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The Role of Parental Language Acculturation in the Formation of Social Capital: Differential Effects on High-risk Children

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Abstract

This person-centered study examines the extent to which parents' language dominance influences the effects of an after school, multi-family group intervention, FAST, on low-income children's emotional and behavioral outcomes via parents' relations with other parents and with school staff. Social capital resides in relationships of trust and shared expectations, which are highly dependent on whether parents share the language of other parents and teachers. This study is based on a community epidemiologically-defined sample of Latino families ($N = 3,091$) in San Antonio, Texas and Phoenix, Arizona. Latent profile analyses revealed three language profiles of parents across the two cities: English-dominant, Spanish-dominant, and bilingual. Path models revealed that FAST did not have a direct or indirect effect on children's emotional and behavior functioning, although FAST increased parent-parent and parent-school social capital among Spanish-dominant parents in Arizona and these parent-parent relations were associated with better child outcomes. Implications for interventions are discussed.

Keywords

acculturation; language; social capital; behavior problems; FAST

This study examines the role of parents' language acculturation in the formation of social capital, and the relevance of social capital in urban Southwest, low-income Latino children's socio-emotional lives. Social capital, broadly defined as positive social networks among individuals, has been increasingly recognized as a critical factor in children's functioning [1–2]. Children benefit from their parents' social networks when parents are well connected with their children's teachers and other parents. When parents come to know the parents of their children's school friends and their children's teachers, they are better able to enforce social norms to guide children's behavior [1]. Parents who know the parents of their children's friends and their children's teachers are also better able to monitor their children's emotional growth and everyday activities, such as homework completion, providing a more consistent parent-child relationship [3–5]. Social capital is related to positive long-term outcomes for at-risk children, including academic achievement, motivation, and aspirations as well as resilience [5]. Less is known about the effects of social capital on children's emotional and behavioral outcomes.

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Interventions designed to increase social capital are particularly important for minority families who may be isolated due to language or incompatible cultural expectations surrounding children's education [4]. One such promising intervention is Families and Schools Together (FAST), an evidence-based after-school multi-family group intervention, implemented across diverse groups within 45 states and 16 countries [6]. FAST aims to build parent-child, parent-parent, and parent-school relationships through culturally-sensitive family activities. Among other outcomes, randomized controlled trials have demonstrated successful engagement of low-income parents and improved behavioral and academic performance of students [7–8].

The Role of Language Acculturation in Social Capital Formation

Acculturation may explain variation in how FAST impacts Latino children's outcomes through parents' social capital. Acculturation refers to the "process that occurs when two distinctly different cultures come into firsthand contact with each other and involves the social, attitudinal, and psychological changes that occur to individuals as a result" (pp. 340–341) [9]. As a person comes into prolonged contact with a new culture, their language dominance may shift in order to accommodate new cultural information and social ties [10, 11]. Thus, language is meaningful in relation to one's ability to develop and maintain social ties [11].

Language acculturation has important implications in the formation of social ties and acquisition of resources [12]. Relationships of trust, mutual expectations, and shared values are closely tied to language [2], in that Latino parents who are dominant in English—the language of the dominant culture—are better able to communicate their children's needs, to hold compatible cultural norms, and to feel supported in those networks. Conversely, Latino parents whose language dominance is primarily in Spanish are more isolated and experience a dissonance of values and expectations with school staff and parents from outside their ethnic networks [12].

An additional consideration is the communities within which language minorities like Latinos reside. Being bilingual may be more beneficial to Latino parents who live in communities with low levels of English proficiency (e.g., Phoenix) than to those who live in communities with high levels of English proficiency (e.g., San Antonio) [13]. Thus, language isolation may negatively impact social capital and children's outcomes [14].

Explanatory Acculturation Models

Early models of acculturation focused on a unidimensional process, in which contact with the host culture led to gradual movement away from elements or practices of one's native culture. In contrast, bidimensional models of acculturation view adherence to the host culture as independent of one's relationship to the culture of origin, allowing individuals to have multiple cultural identities, which may vary in strength [10]. In Berry's acculturation framework [15], dimensions of host-culture acquisition and original-culture retention intersect to create four possible categories: assimilation to host culture, separation from host culture, integration of both cultures, and marginalization from any culture [11, 16]. While Berry's model emphasizes integration and has provided a foundation for much research on acculturation, one critique of this model focuses on how individuals are classified into Berry's four acculturation categories [17]. Typically, classification of individuals is based on cutpoint values, such as the sample median or the midpoint in the range of possible scores [16]. This method assumes each of the categories is valid and that an equal number of study participants will fall in each of the groups, despite literature questioning the validity of specific categories, mostly notably marginalization [see 16].

A Person-centered Approach to Acculturation

Such critiques have led to calls for further study of acculturative processes by using clustering methods that do not assume an a priori theoretical model [16, 17]. These methods allow for extraction of only some categories or multiple variations of one or more categories (e.g., multiple types of integration) [16]. Latent profile analysis, an empirical clustering method, creates profiles based on observed patterns and the optimal number of profiles to fit the data. When the emergence of profiles is based on the individual participants, as opposed to the characteristics of the measured variable, the model is referred to as *person-centered*. Person-centered models have only recently been applied to characterizations of acculturation [see 18].

The Focus of the Study

This paper explores the differential effects of FAST on Latino children's emotional and behavioral functioning via parent's relations with other parents and with school staff, for parents with varying language acculturation profiles. The size and diversity of our Latino sample allow us to classify parents into different profiles of language dominance in speaking, writing, and reading. We expected that profile membership would be associated with differential effects of FAST, and that the results may differ by city, where the larger immigrant population in Phoenix may be more isolated than the larger U.S.-born population of San Antonio. Thus, FAST effects may be greater in Phoenix than in San Antonio. The person-centered methodology used in this study aims to account for the heterogeneity of Latino families.

