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**It's about time: Parent's direct care for children in Hispanic noncitizen households across state immigration policy contexts**

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**Abstract:** Is parent's direct care for children more common in state contexts with inclusive policies toward immigrants? If so, among whom do we find such a relationship? We analyze American Time Use Survey (ATUS) data between 2010 and 2019 to investigate whether daily routines involving parent's direct care for children (e.g., playtime, sports, reading, etc.) vary with different immigration policy contexts. Among parents responding to the ATUS, we find that Hispanic parents in Hispanic noncitizen households are more likely to report having engaged in direct care for their children if they live in states with more inclusive policies toward immigrants. No comparable results apply to households with no Hispanic noncitizens, including non-Hispanic parents (White, Black, or Asian) or Hispanic citizen parents in U.S. citizen households. Our work identifies a possible route to increase the pool of parents engaging in direct care: recent state policies designed to integrate immigrants. Providing Hispanic noncitizen households with a combination of resources and support may help promote direct care for children, including time devoted to children's developmental care.

**Keywords:** immigration; time use; children; Hispanic; noncitizens

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**Replication materials**: Files to replicate results presented in this paper are available online: https://doi.org/10.7910/DVN/PUWBIH. ATUS data are available from IPUMS (Flood et al., 2022) at www.atusdata.org. All variables we used in our analyses are noted in replication materials. We also include a data file with each variable used to measure state-level contexts. All analyses were conducted using Stata version 18.

**Co-author contributions:** Data management (Elena and Juan); data analysis (Juan and Elena); writing (Juan & Elena)

## Introduction

Hispanic youth make up a large share of the US population. For context, Hispanics comprise a sizable share (19%) of the US population, according to the 2022 American Community Survey (ACS). This figure is higher when focusing on young people: 25% of children age 12 and younger are Hispanic. The outsized Hispanic youth share is more pronounced in noncitizen households. Among children under age 13 in households where at least one member is not a U.S. citizen, 60% are Hispanic. This percentage rises to 96% in households where at least one member is a Hispanic noncitizen.

In this study, we examine variation by citizenship status to differentiate individuals who are Hispanic noncitizens or living with Hispanic noncitizens (c.f., Pedroza, 2022a; Wang & Kaushal, 2019). We focus on parents with young children (our unit of analysis) and compare Hispanic parents in "Hispanic noncitizen households" (i.e., parents in households where any household member is Hispanic and not a U.S. citizen) to other parents. Noncitizens in these households include green card holders, unauthorized immigrants, formerly lawfully present immigrants, or refugees (Bean et al., 2015; Ojeda & Brown, 2005; Yoshikawa, 2011). We think of parents in Hispanic noncitizen households as a proxy for parents in households who stand to gain from living in states where inclusive immigration policies (e.g., access to driver's licenses for noncitizens; expanded educational and safety net options for households with noncitizens; and limits on cooperation with deportation authorities) are more common than exclusionary policies.

We know children in Hispanic noncitizen households face multiple obstacles and uncertainty and tend to lag behind on a range of important outcomes. Children with noncitizen parents are less likely to have health insurance (Ojeda & Brown, 2005), and that children with

likely unauthorized parents fare worse in academic outcomes and are more likely to get held back in school (Amuedo-Dorantes & Lopez, 2015). Hispanic youth face high levels of food insecurity (Potochnick et al., 2019), especially when living in locations with higher levels of immigration enforcement (Potochnick et al., 2017). Hispanic youth in mixed-status families (i.e., where at least one family member is a U.S. citizen and any others are likely undocumented) are also more likely to have limited access to safety net programs, such as nutrition assistance via the Women, Infants, and Children (WIC) program (Vargas & Pirog, 2016). We have limited evidence, however, on parental time use in Hispanic noncitizen in households.

We know about the benefits of providing direct care for children – everyday activities that parents do together with their children as a primary activity – for young people's long-term prospects (Guryan et al., 2008; Kalil et al., 2012). But evidence on parental time use in Hispanic noncitizen households has yet to examine what might support their participation in direct care for children. Therefore, we set out to answer our main question by focusing on variation in time use across state immigration policy contexts. Specifically, we analyze whether (and for whom) direct care for children differs based on policies toward immigrants in their state of residence. Since policies range from exclusionary to inclusive policies and states vary in their mix of both kinds of policies, we can answer the following questions: Is parents' direct care for children related to their state's context of policies toward immigrants? If so, among whom do we find such a relationship?

