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Bills, babies, and (language) barriers: Associations among economic strain, parenting, and primary language during the newborn period

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Abstract

Objective: The goal of this study was to examine associations among economic strain, parenting self-efficacy, parenting satisfaction, and parent primary language in a universally low-income sample of parents with newborns.

Background: Previous research links increased economic strain to lower levels of parenting self-efficacy and parenting satisfaction among socioeconomically diverse parents with older children. Little research has examined whether primary language shapes the associations among economic strain, parenting self-efficacy, and parenting satisfaction.

Method: Parents ($n = 194$, $M_{age} = 30.91$) completed self-report surveys measuring economic strain, parenting self-efficacy, and parenting satisfaction. Parents' ethnic self-identification and primary language were used to stratify parents into three groups: Latinx Spanish speakers, Latinx English speakers, and non-Latinx English speakers.

Results: Regression analyses revealed that economic strain was negatively associated with both parenting self-efficacy and parenting satisfaction. Further, the negative association between economic strain and parenting self-efficacy was stronger for Latinx Spanish speakers.

Conclusion: Economic strain may negatively influence parenting self-efficacy and parenting satisfaction during the newborn period. Parents whose primary language is Spanish may be disproportionately affected by economic strain.

Implications: Parents of newborns may benefit from increased economic supports in linguistically responsive pediatric care and social service settings.

KEYWORDS

economic strain, infant, parenting satisfaction, parenting self-efficacy, primary language

INTRODUCTION

The negative associations among economic strain, parenting self-efficacy, and parenting satisfaction have been well documented (Hurwich-Reiss & Watawura, 2019; Jackson & Scheines, 2005; Scaramella et al., 2008). However, these relationships have yet to be replicated among parents of newborns from low-income households, parents who must come to terms with new financial responsibilities while meeting the sensitive needs of a newborn (Bartek, 2016; Thompson, 2001). Parents of newborns are immediately thrust into their caregiving roles during one of the most developmentally critical periods of a child's life. The stress for parents with limited financial resources may be exacerbated by the increased medical, child care, and material expenses that often accompany a newborn (Bartek, 2016). The resulting economic hardship and strain may be associated with challenges in meeting newborns' needs and feelings of inefficacy, guilt, and frustration as a parent (Lavee et al., 1996; Mistry et al., 2008; Pescud & Pettigrew, 2014). Therefore, understanding the relationships among economic strain, parenting self-efficacy, and parenting satisfaction during this critical time period may yield insight into the experiences of parents with newborns from low-income households that may have parenting, financial, and developmental implications many years onward.

Parents' primary language also may shape these relationships. In the United States, the majority of pediatric and social services offered to parents of newborns are provided in English, meaning parents whose primary language is not English may experience inequitable access to economic and parenting resources. Primary Spanish speakers also may struggle to gain entry to well-compensated employment and educational opportunities that can bolster their families' incomes (Akbulut-Yuksel et al., 2011; Ayón & Becerra, 2013; Vesely et al., 2015). Further, past research notes Spanish-speaking parents experience language barriers when accessing social services, pediatric care, and other parenting resources that can address their economic and caregiving needs (Ayón & Becerra, 2013; Bai et al., 2011; DeCamp et al., 2013).

Given Latinx families in the United States are disproportionately represented among families living in poverty (Jiang et al., 2015), understanding how primary language shapes the relationships among economic strain, parenting self-efficacy, and parenting satisfaction may have implications for intervention research and social service provision tailored to populations who do not speak English. The current study uses baseline data collected for a separate, ongoing study to examine associations between economic strain, parenting self-efficacy, and parenting satisfaction within a sample of low-income parents of newborns and infants receiving preventive pediatric care in a safety net medical clinic in Los Angeles County. Using parents' self-reported primary language, we also test whether this relationship is moderated by primary language.

PARENTING SELF-EFFICACY AND PARENTING SATISFACTION

Parenting self-efficacy and parenting satisfaction are key determinants of parenting behavior and child development (Albanese et al., 2019; Jones & Prinz, 2005). Derived from Bandura's social cognitive theory, parenting self-efficacy refers to a parent's perception of their capacity to competently fulfill their child's needs and foster optimal developmental outcomes. Parenting self-efficacy is theorized to arise from an individual's history of success and failure with parenting tasks, feedback from their social environment, and modeling caregiving behaviors (Bandura, 1999; Jones & Prinz, 2005). Bandura theorized parents with higher parenting self-efficacy are more resilient when confronted with difficult parenting tasks and more likely to engage in parenting behaviors that are conducive to resolving these challenges (Bandura, 1999). Researchers have since found multiple associations between high parenting self-efficacy and promotive parenting, emotional support, and improved socioemotional and academic outcomes (Albanese et al., 2019; Jones & Prinz, 2005).

Parenting satisfaction is defined as the pleasure and interest that parents experience in their caregiving role (Bornstein et al., 2018). Higher parenting satisfaction has been similarly linked to positive discipline strategies, decreased parental stress, and improved parent emotional well-being (Alleyne-Green et al., 2019; Dunning & Giallo, 2012; Medora et al., 2001). In their study of parenting satisfaction among Black, Latinx, and a low-income parents, Medora and colleagues found mothers that reported high parenting satisfaction not only experienced decreased loneliness and interpersonal problems but were also more likely to reason with their children rather than engage in authoritarian parenting (Medora et al., 2001). This finding has since been corroborated by additional research suggesting parenting satisfaction is associated with the positive appraisal of external stressors, which may diminish negative downstream effects on parenting and child outcomes (Deater Deckard, 2004; Popp et al., 2019).

