher levels of internalizing and externalizing behaviors among children through adolescence are negatively associated with cognitive performance (Papachristou & Flouri, 2020), which are key for academic success. Because evidence shows that early childhood factors are predictive of children's subsequent internalizing and externalizing behaviors, understanding parent and household characteristics at childbirth may help to guide policy, intervention development, and resource allocation to better support families whose children may demonstrate higher risk for these behaviors in school.

Family Stress Model and Healthy Immigrant Effect

The Family Stress Model (FSM; e.g., Conger & Elder, 1994; Conger et al., 1994, 2010) posits that financial

hardships can negatively impact the social/emotional functioning of all family members, including the development of children and teens. Youth in critical developmental periods are particularly vulnerable to this stress as it can affect their cognitive functioning, social skills, and externalizing and internalizing behaviors in addition to other school outcomes (Conger et al., 2010). The FSM has been applied to immigrant populations to examine the interplay of parental mental health, financial stress, and academic involvement related to the academic success of Latinx children (Gilbert et al., 2017). However, the Healthy Immigrant Effect (HIE; sometimes referred to as the "healthy immigrant paradox"), first proposed by Markides and Coreil (1986), noted that Latinx immigrants, despite economic hardship, were more likely to demonstrate health outcomes consistent with those of non-Hispanic Whites than Blacks, with whom their economic outcomes were more closely aligned. For example, some research suggests that immigrants generally have better mental health outcomes (i.e., substance use, anxiety, and mood) compared to individuals born in the U.S.; however, this effect tends to decrease over time as well as across generations and may not apply to all immigrant groups (Shekunov, 2017). Recent research continues to support the HIE for physical health conditions (Lu & Ng, 2019), though this effect, too, may fade after residing in the U.S. for more than one or two decades (Markides & Rote, 2019). Thus, while the FSM suggests that financial hardship is linked to deficits in families' social and emotional functioning, the HIE suggests that Latinx immigrant status may buffer against these deficits.

While both the FSM and HIE have broad support in the research literature, little is known about how parents' key FSM domains at childbirth, including marital status, nativity, English language proficiency, educational achievement, and socioeconomic status, are associated with children's internalizing and externalizing behaviors downstream, or whether the HIE might buffer against internalizing and externalizing behaviors for children of immigrant parents with a preference for the Spanish language in the context of the FSM.

Marriage

Evidence shows that children of married couples generally tend to have better outcomes across a variety of domains, such as health, academics and cognition compared to children from diverse family structures (e.g., single-parent homes, grandparents serving as the primary caregivers, cohabitating couples; Krueger et al., 2015). Moreover, children in unmarried families demonstrate higher levels of internalizing behaviors than those children with married parents (Wallenborn et al., 2019). Notably, children living in single-parent homes have a

higher propensity for externalizing behaviors in young adulthood (Mack et al., 2015). In addition, evidence has shown that as the number of familial risk factors increases such as, parental conflict and divorce, so does the probability of internalizing and externalizing behaviors during childhood; parental conflict appears to be the most potent of the examined risk factors (Tetzner et al., 2022).

Nativity/Language

Parental nativity and language proficiency have important implications for their children's behavioral outcomes as well as academic performance, but findings have been mixed. Parental involvement (e.g., assisting with homework assignments, reading to their children, attending school functions) has been linked to school performance in both U.S.-born, English-speaking and immigrant Latinx, Spanish-speaking populations (Baker, 2018; Sibley & Dearing, 2014); evidence shows that some immigrant families may face additional challenges with parental involvement in their children's academics (Gilbert et al., 2017). For example, Latinx children, from households with lower levels of SES and parental education, may be academically disadvantaged when entering kindergarten as their parents are less likely to devote as much time to preacademic activities that are conducive to success, such as reading and counting (Cabrera et al., 2016). However, research shows immigration status and associations with child outcomes are heterogeneous. For example, documented immigrants demonstrate higher levels of internalizing behaviors compared to children of U.S.-born parents, while children of undocumented immigrants have higher levels of internalizing behaviors compared to documented immigrants in a predominantly Latinx sample (Kang & Cohen, 2017). Similarly, Landale et al. (2015) noted that children with undocumented, Mexican mothers exhibit higher internalizing and externalizing behaviors when compared to other maternal groups (i.e., documented, naturalized citizens). On the other hand, Hourii and Sullivan (2019) observed that kindergarten students from immigrant families, predominantly from a Latinx sample with Mexican parents accounting for a large percentage of this heterogeneous pan-ethnic group, had better attentional focus, self-control, and lower externalizing behaviors than children of U.S.-born parents. This variability in findings underscores the importance of examining subgroup differences to facilitate a more nuanced understanding of internalizing and externalizing behaviors in children.