We use American Time Use Survey (ATUS) data from the Current Population Survey (CPS) between 2010 and 2019. We test whether parents in different states respond differently to questions about their daily routines and engagement in children's primary activities. The ATUS data are uniquely suited to help us sort out whether parents spend more time with children in

exclusionary or inclusive states. Past ATUS analyses have also examined parental time use, including research on gaps by nativity (Hamermesh & Trejo, 2013), gender and education (Negraia et al., 2018), gender and nativity (Ribar, 2013), race/ethnicity, gender, and immigrant household status (Ackert & Wikle, 2022), and child citizenship status (Wikle & Ackert, 2022). To understand whether direct care for children varies by state context, we focus on parental time use in Hispanic noncitizen households separately from other households.

Our paper highlights the value of paying close attention to everyday decisions in Hispanic noncitizen households. Amidst ample evidence of how exclusionary policies hamper immigrant households, our results point to the possibility of charting a different course. After examining parental time use across states, we find parents who are Hispanic noncitizens or are living in Hispanic noncitizen households are more likely to report direct care for children if living in states with more inclusive than exclusionary policies toward immigrants. We believe the associations between parents' direct care for children and state context may indicate positive child outcomes. To be clear, most states have a mix of exclusionary and inclusive policies. We thus interpret our results as suggestive evidence that states with a balance towards inclusive policies can support immigrant households. For instance, we find evidence of more (and, to some extent, longer-lasting) direct care activities in states where inclusive policies outnumber exclusionary policies. Again, the results hold only among parents in Hispanic noncitizen households. These results extend to parents' time devoted to activities we identify as direct care that can promote children's education and development (hereafter, "developmental care time"). This subset of enriching and educational care can support child development. Finally, we find limited and partial evidence that parents in states with more inclusive policies may be more likely to report direct care for children taking place outside their home. Taken together, our

results suggest states can play a role in supporting parents and children in Hispanic households that are typically excluded from U.S. citizenship.

## Theoretical Motivation

***Children of immigrants and parent-child time use:*** As a growing share of the US population, children of immigrants (especially in Hispanic households) have reshaped the composition of US households, classrooms, and local communities. As a result, scholarship has focused on whether and how children of immigrants become integrated (or excluded) from US society (Suárez-Orozco et al., 2008; Suárez-Orozco & Suárez-Orozco, 2009; Yoshikawa, 2011). Assessing similarities and differences between immigrant households and U.S. host society has been central to this line of work (Alba & Nee, 2003; Jiménez et al., 2017; Kasinitz et al., 2009; Mattingly & Pedroza, 2018; Portes & Rumbaut, 2001). We focus on an important element of immigrant integration that, until recently, received only limited attention: parent's direct care for children.

Parent-child time use is receiving growing attention. A central concern here is the gap in developmental care time by income. High-income parents spend more time with children in ways that benefit their children's long-term development and mobility prospects. For instance, analyzing ATUS responses, highly-educated parents generally spend more time with their children when compared to other parents; which likely widens gaps in economic status (Guryan et al., 2008). In disadvantaged families, parents are less likely to report direct care for children known to translate into a 'development gradient' (Kalil et al., 2012). More time spent together is not necessarily beneficial: parents and children in low-income families spend more time waiting for basic services (Holt & Vinopal, 2023). Time lost waiting takes parents and children away

from other activities. However, given the well-known child development benefits from spending time with parents – especially developmental care time (Fiorini & Keane, 2014; LaBriola & Schneider, 2021; Zick et al., 2001) – we need to know whether these gaps in direct care for children also extend to Hispanic noncitizen parents and parents in Hispanic noncitizen households.