Methods

Participants

This study is part of a larger examination of the effects of social capital on children's social and academic outcomes. This cluster-randomized controlled trial assigned 52 elementary schools in San Antonio, TX, and Phoenix, AZ, to FAST ($n = 26$) and no FAST ($n = 26$). Participants were 3,091 parents, 51.8% ($n = 1,601$) from San Antonio and 48.2% ($n = 1,490$) from Phoenix, whose first grade child was enrolled in a study school. Seventy-six percent of the sample was Latino, with other minority groups represented at lower levels: 8% African American, 1.6% Asian/Pacific Islander, and 1.3% American Indian. There were no statistically significant differences between recruitment rates across the FAST and comparison schools. Over 68% ($N = 2,056$) of parents completed post-test surveys. In Phoenix, 65% were born outside of the United States and 62% spoke Spanish as their native language. In San Antonio, 35% of parents were born outside of the United States and 38% spoke Spanish as their native language. Independent samples t tests revealed no significant differences in key child demographic characteristics for schools assigned to FAST versus those assigned to the comparison group in San Antonio (% Hispanic: $t = .300$, $p = .776$; % free/reduced lunch: $t = -.414$, $p = .683$; % English learner: $t = -1.60$, $p = .819$; % special education learner: $t = -1.02$, $p = .324$) or in Phoenix (% Hispanic: $t = .511$, $p = .614$; % free/reduced lunch: $t = .220$, $p = .828$; % English learner: $t = -1.76$, $p = .862$; % special education learner: $t = .968$, $p = .343$).

In FAST schools, 71.7% of families attended at least one FAST session, but only 47% of families completed the full dose of the intervention (i.e., at least 50% of sessions), and our analyses were of these FAST completers and participants in the comparison group. There were no significant differences in child characteristics between FAST completers and FAST non-completers, with the exception that FAST completers in San Antonio were more likely

to be English language learners than FAST non-completers, $\chi^2(1, n = 782) = 8.82, p = .003$).

The FAST Program

During the 8-week, 2.5 hour sessions of FAST, teams of trained, culturally representative parents, school liaisons, and professionals lead participating families through a range of activities focused on empowering parents and fostering parents' relations with other parents. The team also encourages bridges between the culture of the home with the culture of the school, with an emphasis on increasing the likelihood that parents return to the school for other events [19].

Facilitators followed a program manual that delineates in detail the goals and activities of each meeting, which are theory and research based. Although core elements of FAST were unaltered, facilitators could adapt up to 60% of the FAST program to meet the needs of the particular community or cultural group it serves. For example, San Antonio teams facilitated FAST to mixed language family groups (i.e., English and Spanish), whereas Phoenix teams usually facilitated FAST to monolingual groups. Adherence to the core elements of FAST was ensured through a multi-level, multi-systemic process of implementation fidelity by a certified FAST trainer that included training, supervision, and site visits, along with the provision of feedback to FAST facilitators through a weekly program integrity checklist and a final report.

Measures

Parents completed Time 1 surveys on social capital when they enrolled in the study. Time 2 surveys on social capital, children's emotional and behavioral functioning, and parents' language dominance were completed by mail or phone. Surveys, conducted in English or Spanish, were spread 10 weeks apart for FAST (pre- and post-) and comparison participants.

Social capital—Social capital was assessed using the Parent Social Capital Survey which was derived from the Social Relationships and Parent Involvement scales of the Building Relationships Parent Survey (BRPS) [20]. We explored the size of parents' Time 1 and Time 2 parent-parent and parent-school social networks by asking, "How many parents of your child's friends at this school do you know?" and "How many of the school staff would you feel comfortable approaching if you had a question about your child?" Parents responded in English or Spanish on a scale of "0" to "6 or more."

Children's difficulties—The Total Difficulties Index of the Strengths and Difficulties Questionnaire (SDQ) [21] was administered to parents who reported on emotional and behavioral outcomes of their children. The index ($\alpha = .74$) is composed of 20 total items (four scales of five items each) measuring emotional symptoms, conduct problems, hyperactivity/inattention, and peer relationship problems. Response choices are "not true," "somewhat true," and "certainly true."

Language dominance—Language dominance was assessed by asking parents to "Please tell us how often you do each of the following: speak, write, and read in Spanish, and speak, write, and read in English" with response choices of "never," "rarely," "sometimes," "often," and "always." Separate means for the two language scores were computed to create a composite variable representing speaking, writing, and reading frequency in Spanish ($\alpha = .97$) and in English ($\alpha = .94$). Some of the categories had few responses and, thus, categories were collapsed as follows: "never or rarely," "sometimes," and "often or always."

Procedures

Study procedures were conducted with full IRB approval. Members of our research team worked with local social service agency partners in Phoenix and San Antonio to recruit families to the study at FAST and comparison schools through family dinner events, parent-teacher conferences, and home visits. Participants learned about the study, consented to participate in the study (and FAST, if applicable) in writing, and completed the Time 1, three-page survey.

Analytic Strategy

Our analytic strategy began by employing latent profile analysis to estimate the number of distinct language dominance profiles. Next, we conducted a path analysis for each language dominance (i.e., acculturation) profile to assess the FAST effects on children's difficulties through parents' social capital. In what follows, we provide an overview of how we modeled our language dominance profiles and how we specified and estimated the path models.

Latent profile analysis—It was hypothesized that the effect of FAST on children's outcomes through their parents' social capital might be based on the extent to which participating parents were acculturated with respect to language dominance. Our measure of language dominance is based on six items asking participants to rate the extent to which they speak, read, or write in either Spanish or English. The response patterns to these six items were thought to characterize the underlying profiles of language dominance.