Parenting self-efficacy and satisfaction are especially important during the newborn period. High parenting self-efficacy has been repeatedly linked to secure infant attachment (Candelaria et al., 2011; Cassé et al., 2016; Gartstein & Iverson, 2014). Further, high parenting self-efficacy and satisfaction in the newborn period are related to sensitive caregiving, improved adherence to breastfeeding recommendations, and decreased parent postnatal psychopathology (Bahorski et al., 2019; Bates et al., 2020; Hess et al., 2004; Kleinman & Reizer, 2018). Given these ties to a strong start in life, understanding the ecological factors that may be related parenting self-efficacy and parenting satisfaction during the newborn period is critical to scaffolding positive developmental trajectories for infants and their families.

FAMILY STRESS MODEL, PARENTING SELF-EFFICACY, AND SATISFACTION

The family stress model proposes that economic hardship results in economic strain, which triggers a cascade of emotional and behavioral events within caregivers that can negatively affect parenting and child development (Conger et al., 2010). Defined as the negative psychological attributions associated with economic hardship, economic strain has been identified as an ecological correlate of parenting self-efficacy and satisfaction among parents of children and adolescents (Hurwich-Reiss & Watamura, 2019; Jackson & Scheines, 2005; Lavee et al., 1996). Weighing difficult financial decisions related to the provision of food, clothing, and other material goods has been repeatedly linked with lower parenting self-efficacy (Jackson & Scheines, 2005; Mistry et al., 2008; Russell et al., 2008). Notwithstanding, scholars have yet to identify whether economic strain is similarly related to the parenting self-efficacy of parents with newborns from low-income households. It is possible that the additive economic toll that is inevitable with having a newborn may be associated with parents second-guessing their efficacy as caregivers. Considering parenting self-efficacy's widespread developmental implications during infancy, understanding when this relationship arises may provide additional rationale for early intervention programs aiming to reduce the developmental consequences of economic strain (Masarik & Conger, 2017; McFarland, 2017).

The relationship between economic strain and parenting satisfaction is less clear. Whereas some studies of predominantly white samples have found associations between economic strain and parenting satisfaction (Lavee et al., 1996; Pittman & Lloyd, 1988), other examinations including racially and ethnically diverse samples have found no such relationship (Dunning & Giallo, 2012; Medora et al., 2001; Woody & Woody, 2007). Moreover, studies examining this relationship have strictly used samples of parents with older children, providing little insight to the relationship between economic strain and parenting satisfaction during the newborn period. In light of these gaps and inconsistent findings, additional research is warranted to clarify the relationship between economic strain and parenting satisfaction.

PARENT LANGUAGE AND THE FAMILY STRESS MODEL

Language barriers may have notable impacts on economic strain, parenting self-efficacy, and parenting satisfaction during the newborn period. On a practical level, Latinx parents with limited English proficiency may struggle to secure well-compensated employment that facilitates the fulfillment of their families' basic needs (Vesely et al., 2015). Given primary Spanish speakers and those with limited English proficiency also may be recent immigrants (Johnson & Sanchez, 2019; Passel & Cohn, 2019), some parents may not have the immigration status needed to access well-compensated employment or social services that can alleviate economic strain. Recent antiimmigrant policy changes may further dissuade immigrants from accessing social services to which they are entitled (Perreira et al., 2018).

Parents whose primary language is Spanish also may experience a constricted flow of feedback and information that can provide critical parenting assistance during the newborn period. The linchpin of Bandura's social cognitive theory is the concept of reciprocal causation, which posits task-related feedback from an individual's social environment can shape their cognitions, emotions, and beliefs about their ability to perform tasks (Ormond, 2010). Positive feedback and caregiving guidance from others can promote parents' caregiving confidence, which in turn may be related to greater self-efficacy, satisfaction, and resilience in future parenting tasks (Bandura, 2018). Although parents obtain this support from family and social networks, pediatricians and social service providers also offer critical caregiving feedback and guidance during the newborn period. The inability to communicate with pediatric and social service providers in their primary language may hinder parents' capacity to maximize the social inputs that foster parenting self-efficacy and satisfaction during this sensitive developmental period. Studies of pediatric care acquisition note parents with limited English proficiency are less satisfied with pediatric services, experience worse communication with social service providers, and are less likely to attend recommended well-child visits (Ayón & Becerra, 2013; Cohen & Christakis, 2006; Lion et al., 2013; Weech-Maldonado et al., 2001). Parents who immigrated to Canada reported feelings of parental inefficacy stemming from their inability to fully relay their children's symptoms to service providers who were not fluent in their primary language (Ali, 2008). Furthermore, this language barrier may exacerbate cultural discrepancies in how parents and service providers describe and address common challenges during infancy (Taylor & Willies-Jacobo, 2003). For instance, primarily Spanish-speaking parents may consider infant ailments and developmental changes (e.g., colic, sleep regression, ear infections) as folk illnesses (e.g., *empacho*, *mal de ojo*). Providers without the linguistic and related cultural knowledge of folk illnesses may inadvertently shame parents' previous attempts to soothe children and cause parents to question long-standing cultural child rearing practices. Moreover, parents' concerns may ultimately go unaddressed by providers and subsequently prolong infants' distress, thus making it harder to derive satisfaction from caregiving.

Altogether, linguistic and related cultural barriers may impede primarily Spanish-speaking parents from enjoying the same provider–parent alliance that can bolster parenting self-efficacy and satisfaction. Situated within the family stress model, this suggests the absence of a fully fledged opportunity for reciprocal causation—in this case, the equitable feedback and resources from pediatric and social service providers facilitated by communication in one's primary language—may impede the flow of crucial information that can support primarily Spanish-speaking parents in navigating economic hardship and caregiving challenges. Recent immigrants who have yet to develop abundant social ties that provide caregiving support may be particularly reliant on medical and social service providers' support (Ayón, 2014). Consequently, research is needed to examine whether primary language shapes family stress pathways during the newborn period.

