Immigrant parents' stressors and supports: a mixed methods analysis of how families navigate immigration-related stressors

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Introduction

Immigration to a new country brings challenges that can influence parenting and family health. Prior work shows that immigration stress may adversely influence parenting practices, and that parental acculturative stress predicts higher anxiety symptoms in children. Evidence also suggests biological embodiment of these stressors: recent asylum seekers have higher hair cortisol compared with non-immigrants, and economic hardship has been associated with increased hair cortisol in children. However, immigrant families' strengths and sources of resilience in parenting have not been studied extensively.

Aims

This pilot study used a mixed methods approach to describe how Latino immigrant parents experience stressors, their social and psychological responses, and to examine associations between parental stressors and biological measures of stress in children.

Methods

Sample: Parents of children ages 3–6 were recruited from Head Start centers serving agriculture-associated immigrant families in Oregon. Parents were eligible if born outside the US. Families were interviewed in their homes.

Qualitative: Semi-structured interviews explored immigration experience, reasons for immigration, social supports, and family responses to stressors.

Surveys (completed separately by mothers and fathers):

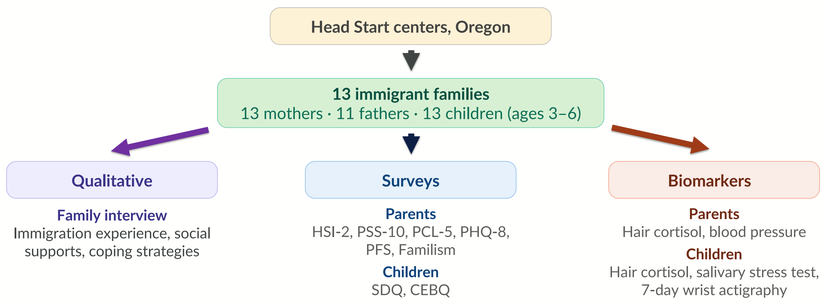
- Stressors: Harvard Trauma Questionnaire, Hispanic Stress Inventory-2 (discrimination and immigration stress subscales), PCL-5 (PTSD symptoms), Perceived Stress Scale-10
- Strengths: Protective Factors Survey (social support, family functioning), Familism scale, Positive Parenting questionnaire
- Other: Acculturation scale, PHQ-8 (depression), culturally bound syndromes checklist

Child measures: Strengths and Difficulties Questionnaire (SDQ), Child Eating Behavior Questionnaire

Biomarkers: Hair cortisol was measured in parents and children (3 cm closest to scalp, analyzed via ELISA). Blood pressure measurements were taken in parents. Children completed a modified Trier Social Stress Test with salivary cortisol collected at baseline, 10, 30, and 50 minutes post-stressor.

Accelerometry: Children wore wrist-placed ActiGraph wGT3X-BT accelerometers for 7 days. Sleep was scored using the Sadeh algorithm (60-second epochs). Physical activity was classified into sedentary, low intensity, and high intensity using Johansson parameters (5-second epochs).

Figure 1. Recruitment and study design



Limitations

This is a pilot study with a small sample size (n=13 families) that limits statistical power and generalizability. The sample was drawn from agricultural communities in Oregon and findings may not generalize to other immigrant populations or geographies. Hair cortisol normative values are not well established in children and the TSST was modified for children, limiting direct comparison to adult norms. Survey data are subject to social desirability bias, particularly for sensitive topics such as trauma and discrimination. Finally, the cross-sectional design precludes causal inference about the relationship between parental stressors and child outcomes.

Results

Sample characteristics: 13 families enrolled (13 mothers, 11 fathers, 13 children). Mean maternal age 35 years (SD 7), paternal age 40 years (SD 7). All parents reported low acculturation scores (<3).

Parental stress: Mothers reported a median of 2 traumatic events (IQR 0, 4.5); fathers reported a median of 0 (IQR 0, 1). Two of 11 fathers met PCL-5 criteria for PTSD; no mothers met criteria. Fathers reported immigration stress more than 1 SD above the national HSI-2 normative sample. Paternal PTSD symptoms appeared driven by ongoing immigration-related stressors rather than discrete traumatic events. Several mothers had elevated systolic blood pressure.