Latent profile analysis (LPA) was used to derive profiles of parents based on their reported language dominance. LPA is a statistical technique that derives information about categorical latent variables based on the observed values of continuous manifest variables or indicators [22]. Because LPA assumes that the indicators are explained by unobserved constructs, the technique fits latent profile models to the data. LPA is similar to latent class analysis (LCA) but is typically applied to ordered categorical or continuous variables whereas LCA is typically applied to categorical variables. Unlike factor analysis, which yields scores of individuals along a continuous underlying dimension, LPA serves to partition the population into mutually exclusive and exhaustive latent profiles. LPA was conducted using the R statistical package *poLCA* [23]. This set of analyses determined the best and most parsimonious profile solution based on parents' language dominance in speaking, writing, and reading.

An advantage of LPA is that the profiles are identified through the testing of statistical models. Based on the posterior probabilities of profile assignment, participants were assigned to one and only one latent profile. As such, these latent profiles become "observed" and can be used to designate groups. To determine the best fitting and most parsimonious model, models with increasing numbers of profiles were compared based on the examination of test statistics [24]. Models were assessed using the Bayesian information criterion (BIC), with lower scores on the BIC indicating better fitting models. In addition to the BIC, we followed a content-oriented approach to model selection in which a more parsimonious model with one fewer profile is selected if a model with more profiles splits a well-interpretable profile into two poorly interpretable profiles [25].

Path analysis—Once the profiles were determined, a path analysis was conducted for each profile. Path models posit that the effects of a predictor X on an outcome Y are due to X's effect on a mediator M and M's effect on Y [26]. In the present study, we did not utilize the method of Baron and Kenny [27] to examine mediation. Rather, we tested a full structural equation model using the software program 'lavaan', available within the R programming environment [28]. Model fit was evaluated based on the following indicators:

Chi-square, the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). Recommended cutoff values of fit for CFI and TLI are above .95 [29] and for RMSEA are less than or equal to .05 [30]. We set the FAST effects to be invariant to test the null hypothesis that there is no moderating effect of language acculturation. If the null hypothesis is rejected, meaning that language acculturation influences FAST effects, then we set the parameters to be free or to vary across effects.

Non-Normality, Missing Data, and Model Modification

It is well known that fit indices, such as the likelihood ratio chi-square statistic, are not robust to violations of the assumption of multivariate normality. To that end, we utilized the robust maximum likelihood estimator available in lavaan. This estimator corrects for non-normality and produces robust chi-square values and robust standard errors. To address the problem of missing data, we used full information maximum likelihood (FIML) under the assumption of “missing at random” (MAR), also available in lavaan. Treating the missing data as missing at random assumes that missing data on a variable is dependent on another variable in the dataset. Although MAR is usually an unrealistic assumption, directly modeling the mechanism that generated the missing data is often intractable. As a compromise to the more unrealistic assumption that missing data are missing completely at random, MAR assumes a type of ignorable nonresponse that can be effectively treated using FIML.

To offset problems related to large sample sizes, we adopted an approach to model modification advocated by Kaplan [31, 32]. Specifically, we examined the modification indices alongside the standardized expected parameter change (SEPC) statistics and only considered modifications in which the change indicated by the SEPC was of substantive significance while in addition yielding improved model fit.

Results

Preliminary Analyses

As shown in Table 1, Pearson correlations indicate that for Phoenix and San Antonio, parent-school social capital and parent-parent social capital at Time 1 (T1) and Time 2 (T2) were significantly correlated with all other variables in the study, except for child difficulties. Across treatment conditions and cities, the mean for the number of parents a study parent knew increased from T1 to T2, whereas the mean for the number of school staff a study parent would feel comfortable approaching slightly decreased from T1 to T2.

Model Selection

The three-profile solution for Phoenix had a higher Bayesian Information Criterion (BIC) value (6594.046) than a four-profile solution (6558.549). Similarly, the three-profile solution in San Antonio had a higher BIC value (6262.983) than the four-profile solution (6156.489). However, the four-profile solutions in each city were difficult to interpret conceptually in that two of the profiles were almost indistinguishable from one another in both cities and the proportions for a fourth profile were small. In addition, both solutions had similar modal posterior probabilities in Phoenix (3 profiles: .64, .24, and .12; 4 profiles: .63, .24, .06, and .07) and San Antonio (3 profiles: .74, .25, and .15; 4 profiles: .73, .11, .07, and .10). Thus, the more parsimonious three-profile solution was selected. Although the profile configuration was the same across cities, the population share (i.e., number of individuals assigned to the profile divided by the number of observations), expressed as the percentage of individuals within each profile, differed by city. Thus, path models were run separately by city.

Latent Profile Patterns

In Phoenix, three profiles of language acculturation emerged (see Figure 1). Profile 1 ($n = 637$, 44%), *English-dominant*, consisted of parents who primarily spoke, wrote, and read in English. Parents in profile 2 ($n = 550$, 38%), *Spanish-dominant*, primarily spoke, wrote, and read in Spanish with little domain over English speaking, writing, and reading. Parents in profile 3 ($n = 275$, 19%), *bilingual*, spoke equally well in English and Spanish but were more dominant in English writing and reading than Spanish writing and reading.

In San Antonio, three similar latent profiles emerged but with a lower proportion of Spanish-dominant parents and a higher proportion of English-dominant and bilingual parents than in Phoenix (see Figure 1). San Antonio parents in profile 1 ($n = 969$, 60%), *English-dominant*, always spoke, wrote, and read in English. Profile 2 ($n = 226$, 14%), *Spanish-dominant*, consisted of parents who primarily spoke, wrote, and read in Spanish with little domain of English speaking, writing, and reading. Parents in profile 3 ($n = 404$, 25%), *bilingual*, spoke equivalently in English and Spanish but were more dominant in English writing and reading than Spanish writing and reading.

Path Models for the Language Acculturation Profiles

Preliminary analyses revealed that the structural model was not invariant across language acculturation profiles. Thus, the models were treated separately by acculturation profile. In addition, because the proportion of parents within each acculturation profile varied from Phoenix to San Antonio, we analyzed the models separately by city. None of the models showed an adequate fit to the data.