Parental Educational Attainment

Parental educational attainment is similarly linked to child behavior outcomes. Higher educational attainment is a

protective factor for adolescents in regard to internalizing and externalizing behaviors; however, studies with Latinx and Black students suggest that this effect is weaker even with highly educated parents compared to non-Hispanic Whites (Assari et al., 2020). In addition, it is important to note that immigrants in general face additional barriers to educational achievement relative to native-born individuals. A recent study, with a predominant Latinx sample, showed that over 80% of undocumented parents and about 50% of documented parents had not completed high school in comparison to U.S.-born parents (i.e., 12%; Kang & Cohen, 2017).

Socioeconomic Status

Research shows that higher household income is associated with lower levels of externalizing and internalizing behaviors in children across low-, middle-, and high-income countries (Lansford et al., 2019). These links are likely due at least in part to well-documented associations between parent's financial stress and mental health symptoms, like depression, that pose challenges to adaptive parenting behaviors (e.g., Petts, 2018). Immigration status may also affect associations between financial stress and child behavior outcomes. According to the Migration Policy Institute (2019), 25.8% of children under the age of 18 have at least one parent born outside the United States; in addition, 31.2% of children in low-income families had at least one parent that was born outside of the U.S. Evidence shows that immigrant groups may have lower levels of income as well as "disadvantaged" living conditions (Kang & Cohen, 2017). Furthermore, chronically poor individuals are more likely to reside in single-parent households with lower levels of maternal educational attainment, and to be Latinx; among immigrant parents, studies show that financial stress may contribute to depressive symptoms and low engagement in the context of children's academic activities (Gilbert et al., 2017). In the context of the FSM, this pattern of associations suggests that children of Latinx immigrants may be at higher risk for externalizing and internalizing behaviors in comparison to the children of nonimmigrant parents.

The Present Study

In light of the heterogeneity and complexity of associations between parental factors, particularly immigration and socioeconomic status, and child internalizing and externalizing behaviors, the present study applied a person-centered mixture modeling approach informed by the FSM and HIE to investigate the following research

questions: (1) Are meaningful latent classes present in the current sample regarding parents' marital status, nativity/language, educational attainment and SES at childbirth? (2) Are these latent classes associated with different scores on children's downstream internalizing and externalizing behavior measures?

Person-centered mixture modeling approaches like latent class analysis (LCA) allow investigators to assign individuals from an overall sample to conceptually meaningful subgroups with distinct patterns, or classes, of responses on categorical variables based on participants' likelihood of subgroup membership. This approach is valuable where variable centered analyses, which assume participants are part of a single distribution, may obscure meaningful subgroup differences on key indicators and their class-based associations with distal outcomes (Howard & Hoffman, 2017).

Method

Participants and Procedures

The current sample was drawn from a nationally representative, longitudinal sample of children born between 1998 and 2000 (Reichman et al., 2001). The 20 U.S. cities with populations over 200,000 were stratified by economic and welfare conditions. Hospitals were randomly selected within cities, and births randomly selected within hospitals with an intentional oversample of births to unmarried parents ("fragile families"). Mothers were interviewed in hospitals shortly after giving birth for the baseline wave, with follow-up interviews occurring at one, three, five, nine, and 15 years. Fathers were interviewed when available at all waves, and children began completing surveys at Year 9 when they were approximately nine years old. Please refer to the parent study conducted by Reichman et al. (2001) for details on IRB approval and consent information. The present study used public data from the baseline and Year 9 waves, and the analytic sample was limited to those with complete data on the study variables described below. The final analytic sample was $n = 2460$.