CURRENT STUDY

The current study addresses the aforementioned gaps by testing the associations among economic strain, parenting self-efficacy, and parenting satisfaction within a low-income sample of parents with newborns and young infants. Using data collected at the baseline timepoint for a randomized clinical trial, we answered the following research questions. First, what is the association between economic strain and parenting self-efficacy and/or parenting satisfaction in our sample of parents of newborns and young infants from low-income households? Second, how does parents' language shape the association between economic strain and parenting self-efficacy and/or parenting satisfaction in our sample?

On the basis of our theoretical framework shaped by Conger and colleagues' family stress model and Bandura's social cognitive theory (Bandura, 1999; Conger et al., 2010), we hypothesized that parents' economic strain would be inversely associated with both parenting self-efficacy and parenting satisfaction. Further, we hypothesized that the relationships among economic strain, parenting self-efficacy, and parenting satisfaction would be moderated by parents' primary language. More specifically, we hypothesized that negative associations between economic strain and parenting self-efficacy and parenting satisfaction would be stronger for parents whose primary language is Spanish compared with those whose primary language is English.

METHODS

Participants

The study participants consisted of 194 parents (89.6% mothers, $M_{age} = 30.91$ years). At the time of enrollment, parents' infants were an average of 1.49 months in age. Approximately 62.3% participants identified as Latinx of any race,¹ 24.6% as Black, 6.6% as Asian, 3.8% as White, and 2.7% as mixed race. Approximately 71.4% of parents spoke English as their primary language. Just over half of the participants was single, divorced, or separated (54.5%). Average household size was 4.13 (approximately 2.34 adults and 1.78 children). About 60.8% of participants were unemployed, and more than half of participants indicated earning zero individual income (56.70%) at the time of study enrollment, although it is not clear if this is due to temporary leave or unemployment caused by birth. Participants who reported income earned an average \$23,945.39 annually (median annual income: \$21,600; the mean and median annual income of the entire sample was \$8,931.76 and \$0, respectively). Although we did not ask for household income, given that participants' children were Medicaid recipients, household income could not exceed 138% of the federal poverty threshold. For reference, the federal poverty threshold for a family of four in 2019 (when data were collected) was \$25,750, meaning a participating family of four could earn a maximum of \$35,535 annually. See Tables 1 and 2 for more details.

Procedure

Participants' infants were enrolled in Medicaid insurance and were recruited at an academically affiliated, safety-net primary pediatric care clinic in Los Angeles County as a part of an ongoing clinical study examining the impact of financial supports on parent health-related quality of life and child development. Participants were approached by research assistants in the clinic's

¹Although Latinx identity refers to an ethnic group, 87.5% of all Latinx participants indicated Latinx as their sole race. Only 12.5% of Latinx respondents identified with another race. Among Latinx participants, there was no association between racial identity (identifying as another race or solely as Latinx) and primary language, $\chi^2(3) = 5.07, p = .17$. Given this small proportion and the small overall sample size, we combined Latinx participants into one group.

TABLE 1 Descriptive statistics for categorical demographic variables

Categorical variable	Total (%)
Parent gender	
Male	9.8
Female	89.6
Non-binary	0.5
Race/ethnicity	
Non-Latinx Black	24.6
Non- Latinx Asian	6.6
Non-Latinx White	3.8
Mixed race (non-Latinx)	2.7
Latinx of any race	62.3
Primary language	
English	71.4
Spanish	26.6
Other	2.1
Parenting experience	
Veteran parent	45.9
First-time parent	54.1
Parent marital status	
Partnered	54.5
Unpartnered	42.4
Decline to state	3.1
Parent education	
Less than high school	7.9
High school diploma or GED	57.6
Some college	24.9
Bachelor's degree or above	9.6
Parent employment status	
Full time	25.4
Part time	13.8
Unemployed	60.8

Note: $n = 194$.

Abbreviation: GED, general education development.

waiting or examination rooms. Parents were eligible for study participation if they spoke English or Spanish and had a child aged 0 to 4 months at enrollment whose primary care medical home was the clinic study site. Participants that opted into the study provided informed consent and then completed survey measures for key study variables. The study was approved by the University of California–Los Angeles Institutional Review Board before data collection.

Measures

Parenting self-efficacy and satisfaction

Parenting self-efficacy and parenting satisfaction were measured using the Parenting Sense of Competence Scale (PSOC; Gibaud-Wallston & Wandersman, 1978; cited in Johnston &

TABLE 2 Descriptive statistics of continuous independent, dependent, and demographic variables ($n = 194$)

Continuous variable	<i>M</i>	95% CI
Economic strain (scale range = 15–75)	33.59	[31.75, 35.44]
Parenting self-efficacy (scale range = 8–48)	35.12	[34.18, 36.06]
Parenting satisfaction (scale range = 9–54)	39.36	[38.16, 40.56]
Parent age (sample range = 18–53 years)	30.91	[29.91, 31.91]
Child age ^a (sample range = 0–10 months)	1.49	[1.21, 1.77]
No. of adults in household (1–6)	2.34	[2.16, 2.51]
No. of children in household (sample range = 1–7)	1.78	[1.63, 1.95]
Annual income ^b (sample range = \$3,600–\$117,600)	\$23,945.39	[19,689.41, 28,201.37]

Abbreviation: CI, confidence interval; No., number.