Phoenix models—For Phoenix parents who were *English-dominant* (profile 1), participation in FAST was not associated with child difficulties at T2 ($\beta = -.09$, $p = .370$). Parent-school social capital at T1 was positively associated with parent-school social capital at T2 ($\beta = .51$, $p < .001$) but parent-school social capital at T2 was not associated with children's difficulties at T2 ($\beta = -.09$, $p = .15$). Similarly, parent-parent social capital at T1 was positively associated with parent-parent social capital at T2 ($\beta = .61$, $p < .001$) but parent-parent social capital at T2 was not associated with children's difficulties ($\beta = -.14$, $p = .06$).

For Phoenix parents who were *Spanish-dominant* (profile 2; see Figure 2), participation in FAST was associated with higher levels of parent-parent social capital at T2 ($\beta = .18$, $p = .040$) and parent-school social capital at T2 ($\beta = .26$, $p = .001$) but was not associated with children's difficulties ($\beta = .04$, $p = .759$). Parent-parent social capital at T1 was positively associated with parent-parent social capital at T2 ($\beta = .49$, $p < .001$) and parent-school social capital at T1 was also positively associated with parent-school social capital at T2 ($\beta = .30$, $p < .001$). Parent-parent social capital at T2 was negatively associated with children's difficulties ($\beta = -.21$, $p < .001$) but parent-school social capital at T2 was not ($\beta = -.02$, $p = .764$). The indirect negative association between parent-parent social capital at T1 on children's difficulties through parent-parent social capital at T2 was significant ($\beta = -.02$, $p = .003$).

Bilingual parents (profile 3) from Phoenix also had levels of parent-parent social capital at T1 that were positively associated with parent-parent social capital at T2 ($\beta = .60$, $p < .001$), and levels of parent-school social capital at T1 that were positively associated with parent-school social capital at T2 ($\beta = .51$, $p < .001$). In addition, bilingual parents' parent-school social capital at T2 was negatively associated with children's difficulties ($\beta = -.25$, $p = .023$). In other words, higher levels of parent-school social capital were associated with fewer child difficulties. The indirect negative association between parent-school social capital at

T1 on children's difficulties at T2 through parent-school social capital at T2 was significant ($\beta = -.01, p = .033$). Bilingual parents' level of parent-parent social capital at T2 was not significantly associated with children's difficulties ($\beta = .00, p = .779$). Participation in FAST was negatively associated with parent-school social capital at T2 ($\beta = -.25, p = .023$). In other words, families who participated in FAST had lower levels of parent-school social capital at T2.

San Antonio models—For San Antonio parents who were *English-dominant* (profile 1), participation in FAST was associated with higher levels of parent-parent social capital at T2 ($\beta = .15, p = .001$) but not with parent-school social capital at T2 ($\beta = .00, p = .943$). Parent-school social capital at T1 was positively associated with parent-school social capital at T2 ($\beta = .56, p < .001$), which in turn was negatively associated with children's difficulties ($\beta = -.12, p = .020$). Parent-parent social capital at T1 was also positively associated with parent-parent social capital at T2 ($\beta = .61, p < .001$); however, parent-parent social capital at T2 was not significantly associated with children's difficulties at T2 ($\beta = -.08, p = .172$). The indirect association between parent-school social capital at T1 with children's difficulties through parent-school social capital at T2 was significant ($\beta = -.00, p = .021$) and the total effect was also significant ($\beta = -.01, p = .005$). The total association between parent-parent social capital at T1 with children's difficulties through parent-parent social capital at T2 was also significant ($\beta = -.00, p = .044$).

Spanish-dominant (profile 2) parents in San Antonio who participated in FAST had a positive association with parent-parent social capital at T2 ($\beta = .24, p < .001$), but not with children's difficulties ($\beta = -.08, p = .410$). Parent-school social capital at T1 was positively associated with parent-school social capital at T2 ($\beta = .53, p < .001$) and negatively associated with children's difficulties ($\beta = -.18, p = .023$). The total effect of parent-school social capital at T1 to children's difficulties through parent-school social capital at T2 was significant ($\beta = -.01, p = .009$). Parent-parent social capital at T1 was positively associated with parent-parent social capital at T2 ($\beta = .67, p < .001$). The total effect of parent-parent social capital at T1 to children's difficulties through parent-parent social capital at T2 was also significant ($\beta = -.01, p = .003$).

Finally, for San Antonio parents who were *bilingual* (profile 3), participation in FAST was not associated with parent-parent social capital at T2 ($\beta = .03, p = .744$), parent-school social capital at T2 ($\beta = -.03, p = .734$), or children's difficulties ($\beta = .02, p = .845$). Parent-school social capital at T1 was positively associated with parent-school social capital at T2 ($\beta = .45, p < .001$) but was not significantly associated with children's difficulties ($\beta = -.03, p = .057$). Parent-parent social capital at T1 was positively associated with parent-parent social capital at T2 ($\beta = .63, p < .001$) but was not significantly associated with children's difficulties ($\beta = -.18, p = .245$). The total effect to children's difficulties was significant ($\beta = -.01, p = .003$).

Discussion

The current study assessed the differential effects of FAST on Latino parents' social ties and children's difficulties, by parents' language acculturation profile in Phoenix and San Antonio. A person-centered approach was employed to create language acculturation profiles using latent profile analysis, an empirical clustering method. The main findings of the study were that FAST had a positive effect on parent-school relations and parent-parent relations, but differences were noted based on language acculturation profiles within and between cities. FAST did not have a direct effect on children's difficulties although higher levels of social capital, which FAST increased particularly for language-isolated parents, were associated with lower levels of children's emotional and behavioral difficulties.