Child biomarkers: 7 of 13 children showed a typical salivary cortisol response to the stress test. Of the 6 with atypical responses (blunted or prolonged elevation), 5 had the highest hair cortisol levels in the sample (all >10 pg/mg). On the SDQ, fathers reported greater problem severity than mothers, and every child exceeded the threshold on at least one subscale per at least one parent's report.

Accelerometry: Children's mean nighttime sleep duration fell below the AASM-recommended 10–13 hours per 24 hours for this age group, and children spent the majority of waking time in sedentary or low-intensity activity.

Qualitative themes – select translated quotes from interviews with parents:

- *"In many jobs—including the one I'm in now—immigration [enforcement agents] have come through to check papers, and well... I don't know how long it will be before it happens again, but they are going to have to lay off some coworkers. Only two or three of us are left." – Father speaking on legal stress*
- *"Sometimes, we just want to stay in—to clear our heads and remind ourselves that we're not actually cooped up inside the house. We try to get outside—to make sure we're not stuck indoors all the time." – Mother speaking on coping*

Table 1. Parents' demographics and survey scores

	Mothers (n=13)	Fathers (n=11)
Demographics		
Age, mean (SD)	35 (7)	40 (7)
Years in US, mean (SD)	14 (8)	20 (10)
Acculturation (BASH), mean (SD)	1.4 (0.4)	1.4 (0.5)
Stressors		
Perceived stress (PSS-10), mean (SD)	15 (5)	13 (4)
HSI-2 Discrimination, mean (SD)	1.6 (1.0)	1.3 (0.6)
HSI-2 Immigration, mean (SD)	1.7 (1.0)	2.0 (1.0)
Trauma inventory, median (IQR)	2 (0, 4.5)	0 (0, 1)
PCL-5, median (IQR)	12 (8, 18.5)	8 (0, 14)
Met PTSD criteria, n (%)	0	2 (18)
Depression (PHQ-8 ≥10), n (%)	0	1 (9)
Protective factors		
Social support (PFS), mean (SD)	3.3 (1.0)	3.4 (0.8)
Family functioning (PFS), mean (SD)	4.2 (0.4)	4.3 (0.6)
Familism (obligations / support / referents)	3.8 / 3.7 / 2.5	4.2 / 4.4 / 3.2
Biologic measures		
Systolic BP, mean (SD)	119 (17)	123 (12)
Hair cortisol pg/mg, mean (SD)	7.0 (2.3)	11.8 (8.7)

Table 2. Children's sleep and activity levels

	Children (n=12)
Sleep	
Total sleep time, average minutes (SD)	470 (44)
Sleep efficiency, average % (SD)	83 (4)
Sleep fragmentation index (SD)	27.9 (8.7)
Activity levels	
% time in sedentary activity (SD)	37 (11)
% time in low intensity activity (SD)	19 (3)
% time in high intensity activity (SD)	9 (3)

Note: 1 child of the 13 in the study did not have usable ActiGraph data

Discussion

This pilot study found that immigrant parents experienced substantial stressors through the immigration process, with fathers reporting immigration-related stress more than 1 SD above national norms and 2 of 11 fathers meeting criteria for PTSD. Despite these stressors, qualitative interviews revealed strong social support networks and coping strategies, consistent with the Familism and Protective Factors domains assessed. The finding that children with atypical salivary cortisol stress responses also had the highest hair cortisol levels suggests chronic cortisol exposure (hair) may be associated with altered acute reactivity (saliva), consistent with HPA-axis dysregulation. Fathers reported more behavioral difficulties in children than mothers on the SDQ, highlighting the importance of including paternal perspectives in developmental assessment. Children's sleep and activity levels below normative values may reflect additional environmental or stress-related influences on health behaviors that warrant further investigation. Qualitative data provide context for how families navigate these stressors and identify targets for intervention, including strengthening social networks and culturally responsive support.