We are not the first to use ATUS responses to closely examine time use gaps between immigrants and U.S. host society. Based on this work, we can conclude that immigrants generally spend time differently than their US-born counterparts. To begin, immigrants are less likely to engage in certain activities (e.g., purchases, education, paid work) than others born in the US (Hamermesh & Trejo, 2013). These trends also reflect known differences in time use (which do not only apply to immigrants) between men and women and other correlates of time use, such as child age. Specifically, immigrant men spend more time in paid work and less time doing housework than immigrant women (Ribar, 2013). Among immigrant parents, similar gaps persist: mothers tend to spend more time with their children, especially for time-intensive activities (Negraia et al., 2018). In addition to these insights into overall time use as well as trends by sex, recent evidence has shown how time use differs by race/ethnicity and child citizenship status. Siblings in Hispanic families spend more time together (Ackert & Wikle, 2022), and parents in immigrant families spend more time with citizen children due partly to differences in children's ages (Wikle & Ackert, 2022). We extend existing research by testing whether state-level policy context helps predict direct care for children among Hispanic noncitizen parents and parents in Hispanic noncitizen households.

***State-level policies and immigrant integration:*** A rise in subnational immigration policies instigated research on immigrant integration across divergent policy contexts. States and

localities have long represented important contexts of reception capable of shaping integration efforts (Bloemraad, 2006; Hagan, 1994; Reitz, 1998). They can range from welcoming to exclusionary contexts (Bean et al., 2012), and even neighboring states can have contrasting contexts (Jiménez et al., 2021). A robust and growing body of empirical evidence has documented the consequences of this divergence in policy contexts for Hispanic immigrants.

Much of what we know about the relationship between immigration policy context and immigrant integration stems from work on exclusionary policies. Exclusionary policies include initiatives designed to repel unauthorized immigrants, limit immigrant integration (via obstacles to the safety net and education), and speed up deportations. Such policies predict negative outcomes, especially among mixed-status households typically comprised of unauthorized parents and U.S. citizen children (Perreira & Pedroza, 2019). Past work has focused on how physical and mental health, educational and birth outcomes, housing instability, and food insecurity are more common in places with exclusionary policies (Amuedo-Dorantes et al., 2018; Amuedo-Dorantes & Lopez, 2015; Dondero & Altman, 2022; Pedroza, 2022a; Potochnick et al., 2017; Torche & Sirois, 2019; Wang & Kaushal, 2019). Since Hispanic immigrants comprise the largest share of the foreign-born population and are overrepresented among deportees (Kohli et al., 2011; Pedroza, 2022b), research finds that Hispanic noncitizens and Hispanic immigrant households tend to shoulder the weight of such negative outcomes.

In the same way, research on immigrants' time use across immigration policy contexts has focused primarily on the role of exclusionary policies. Immigrants at risk of deportation are especially likely to change their daily routines to limit their exposure to immigration authorities (Enriquez, 2015; Menjívar & Abrego, 2012). As deportations rose, select immigrants lost their jobs (East & Velásquez, 2022), were less likely to enroll their pre-school age children in school,

spent less time interacting with others, and were home with their children more often (Arenas-Arroyo & Schmidpeter, 2022). Related work on time use among Latinos echoes these results. Specifically, in places with rising immigrant policing, Latino noncitizens tend to limit their time in work-related activities, while Latino U.S. citizens report avoiding educational institutions (Asad & Baer-Bositis, 2025).

By contrast, we also know Latinos seek out specific types of institutions. Recent work relying on interview and time use data examines how Latinos strategically engage in activities (Asad, 2023). Pointing to evidence of 'selective engagement,' Asad leverages time use diary entries from adult Latino ATUS survey takers. The results suggest Latinos seek to maximize positive interactions with U.S. institutions, especially among Latino parents taking actions on behalf of their children's well-being. The incentives to selectively engage with positive institutions thus reflect efforts to act in ways consistent with being a 'good parent' (see especially chapter 3, Asad, 2023). Notably, Latino parents tend to avoid surveilling institutions more than Latinos who are not parents, and selective engagement that benefits Latinos parents' children accounts for the gap (Asad, 2024). Our paper tests whether parents' direct care activities vary across states' immigration policy context. We thus examine whether selective engagement in everyday activities that tend to benefit children are more common in states where inclusionary policies outnumber exclusionary policies.