Membership in a language acculturation profile was determined by the language in which parents primarily spoke, wrote, and read. Across cities, parents were English-dominant, Spanish-dominant, or bilingual. In addition, the most widespread acculturation profile in each city was English-dominant. However, the proportion of parents with Spanish-dominant and bilingual acculturation profiles differed by city. That is, a higher proportion of Spanish-dominant parents than bilingual parents existed in Phoenix while the opposite was true for San Antonio. Given that Phoenix has a larger number of recent Latino immigrants relative to San Antonio, the larger number of Spanish-dominant parents in Phoenix was not surprising.

The Role of FAST in the Formation of Social Capital and Children's Development

Our study focused on low-income Latino families based on the vast body of research indicating that, although children from low-income families are the most likely to benefit from parent involvement in school, their parents are also the least likely to participate in school activities [4, 12]. Our findings suggest that FAST did not have an effect, direct or indirect, on children's emotional and behavior functioning, although FAST did increase parents' social capital for the most isolated of parents, those who are Spanish-dominant, and social capital was related to children's outcomes for many parents.

FAST was effective at connecting the most isolated parents to the school but was not effective at increasing school relations for parents who were possibly already connected to the school, primarily English-dominant parents. For Spanish-dominant parents, however, coming to school every week for FAST and interacting with school staff involved in FAST may have increased and strengthened parent-school networks.

The Spanish dominant outcomes in Phoenix showing the benefits of FAST participation suggest that language-isolated parents in Phoenix are particularly disadvantaged in terms of low parent-school social capital. During data collection, Arizona was in the process of enforcing restrictive immigration policy that heightened isolation and mistrust of schools among our Phoenix sample of undocumented families [33], the majority of whom would be in the Spanish-dominant profile. Therefore, FAST may have been particularly effective at reaching out to these affected parents and, in turn, promoted parent-school relations. Thus, culturally sensitive interventions like FAST, which are designed to increase social capital among vulnerable populations, hold promise and warrant future investigation.

Moreover, Spanish-dominant parents in Phoenix, who are likely to be the most affected by immigration policy, also experienced a gain in parent-parent social capital after participating in FAST, relative to parents from the other language profiles in Phoenix. Thus, although research suggests that immigrant parents tend to have strong kin relationships within their largely ethnic communities [12], our findings suggest that Spanish-dominant parents (who are predominantly immigrant) in Phoenix may be at risk for social isolation, and that family interventions may potentially strengthen these families' social ties. Future research is needed to disentangle the effects of immigration status and immigration policy on Spanish-dominant families' social capital in Phoenix, relative to San Antonio. This study highlights the importance of accounting for contextual influences and heterogeneity within Latino samples.

Parents participating in FAST in San Antonio did not report an increase in parent-school social capital. However, English-dominant parents and Spanish-dominant parents did report an increase in parent-parent social capital as a result of FAST. It is possible that English-dominant Latino parents in San Antonio reside in ethnically heterogeneous communities where connections among parents are weaker than they would be in ethnically homogeneous communities. Thus, FAST may have facilitated connections of trust and shared expectations between Latino parents and other parents. In addition, Spanish-dominant parents may have expanded their networks with other similar parents as a result of FAST because they are a

minority even within the Latino community in San Antonio. In our sample, a significantly smaller percentage of participants in San Antonio than in Phoenix reported Spanish as their native language. Thus, although Latinos in San Antonio represent a more stable, long-standing group than Latinos in Phoenix, Spanish-dominant parents in San Antonio were perhaps more isolated within their largely English-speaking communities and were able to increase their social networks as a result of FAST. These findings highlight the importance of considering the geographic context in which families live [13].

The fact that social capital formation for parents of similar language dominance differed by city suggests that other factors, not controlled in this study, may also play an important role. In addition to considering language minority parents (i.e., Spanish-dominant) as disadvantaged, and to the extent that parents are minorities within their own community, parents' education may shed light on parents' comfort with school staff, and their ability to advocate for their children's functioning through parent-school relations to support their children's development. Based on other research with this sample [33], level of education was higher among Spanish-dominant parents in San Antonio than Spanish-dominant parents in Phoenix. This difference may contribute to the varying impact of FAST on social capital evidenced across the two cities.

The positive impact of FAST on parents' social capital is ideally aimed to promote children's emotional and behavior functioning. However, FAST did not have a direct or indirect effect on children's emotional and behavior functioning in our sample. One possible reason for a lack of positive FAST effects on children's outcomes is intervention dose, such that we included in the FAST condition participants who completed four or more sessions (at least half of the total sessions), which may not have been sufficient. Future research should explore the optimal number of sessions needed to benefit children's outcomes. Secondly, the methods and timing of our assessment of children's emotional and behavioral problems may have attenuated FAST effects. Methods for potentially strengthening our assessment of FAST effects include the use of varied measures of emotional and behavior problems, assessment of varied informant reports of these problems, and allowing more time to detect differences in children's behavior. Following these families over time may allow us to observe larger FAST effects on children's outcomes.

Language Acculturation, Social Capital, and Child Outcomes

Acculturation profiles across cities yielded different patterns of association between social capital and child emotional and behavioral difficulties. In Phoenix, there was no association between parent-school or parent-parent social capital and child difficulties for English-dominant parents. For Spanish-dominant parents in Phoenix, although FAST had a positive effect on parent-parent and parent-school social capital, only parents' relations with other parents were associated with positive children's outcomes. It is possible that even if Spanish-dominant parents became more familiar with school staff, the language barrier between parents and school staff may have continued to be an obstacle in actually connecting with school staff over concerns about the child's emotional and behavioral difficulties. In addition, previous research shows that immigrant parents are less likely to support their children through school involvement, but rather through home and community involvement, compared to non-immigrant parents [34]. In our study, in spite of FAST yielding a positive effect on parent-school networks for Spanish-dominant parents in Phoenix, these parents may have continued to rely on their expanded ties with parents of similar background and expectations than with their relations with school staff. In conclusion, parents knowing a larger number of school staff may not be sufficient to overcome the language barrier and, perhaps, the perception that the values and expectations of parents and schools are at odds with each other, as noted elsewhere [14]. Whether Spanish-dominant parents would seek school staff over concerns about their children's

academic functioning as opposed to their emotional functioning needs to be further evaluated.