^aChild age measured in months.

^bAverage annual income among participants that reported income U.S. dollars.

Mash, 1989). The PSOC is a validated 17-item self-report measure comprised of items assessing parenting beliefs and attitudes (see Johnston & Mash, 1989 for full scale). The PSOC consists of an eight-item parenting self-efficacy scale and a nine-item parenting satisfaction scale. Participants rated their responses on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The parenting self-efficacy scale scores range from 8 to 48, whereas scores for the parenting satisfaction scale range from 9 to 54. Higher scores indicate higher parenting self-efficacy and satisfaction. The PSOC has been established as a valid and reliable measure of parenting self-efficacy and satisfaction in diverse samples of parents with young children (Karp et al., 2015). A validated Spanish translation of the PSOC by Oltra-Benavent et al. (2020) was used for Spanish-speaking participants. Cronbach's alpha for the parenting self-efficacy and parenting satisfaction subscales were .78 and .82, respectively, showing acceptable levels of internal consistency and reliability.

Parent economic strain

Parent economic strain was measured using the Family Economic Strain Scale (FESS; Hilton & Devall, 1997). The FESS is a validated 15-item self-report survey measuring respondents' stress related to financial scarcity and the extent to which it limits their access to basic goods such as food, housing, and health care. Participants rated their responses on a 5-point scale ranging from 1 (*never*) to 5 (*almost always*). Scale scores range from 15 to 75, with higher scores representing greater economic strain. The FESS has been established as a reliable and valid self-report measure of economic stress and has been used among socioeconomically and racially diverse populations (Hilton & Devall, 1997; Shobe et al., 2009). Cronbach's alpha for the FESS in this sample was .93, showing a high level of internal consistency and reliability.

Parent language

Parents' language was measured using a variable that combined parents' primary language and ethnicity. Participants were asked to indicate their primary language and their ethnicity (Latinx or non-Latinx) at baseline. Parents were categorized into one of three groups: Latinx parents whose primary language was Spanish ($n = 50$), Latinx parents whose primary language was English ($n = 63$), and non-Latinx parents whose primary language was English ($n = 64$). All participants that indicated their primary language as Spanish identified as Latinx. Given that English-speaking Latinx parents do not experience the same language barriers to employment

and social services as primarily Spanish-speaking parents (Ayón & Becerra, 2013; Siegel, 2018), we wanted to examine differences in primary language while also accounting for similar cultural backgrounds. This approach has been used to compare outcomes among Spanish-speaking Latinx, English-speaking Latinx, and English-speaking individuals of other racial and ethnic backgrounds (Viswanath & Ackerson, 2011; Zwick & Sklar, 2005). Although some parents whose primary language was Spanish could speak limited English, no primary Spanish speakers were comfortable routinely conversing in English. It also should be noted that some English-speaking participants may have been bilingual, but this information was not collected.

Covariates

Participants' demographic information was collected at baseline. The following covariates were included in our models: parent age, parent gender, parent annual income, parent employment status (unemployed, employed part time, or employed full time), parent education (less than high school, high school diploma or GED, some college, or bachelor's degree or higher), parent marital status (partnered, unpartnered, or decline to state), previous parenting experience (first-time parent or veteran parent), and number of children. Parent age was included as a covariate given past reports of parenting self-efficacy both increasing and decreasing with age (Bryanton et al., 2008; Coleman & Karraker, 2003). Parent gender was included as a covariate given mothers typically report higher parenting self-efficacy and satisfaction than fathers (Elek et al., 2003; Salonen et al., 2009). Annual income, parent employment status, and education were included as indicators of socioeconomic status given their associations with resource attainment that can facilitate caregiving (Bates et al., 2020; Galobardes et al., 2006). Parent marital status was included as a covariate because partners often provide childrearing support (Bryanton et al., 2008). Because first-time parenthood is linked to lower ratings of parenting self-efficacy and satisfaction (Amin et al., 2018; Botha et al., 2020), it was controlled for in analyses. Similarly, number of children was controlled for given parents with more children typically have greater caregiving experience that results in higher parenting self-efficacy and satisfaction (Albanese et al., 2019; Botha et al., 2020).

Analytic plan

Data were analyzed using Stata 16 (StataCorp, 2019). All continuous variables were standardized to facilitate the interpretation of the regression models and compare the effect sizes of our independent variables. Before hypothesis testing, we conducted a series of two-sample *t*-test and regressions to examine whether (a) first-time parents reported lower parenting self-efficacy and satisfaction compared with veteran parents, (b) mothers reported higher levels of parenting self-efficacy and satisfaction than fathers, and (c) ethnicity–language group membership predicted differences among key study and demographic variables. To answer our first research question, we (a) ran bivariate correlations to examine the relationships among economic strain, parenting self-efficacy, and parenting satisfaction and (b) ran two multiple linear regressions controlling for parent age, gender, employment status, education, marital status, parenting experience, and number of children to test the associations among economic strain, parenting self-efficacy, and parenting satisfaction. To answer our second research question, we added a two-way interaction: economic strain by primary language. The moderator (i.e., primary language) is a categorical variable with three response categories: non-Latinx parents whose primary language was English, Latinx parents whose primary language was English, and Latinx parents whose primary language was Spanish. Hereafter, these categories will be referred to as non-Latinx English speakers, Latinx English speakers, and Latinx Spanish speakers,

respectively. In calculating the interaction term, we use “non-Latinx English speaker” as a reference group. Therefore, we report coefficients for interaction between economic strain and each of the two nonreference categories of primary language in Table 5 (i.e., Latinx Spanish speakers and Latinx English speakers). In our model, interaction of economic strain by language implies that the slope of economic strain will be different for Latinx Spanish speakers and/or Latinx English speakers compared with non-Latinx English speakers. To test for differences between Latinx English speakers and Latinx Spanish speakers, we reran the model with Latinx English speaker as the referent and report those findings in our Results. We report the multi-degree-of-freedom tests of the overall interaction term. We also report associations between economic strain and outcomes (i.e., parenting self-efficacy and parenting satisfaction) at low (1 SD below the mean), medium (mean), and high (1 SD above the mean) levels of economic strain.