A smaller but growing line of work has focused on inclusive policies. Welcoming policies include expanded access to driver's licenses and 'sanctuary' policies intended to limit cooperation between federal and subnational law enforcement agencies. Such policies predict greater access to health care (Koball et al., 2022), positive health outcomes (Padilla & Reyes, 2024), lower levels of immigrant poverty (De Trinidad Young et al., 2018), improved housing

options (Christopher, 2023) and increased reporting of crimes by immigrants (Martínez-Schuldt & Martínez, 2021; Muchow & Amuedo-Dorantes, 2020). Furthermore, the Deferred Action for Childhood Arrivals (DACA) program introduced benefits for eligible, young immigrants, including improved mental health, sleep, and birth outcomes (Giuntella et al., 2021; Hainmueller et al., 2017; Hamilton et al., 2021). Yet we still do not know whether living in states with more inclusive than exclusionary policies helps explain parent-child time use in Hispanic noncitizen households.

***Parents and children in Hispanic noncitizen households:*** Before detailing what we expect to find when examining direct care for children across states with different immigration policies, we must first assess which parents are most likely to be responsive to variation across these policy contexts. To illustrate the potential range of results, consider what we know from related immigration research on infant health. Past work finds that states with restrictive employment verification policies report worse infant health outcomes among both immigrant mothers (including likely undocumented mothers) and US-born mothers (Strully et al., 2020), as well as shrinking employment prospects for both immigrant and US-born families in exclusionary contexts (East & Velásquez, 2022). Since exclusionary immigration policies can hurt opportunities for everyone, then inclusive policies designed to help immigrants may end up supporting all parents who want to spend more time with their children. By contrast, other work has found that exclusionary policies appear to send a signal to the broader Hispanic community, including both immigrant and US-born Hispanics, but not to others. Such work finds exclusionary policies harm infant health among immigrant and US-born Hispanic mothers (Novak et al., 2017; Stanhope et al., 2019) and lower trust in health institutions among all Hispanic residents (Cruz Nichols et al., 2018), redistributing trust away from all Hispanics while

boosting trust among non-Hispanic white residents (Rocha et al., 2015). Such results suggest US-born Hispanics may see themselves implicated when the general public conflates 'foreign-born' and 'Hispanic' (Chavez, 2013).

Differing from the above accounts, other work in the same area has found that only a subset of the Hispanic population is responsive to the timing and location of immigration policy variation: Hispanic immigrants report worse infant health (Torche & Sirois, 2019), especially immigrant mothers with lower levels of educational attainment (Tome et al., 2021) and likely unauthorized mothers (Amuedo-Dorantes et al., 2022). These results reflect how exclusionary immigration policies tend to target Hispanic immigrants, who remain the largest and most visible segment of the immigrant population. Recent work suggests immigrants living with Hispanic noncitizens shoulder the burden of exposure to exclusionary policies designed to amplify deportations (Pedroza, 2022a; Wang & Kaushal, 2019) because immigrants from Latin America have long comprised the vast majority of deportees from the US (Kohli et al., 2011). According to this work, individuals in Hispanic noncitizen households share the same roof with people who are among the most common targets of exclusion and deportation. In our study, we consider parents who are Hispanic noncitizens or are living with Hispanic noncitizens as a proxy for those who would benefit from state contexts that lean toward inclusive rather exclusionary policies. Inclusive policies are designed to provide support for households with noncitizens and limit the reach of deportation authorities. Living in relatively inclusive states could help parents in these households make ends meet, support their families, and avoid exposure to deportation. Parents in Hispanic noncitizen households may thus be uniquely responsive to whether their state's immigration policies are, on balance, more inclusionary than exclusionary.

To summarize, we expect the relationship between state immigration policy context and direct care for children might apply broadly to all parents. If this is the case, living in a state with more inclusive than exclusionary immigration policies may help immigrant families broadly, and these supports might also extend to US-born families if these policies generally assist all parents. Alternatively, supporting immigrant parents via a balance of inclusive state immigration policies may benefit Hispanic immigrant parents as well as those in the largest immigrant-origin group in the country: U.S.-born Hispanic parents. In contrast to those accounts, it is possible that direct care for children is related to a parent's immigration policy context, but only if their household includes the most common targets of state immigration policies: Hispanic noncitizens.