If children of Spanish-dominant parents in Phoenix benefitted from their parents' relations with other parents, the opposite was true for children of bilingual parents in Phoenix and of English-dominant parents in San Antonio. It is possible that bilingual and English dominant parents in these cities had initially high levels of parent-school social capital due to their language match with school staff, and that no improvements or actual decrease in the number of school staff they knew later was a function of a ceiling effect. Further, beyond the number of school staff known, sharing the same language and expectations may have enhanced the quality of the parent-school relationship, potentially improving child outcomes.

Moreover, if English-dominant parents in San Antonio reported no change in the number of school staff they knew as a result of FAST, they did report larger social networks of parents as a result of FAST. However, it was their relationship with school staff, and not their relationship with other parents, that benefitted their children. As previously mentioned, for these parents, language was not a barrier to interact with school staff and their expectations of parental involvement may have been shared by school staff. Thus, we can conclude from our findings that (a) a family intervention holds promise in improving parental networks among marginalized, language isolated parents, (b) parents with different language acculturation profiles vary in their efforts to support their children's development, and (b) these effects need to be understood in the context of the unique communities in which families live.

Strengths, Limitations, and Future Directions

A strength of our study is the experimental design, which allowed us to randomly assign an intervention expected to increase social capital among low-income families whose children are in the first grade, a critical period of a child's schooling [4]. Overall, our study supports previous findings that social capital is a protective factor for children who are at-risk [4, 5]. However, our study extends existing research by disentangling the differential impact of parents' social networks on children and by highlighting the promise of a family intervention in increasing social capital among low-income families. This research also highlights the importance of treating Latinos as a heterogeneous group and of considering regional influences on families' well-being.

This study contributes to the development of social policy related to school involvement, in that parents who do not share the language or cultural expectations of school staff seek to support their children through relations of trust with other parents. However, lack of participation in school activities might be perceived by the school as parents lacking interest in their children's well-being [14]. Programs aimed at increasing school involvement should consider parental relations with other parents as a bridge to children's socioemotional adjustment.

The current study employed one of the few person-centered models of acculturation to date. However, a limitation of this study is that none of the acculturation models showed an adequate fit to the data. Given that non-normality and missing data were addressed, a possible explanation for the lack of model fit is model misspecification. Although our modification indices and SEPCs did not reveal any substantive changes, our models may omit other, potentially relevant variables. For example, characterizing acculturation in terms of language dominance may not be sufficient, and incorporating other measures of acculturation may have led to a different model specification and possibly improved model fit. Disaggregating the sample by acculturation profiles may have also reduced our statistical

power to detect FAST effects. In addition, measures of human capital (e.g., income, education, immigration status) may have improved our prediction of FAST effects on children's outcomes based on language acculturation. Finally, although we established equivalence on key demographics between the comparison and FAST schools, our conclusions may have been strengthened by measuring child difficulties at Time 1. In spite of these limitations, acculturation is an important factor to consider in future research given its predictive role in social capital and child outcomes.

Summary

This study examined the role of parents' language acculturation in the formation of social capital, and the relevance of social capital in urban, low-income, Latino children's emotional and behavioral outcomes. Latent profile analyses of data from 3,091 Latino parents in the Southwest revealed three language acculturation profiles: English-dominant, Spanish-dominant, and bilingual. These three profiles were evident in Phoenix and San Antonio but Phoenix had a larger proportion of Spanish-dominant parents than San Antonio, suggesting that Spanish-dominant parents in San Antonio may have been more isolated from other parents, even within their more stable Latino community. Path models revealed that the relationship between FAST and social capital and child emotional and behavioral outcomes differed based on the parents' language acculturation profile within and across cities. This study suggests that language dominance is an important predictor of how low-income parents within their communities support their children's emotional and behavioral functioning.

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References

1. Bourdieu, P. The forms of capital. In: Richardson, J., editor. Handbook of theory and research for the sociology of education. Greenwood Press; New York, NY, US: 1986. p. 241-258.
2. Coleman JS. Social capital in the creation of human capital. *AJS*. 1988; 94(Suppl):S95–S120.10.1086/228943
3. McNeal RB. Parental involvement as social capital: Differential effectiveness on science achievement, truancy, and dropping out. *Soc Forces*. 1999; 78:117–144.10.1093/sf/78.1.117
4. Mendez JL. How can parents get involved in preschool? Barriers and engagement in education by ethnic minority parents of children attending Head Start. *Cultur Divers Ethnic Minor Psychol*. 2010; 16:26–36.10.1037/a0016258 [PubMed: 20099962]
5. Catalano RF, Berglund ML, Ryan JAM, Lonczak HS, Hawkins JD. Positive youth development in the United States: Research findings on evaluations of positive development programs. *Ann Am Acad Pol Soc Sci*. 2004; 591:98–124.10.1177/0002716203260102
6. McDonald L, FitzRoy S, Huchs I, Fookien I, Klasen H. Strategies for high retention rates of low-income families in FAST (Families and Schools Together): An evidence-based parenting programme in the USA, UK, Holland and Germany. *Eur J Dev Psychol*. 2012; 9:75–88.10.1080/17405629.2011.632134
7. Kratochwill TR, McDonald L, Levin JR, Young Bear-Tibbetts H, Demaray MK. Families and Schools Together: An experimental analysis of a parent-mediated multi-family group intervention program for American Indian children. *J Sch Psychol*. 2004; 42:359–383.10.1016/j.jsp.2004.08.001
8. McDonald L, Moberg DP, Brown R, Rodriguez-Espiricueta I, Flores NI, Burke MP, et al. After-school multifamily groups: A randomized controlled trial involving low-income, urban, Latino children. *Child Sch*. 2006; 28:25–34.10.1093/cs/28.1.25