RESULTS

Demographic characteristics

Two-sample *t*-test revealed that first-time parents did not report significantly lower parenting self-efficacy, $t(171) = .29$; $p = .39$, or satisfaction, $t(177) = -.16$; $p = .56$, compared with veteran parents. Similarly, two-sample *t*-test revealed that fathers did not report significantly lower parenting self-efficacy, $t(169) = .55$; $p = .71$, or satisfaction, $t(176) = .24$; $p = .60$, compared with mothers. It should be noted that one parent who identified outside of the gender binary was excluded from the gender analysis. Regression analyses examining differences by ethnicity-language groups revealed that Latinx English speakers reported significantly lower economic stress ($\beta = -.45$; $p = .01$) and were significantly younger ($\beta = -.55$; $p = .001$) than non-Latinx English speakers. Latinx Spanish speakers reported a greater number of children ($\beta = -.48$; $p = .01$) and were less likely to have some college credit ($\beta = -1.96$, $p = .003$) compared with non-Latinx English speakers. No differences were detected in parenting self-efficacy, parenting satisfaction, income, employment status, parent gender, or marital status.

Bivariate correlations

Pairwise correlations (Table 3) revealed that economic strain, although not significantly associated with parenting self-efficacy ($r = -.15$, $p = .06$), was negatively associated with parenting satisfaction ($r = -.37$, $p < .001$).

TABLE 3 Pairwise correlations of continuous variables ($n = 190$)

Variable	1	2	3	4	5	6
1. Economic strain	1.00					
2. Parenting self-efficacy	-0.15^\dagger	1.00				
3. Parenting satisfaction	-0.37^{***}	0.12	1.00			
4. Parent age	0.25^{**}	0.00	-0.17^*	1.00		
5. No. of children	0.07	-0.01	-0.08	0.07	1.00	
6. Annual income	0.08	0.06	-0.06	0.12	-0.11	1.00

$^\dagger p < .10$.

$*p < .05$. $**p < .01$. $***p < .001$.

Economic strain and parenting self-efficacy

Controlling for parents' age, gender, employment status, annual income, marital status, education, past parenting experience, and number of children, economic strain was negatively associated with parenting self-efficacy ($\beta = -.19, p = .02$; Table 4). For each 1 SD increase in parents' economic strain, parenting self-efficacy decreased by 0.19 SD, on average. No other predictors were significant.

Economic strain and parenting satisfaction

Controlling for parents' age, gender, employment status, annual income, marital status, education, past parenting experience, and number of children, economic strain was negatively associated with parenting satisfaction ($\beta = -.35, p < .001$; Table 4). For each one standard deviation increase in economic strain, parenting satisfaction declined by 0.35 SD, on average. No other predictors were significant.

TABLE 4 Linear regression analysis for the association between economic strain on parenting self-efficacy ($n = 139$) and parenting satisfaction ($n = 140$)

Variables	Parenting self-efficacy		Parenting satisfaction	
	β	95% CI	β	95% CI
Economic strain	-.19*	[-0.35, -0.03]	-.35***	[-0.51, -0.18]
Parent age	.06	[-0.11, 0.24]	-.09	[-0.28, 0.09]
No. of children	-.16	[-0.44, 0.11]	-.13	[-0.41, 0.16]
Annual income	.05	[-0.16, 0.26]	-.08	[-0.29, 0.14]
Parenting experience (reference group: veteran parents)				
First-time parent	-.40	[-0.96, 0.15]	-.11	[-0.69, 0.46]
Parent gender (reference group: man)				
Woman	-.28	[-0.85, 0.29]	-.50	[-1.09, 0.09]
Nonbinary	-.77	[-2.76, 1.21]	-.78	[-2.85, 1.29]
Marital status (reference group: unpartnered)				
Partnered	.01	[-0.33, 0.34]	-.04	[-0.39, 0.31]
Decline to state	.58	[-0.52, 1.68]	.45	[-0.69, 1.59]
Parent education (reference group: less than high school diploma)				
High school diploma or GED	.31	[-0.30, 0.93]	-.20	[-0.84, 0.44]
Some college/associates degree	.54	[-0.11, 1.18]	.02	[-0.65, 0.69]
Bachelor's degree or above	.29	[-0.48, 1.06]	-.02	[-0.84, 0.81]
Parent employment status (reference group: full time)				
Part time	.25	[-0.30, 0.80]	.27	[-0.29, 0.84]
Unemployed	.19	[-0.35, 0.74]	.01	[-0.55, 0.58]
Constant	-.01	[-0.97, 0.94]	.58	[-0.41, 1.58]
R ²	.10		.18	
Adjusted R ²	.00		.09	

Abbreviation: CI, confidence interval.

* $p < .05$, *** $p < .001$.