***Possible scenarios when examining time use across state policy contexts:*** When considering the potential role of state policies in predicting direct care for children, we anticipate three competing scenarios. First, state contexts with more inclusive than exclusionary policies may help parents invest more time in directly caring for their children. This may extend to more developmental care for their children as well as increased activities with children outside the home, given past research that shows that immigrant parents spent more time at home with rising immigration enforcement policies (Arenas-Arroyo & Schmidpeter, 2022). States with expanded access to safety net programs (Crosnoe et al., 2012; Perreira et al., 2012) may help immigrant, low-income, working families in making ends meet and possibly opt in to more developmental care and activities away from home. Without such assistance, parents may need to work extra shifts or seek additional work, limiting the time available for their children. In addition to expanding access to tangible support services, states with more inclusionary than exclusionary policies may provide peace of mind that can encourage parents to invest in time with their children, including time for developmental care.

Second, state policies may predict immigrant parents' time use differently. Immigrant parents living in a state with fewer exclusionary than inclusive policies toward immigrants may report spending *less time* with their children. Where few exclusionary policies exist, welcoming policies (such as greater access to driver's licenses and educational programs) could connect immigrants to work or school, reducing time spent at home and with their children. Past work has documented a similar pattern when examining commuting times: as immigrants gained access to driver's licenses, they expanded their occupational options and reported longer commutes (Amuedo-Dorantes et al., 2020). If newly licensed immigrant parents attain work opportunities located farther from home, they may spend less time with their children. This aligns with previous work showing how immigrant parents with preschool-age children spent more time at home in areas with rising immigration enforcement policies (Arenas-Arroyo & Schmidpeter, 2022).

Third, a parent's state policy context may be unrelated to parent-child time use diaries. State policies alone – no matter how inclusive or how few exclusionary policies exist – may not be sufficient to encourage immigrant parents to change how much time they spend with their children. Recent work shows that exclusionary contexts offset inclusive policies when examining immigrant civic engagement, but the opposite does not hold (Vo, 2024). Since most states have a mix of both inclusive and exclusionary policies, perhaps those mixed signals are enough to offset the welcoming, trust-building effects of inclusive policies. In other words, just because negative policies predict immigrants' time use (in ways that limit immigrant integration) does not mean inclusive policies necessarily promote protective outcomes such as greater developmental care time with children.

As described below, we test these competing scenarios by first examining whether parents participate in direct care for their children. We then examine the number of direct care activities reported and how long parents spend time with their children. These separate analyses allow us to determine whether the gaps in engaging in direct care and the length of time they spend in such care reflect past trends (Hamermesh & Trejo, 2013). Conceptually, our approach allows us to gauge whether states with more inclusive than exclusionary policies broaden the pool of engagement in direct care for children and increase its duration.

**Data and Analytic Approach**

We analyze the relationship between state-level policy context and individual responses regarding direct care for children. Our primary data source is the ATUS, and our unit of analysis is individual respondents; namely, parents with young children. Among respondents from the CPS, a subset aged 15 and older are randomly selected to complete an ATUS time diary, documenting their activities over a 24-hour period. We analyze responses between 2010 and 2019 for respondents with children under age 13 (Allard et al., 2007; Cao, 2022; Stewart & Allard, 2016), and we check whether results differ across alternate child age thresholds.

Amongst our sample of parents living with children, we examine whether direct care for children varies across states for different groups based on race, ethnicity, and U.S. citizenship status. In particular, we examine outcomes for Hispanic parents in Hispanic noncitizen households, meaning cases when the parent is a Hispanic noncitizen or the parent is living with someone who is a Hispanic noncitizen. Whereas past work documents negative outcomes are more likely among Hispanic respondents who live with noncitizens (Pedroza, 2022a; Wang & Kaushal, 2019), we consider whether states with more inclusive than exclusionary policies

predict more time devoted to direct care for children. For context, among 2,678 parents in Hispanic noncitizen households, close to four out of five are themselves not U.S. citizens. Among all parents in Hispanic noncitizen households, 210 live in households where everyone is an immigrant, and 96 live in households where everyone is not a U.S. citizen. The remainder are parents in households where some members are U.S. citizens and others are not (e.g., cases where children are U.S. citizens with noncitizen parents).[1]

When identifying Hispanic parents in Hispanic noncitizen households, noncitizens were part of the primary family in nearly all cases (96 percent of 2,678). For a small subset of Hispanic parents (N = 97), the primary family was comprised of U.S. citizens, but they reported also living with a Hispanic noncitizen in the same household. We included them with Hispanic noncitizen households because they likely face similar constraints as other Hispanic noncitizen households (N = 2,581) and differ from Hispanic parents in households without Hispanic noncitizens (N = 2,402).