Measurement

Latent class indicators

Latent class membership was determined using eight observed categorical items measured at baseline. *Mother's nativity* and *father's nativity* indicated whether each parent was born in the United States. Two dichotomous items indicated whether each parent's *survey was conducted in Spanish*. *Marital status* indicated whether the child's

biological parents were married when the child was born. *Mother's education* and *father's education* captured the highest level of education reported by each parent by baseline categorized as less than high school completion, high school degree or General Educational Development (GED), some college, or college degree or higher. *Poverty status* captured the child's household income at birth as a percentage of the federal poverty line, categorized as less than 50%, 50%–99%, 100%–299%, or 300% and higher. Table 1 shows descriptive statistics for parents at baseline. Indicator variable selection was informed by prior theoretical and empirical work highlighting the role of parental nativity, marital status, language preference, educational attainment, and income on a range of child behavior outcomes (Lansford et al., 2019; Kang & Cohen, 2017).

Child behavioral outcomes

The main outcome, child behavior, was assessed using two subscales from the Self-Description Questionnaire (SDQ; Marsh, 1990). Although parents were asked to report on children's behaviors, the sample included children who may not have been living with both or either parent(s) at Year 9; thus, child self-report was determined to be the most reliable measure. *Internalizing* assessed the extent to which children self-reported eight anxious, depressed, or withdrawn behaviors such as "I often feel lonely" and "I feel ashamed when I make mistakes at school." *Externalizing* assessed the extent to which children self-reported six attention problems or disruptive behaviors such as "It's hard for me to pay attention" and "I get in trouble for talking and disturbing others." Children responded to the 14 items using a four-point Likert-type scale ranging from 0 = Not at all to 3 = Very true; scores for each subscale were calculated as the average of relevant items.

Analyses

We applied LCA, a type of mixture modeling which uses observed categorical variables to detect an underlying latent categorical variable, to address study research questions (Asparouhov & Muthén, 2021). Statistical analyses were conducted in two phases: first, we identified the LCA model that best fit the latent class structure of the data, and second examined associations between latent classes and the distal outcomes for child internalizing behaviors and child externalizing behaviors.

In the first phase, the latent class structure of the data was modeled using an iterative fitting process. At each iteration, one additional latent class k was specified, and the resulting model compared to the previous $k-1$ iteration. To determine the best fitting class solution, we applied a holistic model evaluation strategy including model fit and class separation

criteria as well as model explanatory utility (Ferguson et al., 2020; Nylund et al., 2007). LCA models with 1 to 4 classes were specified and evaluated using log likelihood, Akaike information criteria (AIC), Bayesian information criteria (BIC), consistent Akaike information criteria (CAIC), and sample size adjusted Bayesian information criteria (ssBIC), where lower values represent better model fit. To evaluate class separation, we examined model entropy, where higher values scaled from 0 to 1 represent a greater probability that individuals belong to only one class. Consistent with established best practices (Marsh et al., 2009; Masyn, 2013), models with classes comprising less than 5% of the total sample were rejected. When selecting the optimal model from phase one to advance to phase two, we examined statistical indicators of fit and separation as well as individual item response probabilities indicative of class heterogeneity and explanatory utility consistent with the theoretical frameworks described in the introduction.

In the second analytic phase, we used the Bolck et al. (2004; BCH) approach to evaluating differences in class means for continuous distal outcomes with auxiliary variables in LCA to examine differences in child externalizing and internalizing behavior scores across classes. Simulation studies show that the BCH approach, which uses weighted multiple group analysis and prevents class shift between class estimation and distal outcome analysis, to be superior to other methods of evaluating differences in means for

distal outcomes in LCA (Vermunt, 2010; Asparouhov & Muthén, 2014).