TABLE 5 Linear regression analysis for the association between economic strain and parenting self-efficacy ($n = 126$) and parenting satisfaction ($n = 128$) as moderated by primary language

Variables	Parenting self-efficacy		Parenting satisfaction	
	β	95% CI	β	95% CI
Economic strain	-.08	[-0.34, 0.18]	-.43**	[-0.72, -0.14]
Latinx Spanish speaker	-.27	[-0.74, 0.21]	-.06	[-0.56, 0.45]
Latinx English speaker	.03	[-0.39, 0.44]	-.07	[-0.51, 0.38]
Non-Latinx English speaker \times economic strain (reference group)				
Latinx Spanish speaker \times economic strain	-.50*	[-0.92, -0.07]	.21	[-0.24, 0.67]
Latinx English speaker \times economic strain	.11	[-0.26, 0.48]	.12	[-0.29, 0.53]
Parent age	.09	[-0.10, 0.28]	-.11	[-0.32, 0.09]
No. of children	-.17	[-0.45, 0.11]	-.20	[-0.51, 0.10]
Annual income	.15	[-0.06, 0.36]	-.10	[-0.33, 0.13]
Parenting experience (reference group: veteran parents)				
First-time parent	-.35	[-0.91, 0.21]	-.21	[-0.81, 0.39]
Parent gender (reference group: man)				
Woman	-.05	[-0.66, 0.56]	-.57	[-1.24, 0.09]
Nonbinary	-.51	[-2.49, 1.47]	-.68	[-2.80, 1.45]
Marital status (reference group: unpartnered)				
Partnered	-.07	[-0.42, 0.28]	-.03	[-0.41, 0.35]
Declined to state	1.02	[-0.30, 2.35]	.77	[-0.66, 2.20]
Parent education (reference group: less than high school diploma)				
High school diploma or GED	-.22	[-0.90, 0.46]	-.47	[-1.18, 0.23]
Some college/associates degree	-.01	[-0.72, 0.69]	-.22	[-0.96, 0.52]
Bachelor's degree or above	-.38	[-1.22, 0.46]	-.07	[-0.98, 0.85]
Parent employment status (reference group: full time)				
Part time	.19	[-0.38, 0.75]	.25	[-0.35, 0.86]
Unemployed	.37	[-0.18, 0.92]	.04	[-0.54, 0.63]
Constant	.25	[-0.78, 1.29]	.95	[-0.16, 2.05]
Multi-degree-of-freedom tests of overall interaction terms, $\chi^2(2)$	3.99*		.46	
R ²	.18		.20	
Adjusted R ²	.04		.07	

Abbreviation: CI, confidence interval.

* $p < .05$, ** $p < .01$.

Language as a moderator

Controlling for parents' age, gender, employment status, annual income, marital status, education, past parenting experience, and number of children, the two-way interaction between economic strain and parents' primary language was statistically significant, $\chi^2(2) = 3.99$, $p = .02$. Results suggest primary language significantly moderated the negative association between economic strain and parenting self-efficacy for Latinx Spanish speakers, $\beta = -.50$, $p = .02$ (Table 5 and Figure 1). In other words, the negative association between economic strain and parenting self-efficacy was stronger for Latinx parents whose primary language was Spanish compared to non-Latinx parents whose primary language was English. Switching the reference group to

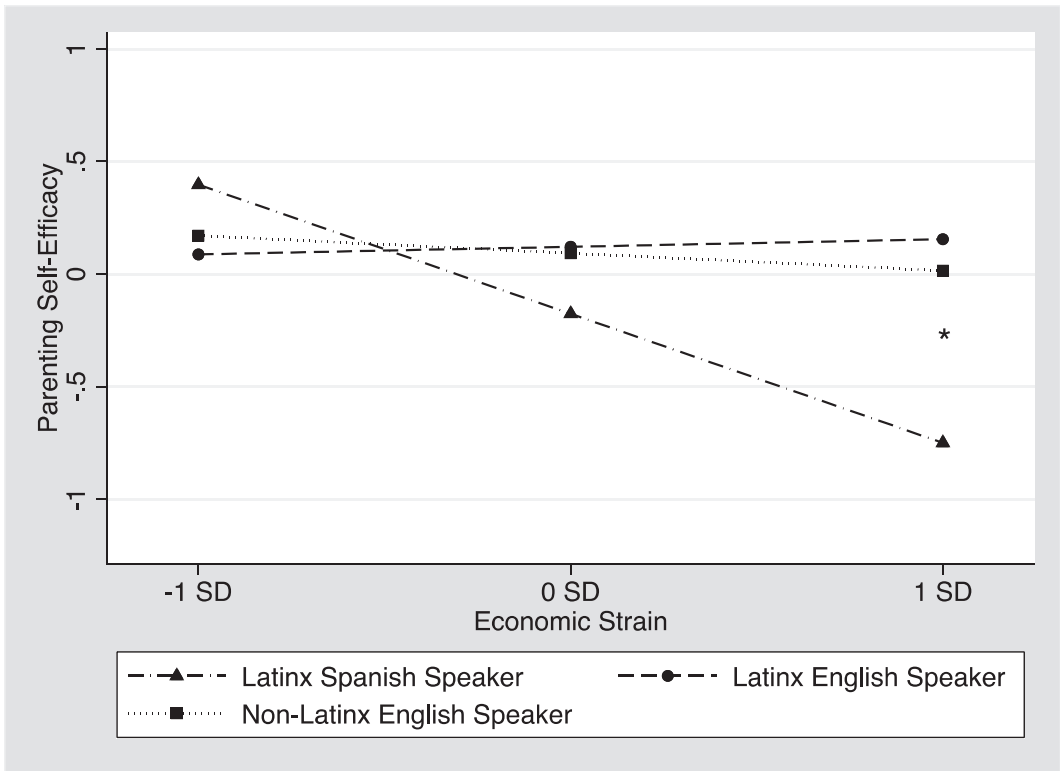


FIGURE 1 Interaction between economic strain and parent language is associated with parenting self-efficacy
note. * $p < .05$

Latinx English speakers revealed the negative association between economic strain and parenting self-efficacy for Latinx Spanish speakers was significantly stronger than that of Latinx English speakers ($\beta = -.54, p = .01$). The associations for Latinx English and non-Latinx English speakers did not significantly differ from one another. No other predictors were significant.