9. Gutierrez MA, Franco LM, Powerll KG, Peterson NA, Reid RJ. Psychometric properties of the Acculturation Rating Scale for Mexican Americans II: Exploring dimensions of marginality among a diverse Latino population. *Hispanic J Behav Sci.* 2009; 31:340–356.10.1111/j.1469-7610.1997.tb01545.x
10. Ryder AG, Alden LE, Paulhus DL. Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self identity, and adjustment. *J Pers Soc Psychol.* 2000; 79:49–65.10.1037/0022-3514.79.1.49 [PubMed: 10909877]
11. Lara M, Gamboa C, Kahramanian MI, Morales LS, Bautista DEH. Acculturation and Latino health in the United States: A review of the literature and its sociopolitical context. *Annu Rev Public Health.* 2005; 26:367–397.10.1146/annurev.publhealth.26.021304.144615 [PubMed: 15760294]
12. Kao G. Social capital and its relevance to minority and immigrant populations. *Soc Educ.* 2004; 77:172–175.10.1177/003804070407700204
13. Golash-Boza T. Assessing the advantages of bilingualism for the children of immigrants. *Int Migration Rev.* 2005; 39:721–753.10.1111/j.1747-7379.2005.tb00286.x
14. Doucet F. How African American parents understand their and teachers' roles in children's schooling and what this means for preparing preservice teachers. *J Early Child Teach Educ.* 2008; 29:108–139.10.1080/10901020802059441
15. Berry, JW. Design of acculturation studies. In: Sam, DL.; Berry, JW., editors. *Cambridge handbook of acculturation psychology.* Cambridge University Press; Cambridge, UK: 2006. p. 129-141.
16. Schwartz SJ, Zamboanga BL. Testing Berry's model of acculturation: A confirmatory latent class approach. *Cultur Divers Eth Minor Psychol.* 2008; 14:275–285.10.1037/a0012818
17. Rudmin FW. Constructs, measurements and models of acculturation and acculturative stress. *Intl J Intercultur Relations.* 2009; 33:106–123.10.1016/j.ijintrel.2008.12.001
18. Coatsworth JD, Maldonado-Molina M, Pantin H, Szapocznik J. A person-centered and ecological investigation of acculturation strategies in Hispanic immigrant youth. *J Community Psychol.* 2005; 33:157–174.10.1002/jcop.20046 [PubMed: 16799699]
19. Valenzuela A, Dornbusch S. Familism and social capital in the academic achievement of Mexican origin and Anglo students. *Soc Sci Q.* 1994; 75:18–36.
20. McDonald, L.; Moberg, DP. *Social relationships questionnaire.* FAST National Training and Evaluation Center; Madison, WI, US: 2002.
21. Goodman R. The Strengths and difficulties questionnaire: A Research note. *J Child Psychol Psychiatry.* 1997; 38:581–586.10.1111/j.1469-7610.1997.tb01545.x [PubMed: 9255702]
22. Lazarfeld, PF. *Latent structure analysis.* Houghton Mifflin Co; Boston, US: 1968.
23. Linzer, DA.; Lewis, J. *poLCA: Polytomous variable latent class analysis.* R package version 1.3.1. 2011. <http://userwww.service.emory.edu/~dlinzer/poLCA>
24. Nylund KL, Asparouhov T, Muthén B. Deciding on the number of classes in latent class analysis and growth mixture modeling. A Monte Carlo simulation study. *Struct Equ Modeling.* 2007; 14:535–569.10.1080/10705510701575396
25. Muthén B, Muthén L. Integrating person-centered and variable-centered analyses: Growth mixture modeling with latent trajectory classes. *Alcohol Clin Exp Res.* 2000; 24:882–891.10.1111/j.1530-0277.2000.tb02070.x [PubMed: 10888079]
26. Hopwood CJ. Moderation and mediation in structural equation modeling: Applications for early intervention research. *J Early Interv.* 2007; 29:262–272.
27. Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J Pers Soc Psychol.* 1986; 51:1173–1182.10.1037/0022-3514.51.6.1173 [PubMed: 3806354]
28. Rosseel, Y. *Lavaan: Latent Variable Analysis.* R package version 1.3.1. 2011. <http://lavaan.ugent.be/?q=node/2>
29. Hu L, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct Equ Modeling.* 1999; 6:1–55.10.1080/10705519909540118
30. Browne, MW.; Cudeck, R. Alternative ways of assessing model fit. In: Bollen, KA.; Long, JS., editors. *Testing structural equation models.* Sage; Newbury Park, CA, US: 1993. p. 136-162.

31. Kaplan D. Evaluating and modifying covariance structure models: A review and recommendation. *Multivariate Beh Res.* 1990; 25:137–155.10.1207/s15327906mbr2502_1
32. Kaplan, D. *Structural equation modeling: Foundations and extensions. 2.* Sage; Newbury Park, CA, US: 2009.
33. .
34. Altschul I. Parental involvement and the academic achievement of Mexican American youths: What kinds of involvement in youths' education matter most? *Soc Work Res.* 2011; 35:159–170.10.1093/swr/35.3.159