Results

Phase one analyses supported a 3-class solution to the data. The 3-class solution reflected lower values across AIC, BIC, and ssBIC indices compared to the 1 and 2-class solutions as well as higher entropy values indicative of better class separation. While fit criteria marginally favored a 4-class solution, entropy was below the recommended .80 threshold for good class separation (Wang et al., 2017) and examination of item response probabilities indicated that the 4-class solution had little explanatory advantage over the 3-class solution, with the fourth class essentially reproducing class indicator values from one of the three previous classes. Table 2 shows AIC, BIC, ssBIC, and entropy values for 1 to 4-class solutions.

In the 3-class solution, class 1, the English-preferred high-income class, and class 3, the English-preferred low-income class, were characterized by high probabilities of U.S. nativity and English language survey completion for both parents, though the English-preferred high-income class had lower probabilities of U.S. nativity for both parents than the English-preferred low-income class. In addition, the English-preferred high-income class was characterized by item response probabilities consistent with positive socioeconomic and child behavior outcomes (Lansford et al., 2019; Altafim et al., 2018), including the highest probabilities of marriage, college completion for both parents, and household income over 300% of the poverty threshold. The English-preferred low-income class was characterized by the lowest probability of marriage, low probabilities of post high-school education for both parents, and the highest probability of income below the poverty threshold, including from 0–49% of the poverty line. In contrast, class 2, the Spanish-preferred class, was characterized by low to moderate probability of marriage, the lowest probabilities of U.S. nativity for both parents, the lowest probabilities of English language survey completion (i.e., highest probability of Spanish language completion), high probabilities of high school non-completion for both parents, and the highest probabilities of income between 50% and 199% of the poverty threshold. Substantively, results show that the overall sample is comprised of meaningfully distinct subgroups with conceptually coherent patterns of class indicators. For both English-preferred classes, these patterns are largely consistent with theory-driven predictions; parental marital status at childbirth and educational attainment are closely linked to income. However, the Spanish-preferred class was characterized by a more nuanced pattern of indicators; this class had the

Table 1 Descriptive statistics for parents at baseline

	<i>n</i> (%)
Biological parents married	624 (25.4%)
Mother U.S.-born	2137 (88.1%)
Father U.S.-born	2048 (86.9%)
Mother survey conducted in English (vs. Spanish)	2309 (93.8%)
Father survey conducted in English (vs. Spanish)	2309 (93.8%)
Mother education	
Less than high school (HS)	762 (31.0%)
HS degree/General Educational Development (GED)	791 (32.2%)
Some college	625 (25.4%)
College degree or higher	282 (11.5%)
Father education	
Less than HS	775 (31.5%)
HS degree/GED	851 (34.6%)
Some college	570 (23.2%)
College degree or higher	264 (10.7%)
Household poverty level	
0–49%	432 (17.6%)
50–99%	392 (15.9%)
100–199%	627 (25.5%)
200–299%	387 (15.7%)
300%+	622 (25.3%)

Table 2 Model fit indices for 1 to 4 class solutions

Classes	Log likelihood	AIC	BIC	ssBIC	Entropy
$c = 1$	-29,535.47	59,108.94	59,219.29	59,158.92	NA
$c = 2$	-28,312.26	56,698.52	56,913.41	56,795.85	0.78
$c = 3$	-27,199.67	54,509.34	54,828.78	54,654.03	0.90
$c = 4$	-26,811.17	53,768.35	54,192.32	53,960.39	0.82