The two-way interaction term in the model with parenting satisfaction was not statistically significant, $\chi^2(2) = 0.46, p = .63$. In other words, we found no evidence that the association between economic strain and parenting satisfaction varies by parent's language.

DISCUSSION

The current study addresses gaps in existing research by testing associations among economic strain, parenting self-efficacy, and parenting satisfaction within a sample of parents with newborns and infants from low-income households. Our findings both lend support to social cognitive theory and the family stress model and provide evidence of the negative associations among economic strain, parenting self-efficacy, and parenting satisfaction within this population. Primary language moderated the relationship between economic strain and parenting self-efficacy, with the negative association between economic strain and parenting self-efficacy being significantly stronger for Latinx Spanish speakers compared with both groups of English speakers.

Differences by parenting experience and parent gender

Contrary to past research, there were no differences in parenting self-efficacy and satisfaction between first-time and veteran parents. This finding contradicts social cognitive theory, which suggests parenting self-efficacy and satisfaction increase as parents have more exposure to parenting experiences (Bandura, 2018; Botha et al., 2020). We also did not find any differences in the parenting self-efficacy and satisfaction by parent gender. It is possible the experience of economic hardship in the current sample bears more relevance to parenting self-efficacy and satisfaction than previous parenting experience or gender.

Association between economic strain and parenting self-efficacy

We found a significant negative association between economic strain and parenting self-efficacy, which extends previous research linking economic strain and parenting self-efficacy in socioeconomically diverse samples of parents with older children (Jackson & Scheines, 2005; Parke et al., 2004; Scaramella et al., 2008). Parents with limited financial resources may struggle to cover the increased expenses associated with infant supplies, child care, and medical care (Bartek, 2016). Although social safety-net programs can offset some costs, these programs are notoriously difficult to access and do not cover the entirety of caregiving costs (Hahn et al., 2018; Parolin & Brady, 2019). Thus, parents may perceive the challenge to fulfill their infant's basic needs as evidence of their parenting inefficacy (Mistry et al., 2008; Russell et al., 2008). The absence of necessary materials also may render caregiving more challenging, therefore eliciting feelings of self-doubt and inadequacy as a caregiver.

Association between economic strain and parenting satisfaction

Economic strain was negatively associated with parenting satisfaction. This finding contradicts findings from studies examining socioeconomically diverse samples that have found no relationship between economic strain and parenting satisfaction (Dunning & Giallo, 2012; Woody & Woody, 2007). This discrepancy may be explained by our uniformly low-income sample. Given the marked economic need in our sample, it is possible that more proximal antecedents of parenting satisfaction, such as social support and marital satisfaction, cannot abate the frustrating reality of raising a child with limited financial resources (Dunning & Giallo, 2012; Pescud & Pettigrew, 2014; Popp et al., 2019). Similarly, the aforementioned caregiving challenges associated with the absence of necessary supplies may make it more difficult to find satisfaction in parenting tasks (Finegood et al., 2017). Without disposable income for childcare or non-parenting-related activities, parents also may struggle to access respite that alleviates the physical and emotional strain that accompanies raising a newborn (McQueen & Mander, 2003).

Parent language as a moderator

We found partial support for our hypothesis, with primary language emerging as a significant moderator shaping the strength of the association between economic strain and parenting self-efficacy. Our model revealed that the negative association between economic strain and parenting self-efficacy was stronger among Latinx Spanish speakers compared with either group of English speakers. Although the current study only measures primary language and not language proficiency, we know from extended interactions with participants over the course of the clinical trial that primary Spanish speakers in our sample do not routinely communicate in

English. As a result, we suspect this finding may be representative of the economic and service disparities experienced by parents whose primary language is Spanish. Although all parents experience increased financial obligations after the birth of a child (Bartek, 2016), parents whose primary language is Spanish may not have equitable access to employment opportunities and social services that would otherwise facilitate the provision of care under high levels of economic strain (Ayón & Becerra, 2013; Siegel, 2018). Further, there are often long waitlists to see Spanish-speaking service providers, and some providers are not adequately proficient in Spanish to render quality services (Ayón & Becerra, 2013; Lion et al., 2013). Situating this finding in the social cognitive literature, this suggests that parents who are unable to communicate with providers in their primary language may not be able to maximize the input from pediatricians, social service providers, or other parenting specialists who can otherwise support parents' cognitions and beliefs about their caregiving capacity (Ayón & Becerra, 2013; DeCamp et al., 2013).

Although we refrained from asking participants about their immigration status in an effort to build participant trust, our language and ethnic self-identification variable may indirectly capture the experiences of parents that are undocumented or have mixed-status families. Undocumented immigrants are systematically excluded from many social services, which would further constrict the flow of information and resources that could alleviate economic strain and parenting concerns. It is also possible that primary Spanish speakers are assumed by others to be immigrants, thereby increasing discrimination that can impede access to resources. In the wake of the overtly racist and xenophobic policies championed by the Trump administration, parents may be especially unwilling to access these services due to increased fears of deportation (Perreira et al., 2018). These hostile, antiimmigrant policies also may cause parents to second-guess their ability to raise a child in a society that discriminates against them. Nevertheless, this interpretation is ultimately speculative and should be explored in future research.