We focus on parents in Hispanic noncitizen households as a proxy for those who may be especially responsive to their state's immigration-related policies. Though not reported in the ATUS, we know this population of noncitizen households includes unauthorized immigrants. In 2019, more than four million unauthorized immigrants lived with children under 18 years old, out of an estimated unauthorized population of 10.5 million (Migration Policy Institute, 2019). In 2022, 4.4 million U.S.-born children under 18 lived with a parent who was an unauthorized immigrant (Passel & Krogstad, 2024). Unauthorized immigrants are generally at an elevated risk

[1] In the sample of 29,894 parents, there are 522 parents from households where everyone is an immigrant, not U.S. born. Of these 522 parents in immigrant households, 210 live in Hispanic noncitizen households. Nearly all of these 210 parents are not U.S. citizens and a small number are naturalized citizens co-residing with a noncitizen. In contrast, among parents not living with any Hispanic noncitizens (N = 27,810), 312 live in households where everyone is an immigrant, and 2,084 live with a non-Hispanic noncitizen.

of deportation and exclusion from public programs and social resources (e.g., educational access, driver's licenses); which are measured by the state-level IPC score that we use in our analyses. Past work on unauthorized immigrant parents has examined the role of legal status in children's outcomes (Bean et al., 2015) and how deportation and deportability can affect parents and their children (Dreby, 2012; Enriquez, 2015; Ojeda & Brown, 2005; Yoshikawa, 2011).

Relying on whether a parent lives in a Hispanic noncitizen household as a proxy for those most likely to benefit from inclusive state policies has drawbacks. Noncitizens include a range of legal statuses (e.g., unauthorized immigrants, green card holders, refugees) with varying legal protections, access to public programs, and deportation risks (Chaudry & Fortuny, 2014). Unauthorized immigrants have no work authorization, can apply for few public programs, and are at an elevated risk of deportation, but not all are an equally high priority for deportation. Lawfully present immigrants have work authorization, can access select public programs, and are typically at lower risk of deportation, unless their lawful status expires or if they are convicted of an aggravated felony (Rosenblum & Kandel, 2012). Given the limitation of grouping parents in Hispanic noncitizen households together, we test whether our results are driven by parents who live with likely unauthorized immigrants.

The main results analyze responses separately for Hispanic parents in Hispanic noncitizen households from non-Hispanic (White, Black, Asian) parents and Hispanic parents in households with no Hispanic noncitizens. We merge ATUS responses with state-level data on policies that either integrate or exclude immigrants, and a higher score (see the description below) signals that the state has more inclusionary than exclusionary policies. We expect an association between state policies and direct care for children to hold only among parents in Hispanic noncitizen households (i.e., parents in households with any Hispanic noncitizens).

*Direct care for children*

We rely principally on the ATUS question (Flood et al., 2022) that categorizes activity types (variable name: *activity*) to identify whether parents report direct care for children. We test whether the relationship between parents' direct care for children and immigration policy context is significant when comparing participation in any direct care as opposed to none. The outcome of interest is whether a parent reported any of 21 child-related, direct care activities related to caring for and helping children as well as activities related to children's education or health during a sampled day (0: none; 1: one or more of direct care activities). Direct care for children includes care reported as a primary, child-focused activity. The Appendix includes a detailed list of ATUS activity codes. Secondary activities (Allard et al., 2007; Stewart & Allard, 2016; Zick & Bryant, 1996) where a child is present while a parent is doing something else (e.g., shopping, engaged in a hobby, or going to the movies) are not included in our analyses.

*Number, duration, and location of direct care for children*

We are interested in whether state context is related to direct care for children. ATUS data includes useful information to address this question, including the number of direct care activities reported by each parent and their length (*duration*). Here, we join others who have used the ATUS to analyze the duration of parental time use decisions by nativity, gender, education, race/ethnicity, and citizenship (Ackert & Wikle, 2022; Hamermesh & Trejo, 2013; Negraia et al., 2018; Ribar, 2013; Wikle & Ackert, 2022). ATUS time diaries also record whether direct care for children took place outside the home (*where*); which allows us to detect whether the frequency of such direct care varies by state context.