Table 3 Model estimated item response probabilities by latent class

	Class 1 (23.99%)	<i>p</i>	Class 2 (8.26%)	<i>p</i>	Class 3 (67.75%)	<i>p</i>
Parent indicators						
Married	0.73	<0.001	0.33	<0.001	0.08	<0.001
Father U.S.-born	0.87	<0.001	0.03	<0.05	0.97	<0.05
Mother U.S.-born	0.86	<0.001	0.13	<0.001	0.98	<0.001
Father survey English (vs. Spanish)	0.99	<0.001	0.28	<0.001	0.99	<0.001
Mother survey English (vs. Spanish)	0.99	<0.001	0.30	<0.001	0.99	<0.001
Father < high school	0.02	<0.05	0.61	<0.001	0.38	<0.001
Father high school grad	0.18	<0.001	0.18	<0.001	0.43	<0.001
Father some college	0.40	<0.001	0.16	<0.001	0.18	<0.001
Father college grad	0.40	<0.001	0.06	<0.001	0.01	<0.001
Mother < high school	0.01	0.17	0.58	<0.001	0.38	<0.001
Mother high school grad	0.13	<0.001	0.24	<0.001	0.40	<0.001
Mother some college	0.40	<0.001	0.15	<0.001	0.21	<0.001
Mother college grad	0.46	<0.001	0.03	<0.05	0.00	0.15
Income 0–49% poverty line	0.00	0.27	0.14	<0.001	0.24	<0.001
Income 50–99% poverty line	0.00	0.36	0.25	<0.001	0.20	<0.001
Income 99–199% poverty line	0.07	<0.05	0.42	<0.001	0.30	<0.001
Income 200–300% poverty line	0.16	<0.001	0.11	<0.001	0.16	<0.001
Income >300% poverty line	0.77	<0.001	0.08	<0.001	0.09	<0.001

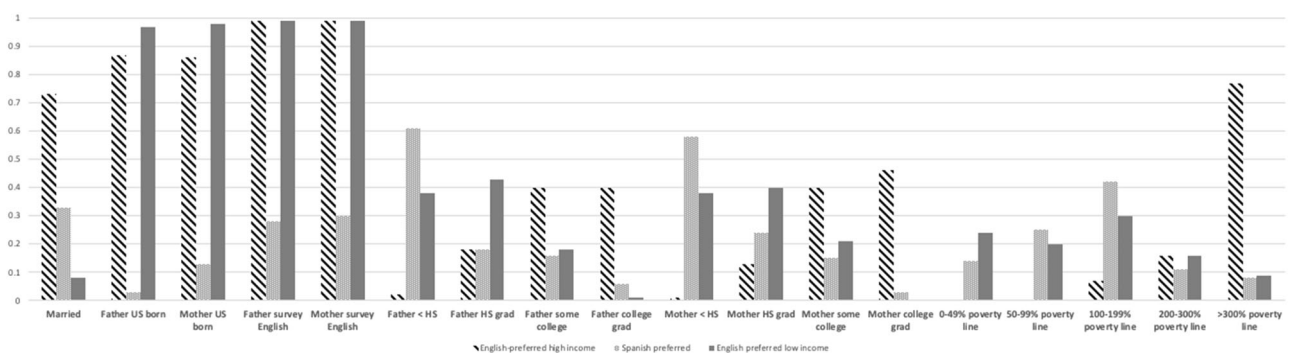


Fig. 1 Item response probability plot by class

highest probability of high school noncompletion among parents but was less likely to fall into the lowest income tier the English-preferred low-income class. Model estimated class indicator probabilities were significant for all variables

except for maternal high school noncompletion, income 0–49%, and income 50–99% of the poverty line in the English-preferred high-income class, and maternal college graduation in the English-preferred low-income class. Class

Table 4 Equality tests of means across classes for child internalizing behaviors

	<i>M</i>	SE	X^2	<i>p</i>	df
Class 1	7.47	0.22			
Class 2	8.59	0.37			
Class 3	9.20	0.15			
Overall test			80.70	<0.001	2
Class 1 vs. Class 2			6.72	<0.01	
Class 1 vs. Class 3			78.42	<0.001	
Class 2 vs. Class 3			11.37	<0.001	

membership percentages and item response probabilities for class indicators are shown in Table 3. Figure 1 shows a visualization of item response probabilities by class.