We found no evidence of language being a significant moderator that shapes the association between economic strain and parenting satisfaction. This may be partially explained by the instrumental and affective differences in parenting self-efficacy and parenting satisfaction, respectively. Parents' capacity to efficaciously care for their child is in part influenced by the instrumental supports available to them (Mistry et al., 2008; Russell et al., 2008), suggesting that potential barriers to these supports may negatively shape the relationship between economic strain and parenting self-efficacy. In contrast, parenting satisfaction encompasses affective domains of the parent-child relationship and may be influenced by social support and marital satisfaction (Dunning & Giallo, 2012; Ngai et al., 2010; Popp et al., 2019). Familism in Latinx culture, a value that emphasizes one's obligation to the family unit (Parke et al., 2004), may provide Latinx parents with a social network that reciprocates familial support and provides caregiving assistance, thereby mitigating the negative influence of external stressors (Hurwich-Reiss & Watamura, 2019).

The current study has several limitations that should be considered when interpreting results. The cross-sectional design prevents us from inferring causality. Additionally, the overall models examining the associations between economic strain and parenting self-efficacy were not significant, which may be linked to our sample size (Rosner, 2006). Although coefficients for economic strain were significantly associated with parenting self-efficacy in both models, future research with larger samples is needed to adequately power tests of these relationships and increase the generalizability of these findings. Our study is also limited by our categorical measurement of language. Primary language ultimately measures the language parents are most comfortable communicating in and may not capture the parents' ability to communicate in other languages. Although studies using continuous measures of language proficiency cite similar findings as those with self-reported, categorical language measures (Colón-Quintana et al., 2020), a continuous measure of English proficiency may yield more nuanced insight to

the effects of linguistic marginalization experienced by parents whose primary language is Spanish.

Potential next steps for this line of research may include measuring downstream child outcomes to understand how economic strain has an impact on the entire family system via parenting self-efficacy and satisfaction among families with newborns. In light of evidence linking parenting self-efficacy and satisfaction to parent mental health (Alleyne-Green et al., 2019; Bates et al., 2020), it is possible these parenting outcomes may buffer or exacerbate mental health outcomes in parents, thereby influencing developmental trajectories during infancy. Incorporating measures of perceived discrimination also may be helpful in understanding the extent to which families with low incomes may be disenfranchised from economic opportunity and social services. Insights from studies of perceived discrimination also may highlight the ways in which social service systems need to adapt to better meet the needs of this population.

Implications

The negative relationships among economic strain, parenting self-efficacy, and parenting satisfaction may have implications for parent mental health during the postnatal period. Low parenting self-efficacy and satisfaction may exacerbate mental health stressors associated with postpartum psychological distress and economic strain (Alleyne-Green et al., 2019; Gross & Marcussen, 2017). Parents' feelings of inadequacy or the absence of positive emotion related to caregiving may contribute to the negative attributions of self that characterize depression and anxiety (Grant et al., 2016; Loeffler et al., 2018), which in turn may make it more difficult for parents to meet the needs of their infants (Letourneau et al., 2017). Although parent gender was not associated with parenting self-efficacy and satisfaction in our sample, it should be noted that these mental health implications may bear more relevance for mothers given that they are more frequently affected by postpartum psychopathology (Bates et al., 2020).

Our findings highlight the need for professionals supporting parents of infants to incorporate economic supports into their service milieu. Given the almost universal reach of pediatric care (Garg et al., 2015), embedding economic supports within pediatric care settings may increase parents' accessibility to and engagement in economic support services (Schickedanz et al., 2019). Medical-Financial Partnerships, a program model that embeds financial coaching services in health care settings, may be a viable option. Medical-Financial Partnerships provide participants with a financial coach who facilitates the mitigation of financial stressors while increasing participants' economic security (Bell et al., 2020). Preliminary findings show that these financial services can help participants meet goals related to savings, debt reduction, and employment (Bell et al., 2020).

Parents whose primary language is not English may be particularly vulnerable to the effects of economic strain. Although the current sample features Latinx Spanish-speaking parents, it is likely the inability to communicate with service providers in one's primary language may shape the parenting self-efficacy of other parent populations. Consequently, pediatric and social services should increase their capacity to serve parents in their primary language by hiring additional bilingual service providers and implementing culturally rooted programming (Ayón & Becerra, 2013; Lion et al., 2013). Even among parents who can also speak English, having the option to receive services in their primary language may promote parents' comfort with services, reduce misunderstandings, and provide cultural cues that do not readily translate into English (Chan et al., 2005). These parents may also be recent immigrants, and therefore service providers should be well acquainted with community resources that meet the immediate economic needs unique to recent immigrants (e.g., economic aid to cover the cost of immigration attorneys, connections to employment opportunities that do not require English proficiency). Because policies such as the Families First Prevention Services Act require increasing levels of

evidence for the federal reimbursement of prevention services, practices developed specifically for non-English-speaking communities of color should be prioritized for evaluation by the Federal Clearinghouse to incentivize the implementation of linguistically and culturally relevant services.

In sum, our study provides preliminary evidence for the relationships among economic strain, parenting self-efficacy, and parenting satisfaction in a sample of parents with newborns from low-income households. Our findings suggest economic strain may disproportionately impact the parenting self-efficacy of Latinx Spanish-speaking parents. These findings add to literature documenting the negative consequences of economic hardship within families of young infants and highlight the need for accessible services that directly address parents' economic hardship.

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ETHICS STATEMENT

Study protocols were approved by the University of California-Los Angeles Institutional Review Board prior to data collection. All participants provided informed consent prior to participation and were able to withdraw from the study at any time. All data were kept in secure, password-protected computers that were only accessible by research staff and the principal investigator.

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