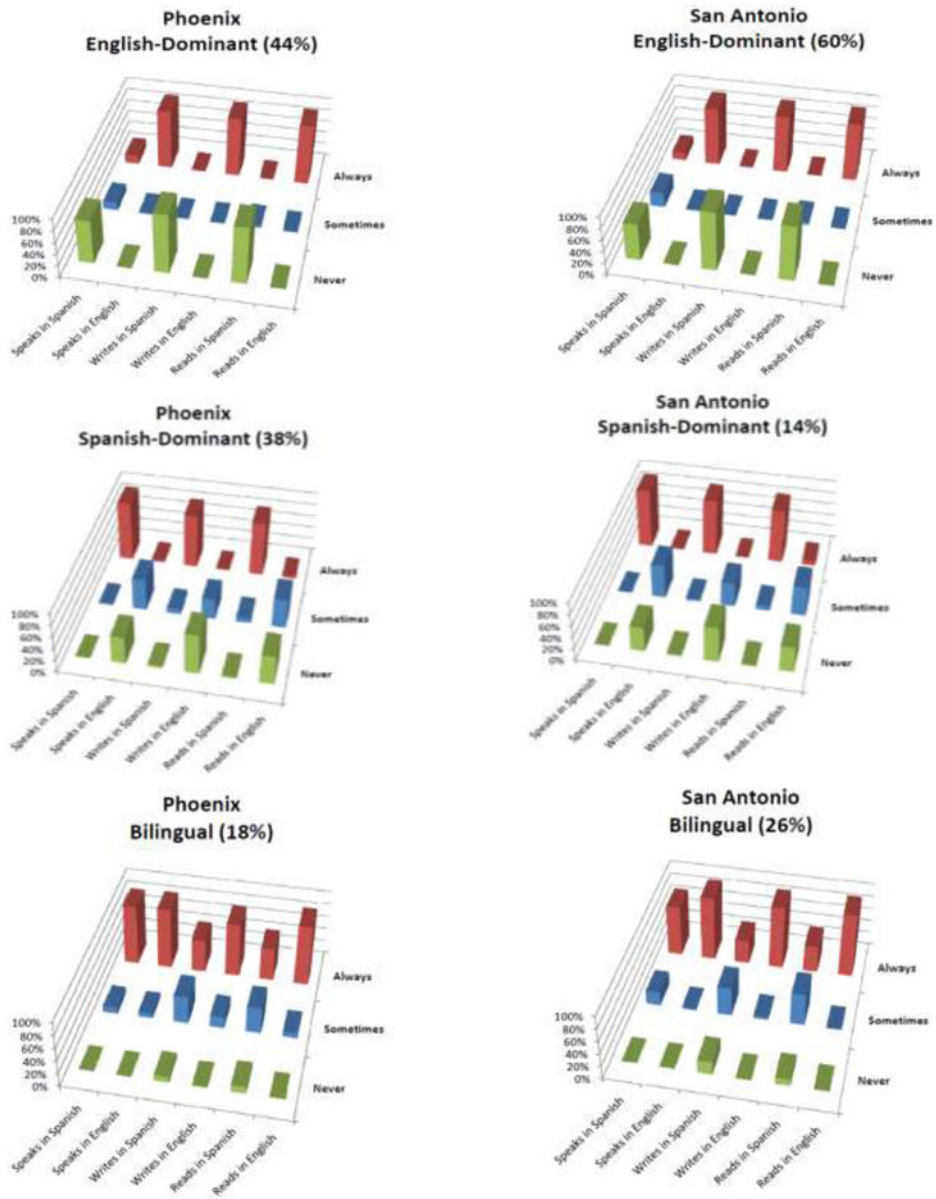


Figure 1. Language acculturation profiles of parents in Phoenix and San Antonio

Table 1
Means, Ranges, and Intercorrelations for Study Variables for Phoenix and San Antonio

Tx Status ^d	M (SD) by City		Range								
	PH	SA		1	2	3	4	5	6	7	
1. Parent-school SC T1	0	3.64 (1.79)	4.14 (1.79)	0-6	—	.18**	.48**	.08	.19**	-.17**	-.05
	1	3.60 (1.78)	3.82 (1.87)	—	.20**	.34**	.08	.16**	-.13**	-.04	-.04
2. Parent-parent SC T1	0	3.15 (2.13)	3.04 (2.18)	0-6	.24**	—	.28**	.63**	-.25**	.26**	.07
	1	2.88 (2.19)	2.68 (2.08)	—	.21**	—	.23**	.55**	-.09	.08	-.03
3. Parent-school SC T2	0	3.50 (1.80)	4.04 (1.79)	0-6	.56**	.29*	—	.31**	.05	-.03	-.04
	1	3.59 (1.78)	3.79 (1.78)	—	.51**	.26**	—	.26**	.08	-.07	-.03
4. Parent-parent SC T2	0	3.26 (2.13)	3.15 (2.11)	0-6	.17**	.69**	.30**	—	-.24**	.30**	-.02
	1	3.72 (2.11)	3.31 (2.17)	—	.21**	.62**	.29**	—	-.12*	.10*	.03
5. English dominance	0	3.76 (1.38)	4.56 (0.91)	1-5	.17**	-.18**	.09*	-.14**	—	-.77**	-.17**
	1	3.89 (1.37)	4.43 (1.03)	—	.08	-.11**	.01	-.14**	—	-.76**	-.19**
6. Spanish dominance	0	3.17 (1.59)	2.51 (1.31)	1-5	-.16**	.17**	-.12**	.15**	-.67**	—	.18**
	1	3.07 (1.65)	2.62 (1.40)	—	-.04	.10*	.00	.13**	-.68**	—	.24**
7. Child difficulties	0	26.36 (5.10)	24.98 (4.91)	18-47	-.13**	-.06	-.12*	-.07	-.11*	-.04	—
	1	26.10 (5.20)	25.62 (4.73)	—	-.02	-.10*	-.08	-.10*	-.17**	.08	—

Note. Intercorrelations for Phoenix participants by FAST ($n = 789$) and Comparison ($n = 701$) are presented above the diagonal, and intercorrelations for San Antonio participants by FAST ($n = 893$) and Comparison ($n = 708$) are presented below the diagonal. PH = Phoenix; SA = San Antonio; SC = Social Capital; T1 = Pre-assessment; T2 = Post-assessment.

^a Comparison group = 0, FAST group = 1

* $p < .05$

** $p < .01$.