Phase two analyses examined differences in mean child internalizing and externalizing behaviors by class. Children of the English-preferred high-income class demonstrated the lowest internalizing behavior mean ($M = 7.47$, $SE = 0.22$), followed by the Spanish-preferred class ($M = 8.59$, $SE = 0.37$) and the English-preferred low-income class ($M = 9.20$, $SE = 0.15$). Chi-square tests demonstrated that all class mean differences for internalizing behaviors were statistically significant at or below the $p = 0.01$ level. A similar pattern of results was evident for externalizing behaviors. Children of the English-preferred high-income class had the lowest mean ($M = 4.34$, $SE = 0.16$), followed by the Spanish-preferred class ($M = 4.25$, $SE = 0.25$) and the English-preferred low-income class ($M = 6.05$, $SE = 0.11$). Chi-square tests demonstrated that mean differences were significant at or below the $p = 0.01$ for all class comparisons except the English-preferred high-income vs. the Spanish-preferred class. Tables 4 and 5 show class means for internalizing and externalizing behaviors and head-to-head difference tests.

Discussion

This study yielded several noteworthy findings. Research question one was answered affirmatively; analyses supported the view that the study sample was characterized by the presence of conceptually meaningful latent classes comprising an English-preferred (i.e., English language survey completion) high-income class, a Spanish-preferred (i.e., Spanish language survey completion) immigrant class with low educational attainment levels and mixed low-income distribution, and a U.S.-born, English-preferred (i.e., English language survey completion) low-income class with low educational attainment levels and the lowest likelihood of marriage at childbirth. Research question two was also answered affirmatively. For the high- and low-

Table 5 Equality tests of means across classes for child externalizing behaviors

	<i>M</i>	SE	X^2	<i>p</i>	df
Class 1	4.34	0.16			
Class 2	4.25	0.25			
Class 3	6.05	0.11			
Overall test			88.86	<0.001	2
Class 1 vs. Class 2			0.08	0.78	
Class 1 vs. Class 3			67.87	<0.001	
Class 2 vs. Class 3			41.74	<0.001	

income English-preferred classes, the FSM predictions were supported; the English-preferred high-income class was associated with the lowest child internalizing and externalizing behavior scores, while the English-preferred low-income class was associated with the highest internalizing and externalizing behavior scores. However, consistent with the HIE, results showed that child internalizing and externalizing behaviors associated with the Spanish-preferred class were lower than those of the English-preferred low-income class. Moreover, externalizing behavior scores for the Spanish-preferred class were not significantly different than externalizing scores for the English-preferred high-income class.

The emergence of robustly differentiated latent classes in these data support the application of person-centered modeling to uncover heterogeneity and support nuanced exploration in the context of parent predictors of child behavior outcomes. While variable centered approaches like regression or structural equation modeling can test associations between variables, these approaches may miss underlying subgroup differences like those revealed in this study, where an LCA approach showed that the overall sample can be characterized with statistical and conceptual support as three distinct subgroups with different associations for distal child behavior outcomes.

This pattern of results suggests that despite socioeconomic and related challenges faced by Latinx immigrants who move to the U.S., the children of those immigrants may show fewer internalizing and externalizing behaviors than might be predicted by the FSM. Indeed, the children of Latinx immigrants in these data were statistically indistinguishable from the children of the English-preferred high-income class with respect to child externalizing behaviors despite socioeconomic challenges implied by parents' non-native and socioeconomic status. While the Spanish-preferred class in these data had a lower probability of extreme poverty (0–50% of the poverty line) than the English-preferred low-income class, findings suggest the presence of buffering effect against the risk posed by FSM predictors with regard to child behavior outcomes, with

externalizing behaviors conspicuously affected. The HIE has demonstrated a health benefit for immigrant populations in the U.S. relative to native-born groups, sustained in immigrant enclaves but reduced over time to converge with native-born populations between one and two decades (Markides & Rote, 2019); similar findings of the “immigrant paradox” have been documented in developmental research although there is variability in the outcomes across groups due to multiple factors, such as demographic characteristics (García Coll & Marks, 2012). However, our findings raise the question of whether an analogous effect may extend to socioemotional outcomes for the children of Spanish-preferred immigrant parents.

One explanation for the potential protective effect against externalizing, and to a lesser extent internalizing behaviors, for the children of Spanish-preferred immigrant parents might be family support demands like navigating English language systems, which in turn impact family functioning, including education and financial systems (Gilbert et al., 2017; Kang & Cohen, 2017). Children of Spanish-preferred immigrant parents may be less likely to enact externalizing behavior problems to avoid causing problems for the family unit. Because internalizing behaviors are *prima facie* less likely to result in disciplinary action in the school context, they may represent a “safer” outlet for regulating negative emotions. This explanation is consistent with prior research indicating that children of immigrant parents have lower levels of externalizing behaviors than those with U.S.-born parents (Houri & Sullivan, 2019) and generally have higher levels of internalizing behaviors although the literature is not in agreement as previously noted (Kang & Cohen, 2017; Landale et al., 2015). Thus, more investigation of a potential socioemotional benefit for the children of immigrant Spanish-preferred parents in school contexts merits additional exploration to extend knowledge related to interactions between FSM and HIE perspectives.

This study’s limitations include the use of self-report measures that may not fully capture underlying variables, such as identifying the parents’ language proficiency as this study relied on the language the survey was completed in for classification purposes. In addition, we were unable to model complete parent and child demographic characteristics, including family size, race, ethnicity, language preference for the child, and other family parameters that future analyses may benefit from including. Moreover, we were not able to model the heterogeneity for Spanish-preferred immigrants that emerged in these data with respect to various immigration status subtypes for individuals (i.e., documented, undocumented) and families (i.e., mixed-status families in which the parents’ immigration status is different), nation of origin, and acculturation levels, which future studies may target to develop more nuanced models of associations between FSM and HIE predictors in the

context of child behavior outcomes. Finally, future studies may consider exploring the implication of children’s internalizing and externalizing behaviors for other contexts, such as involvement with the criminal justice system, given that the measures used to assess for internalizing and externalizing behaviors (i.e., SDQ; Marsh, 1990) in the present study placed a strong emphasis on the school setting. Nevertheless, our findings underscore the importance of understanding socioemotional well-being from a systems approach.

Overall, study findings suggest that the FSM predictors for maladaptive child behavior outcomes in the context of parent’s social and financial stressors may not hold with equal predictive value across sociocultural groups, particularly for the children of Spanish-preferred immigrants. Exploring a socioemotional analog for the HIE in the context of children’s internalizing and externalizing behaviors may yield a more nuanced understanding of risk and protective mechanisms that can support intervention development, policies, and practices to improve socioemotional function and school performance for the children of “fragile families.” More specifically, interventions can be tailored to the heterogeneous differences of pan-ethnic groups and taking immigrant generations into consideration. Cabrera et al. (2016) highlighted the critical role of parental characteristics in the development of children, noting that young Latinx children may be at a disadvantage when they enter kindergarten due to limited household resources (i.e., lower levels of SES and parental educational attainment). However, this study suggests that being the child of immigrants can serve as a protective buffer from risk factors, such as SES and parents’ education levels, defying predictions from the literature and extending the transgenerational support for the HIE. Thus, in developing intervention approaches to enhance socioemotional well-being among school-aged children, it is critical to consider unique family factors through a culturally competent assessment lens that can identify family strengths which might be bolstered or enhanced.

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Author contributions A.C.R. conceived the study, participated in its design, and drafted the manuscript; N.B. participated in the design of the manuscript, conducted statistical analyses, and contributed to drafting the manuscript; K.E.M. contributed to drafting the manuscript. All authors read and approved the final manuscript.

Compliance with ethical standards

Conflict of interest The authors declare no competing interests.

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