*Parent-child developmental care time*

To examine whether state policy context is related to direct care that promotes child development, we report results for a subset of activities we refer to as 'developmental care time.' We follow scholarship showing that developmental care is important for child development. In this work, "educational time" (Arenas-Arroyo & Schmidpeter, 2022; Fiorini & Keane, 2014) and "developmentally enriching activities" (LaBriola & Schneider, 2021) include playing or talking with children, reading with children, helping children with homework, doing arts and crafts, helping children, and attending school meetings. Such direct care for children requires dedicated parent-child interactions and has the potential to promote children's human capital (Zick et al., 2001). We refer to 12 parent-child activities (of the original 21 activity codes) as developmental care time because these activities can promote child well-being and development. Related work (Price, 2008) uses a broader definition of "quality time" that spans both developmental care and direct physical care: our analyses of all 21 activities correspond to the latter (direct care for children), while the subset of 12 activities corresponds to the former (developmental care). The Appendix lists all 21 of these activities as well as the 12 activity codes that we consider developmental care time.

*Main independent variable*

Our main independent variable accounts for state policies toward immigrants. The Immigration Policy Climate (IPC) is a continuous index that captures state-year variation in policies between 2009 and 2019. Each state is scored between -11 to 11 in each year (mean: -1.0; standard deviation: 5.2). A positive IPC score means inclusionary policies outnumber exclusionary policies, and the absolute value of an IPC score measures the strength of the state's overall immigration policy context. The measure captures fourteen kinds of state policies across five domains such as recent access to services for noncitizens (e.g., safety net, public health

benefits, higher education, driver's licenses) and immigration enforcement policies (Samari et al., 2021). IPC is similar to cross-sectional state indices (De Trinidad Young & Wallace, 2019; Pham & Van, 2014) but is unique in capturing both inclusionary and exclusionary policies over time.

Figure 1 shows variation in IPC across states over time. Some states maintained relatively consistent measures on the IPC between 2009 and 2019. For example, California (mean IPC: 7.6; standard deviation: 3.2) and Illinois (mean IPC: 3.5; standard deviation: 1.3) have been relatively welcoming towards immigrants. In contrast, Arizona (mean IPC: -8.2; standard deviation: 1.0) and Georgia (mean IPC: -9.5; standard deviation: 1.6) became more exclusionary across the decade. Oregon (mean IPC: 2.6; standard deviation: 4.1) used to have more exclusionary than inclusionary policies, but their context changed and became more inclusionary by the end of the study period in 2019.

[Figure 1 about here]

*Other correlates of time use*

Analyses account for correlates of time use across respondents: citizenship status (reference: US-born); age; female respondents; educational attainment (categorical; reference: some college); employment status (1: employed; 0: unemployed or not in the labor force); and whether the respondent usually worked at least 40 hours per week. We also account for survey year; survey day and month; single-headed household status; number of children under age 5; family income (categorical); presence of grandparents and non-parenting adults in the household; metro area status; and region.[2] Descriptive statistics use person weights (wt06) and regression results presented in Tables 3 and 4 use replicate weights (rwt06_1 through rwt06_160). Analyses

[2] Two predictors feature missing data: 119 observations have missing values for family income, and the IWS scale excludes Washington, DC and its 47 respondents who would otherwise have been included in our sample.

are limited to those living with children under age 13 in the household and in the US for at least a year before being surveyed.

We account for a cross-sectional index – the Immigrant Welfare Scale (IWS) – of 1990s-era safety net access (Hero & Preuhs, 2007) to account for pre-existing policies before the study period. We also account for state-level demographic (i.e., index of the proportion of Hispanic and immigrant residents) and economic factors (i.e., index of poverty and unemployment rates) using ACS data; votes for Republican presidential candidates in 2008, 2012, and 2016; and the proportion of counties with an active Secure Communities immigration enforcement program in a given state-year. State factors are lagged by one year with exceptions: the IWS is time-invariant; election results are interpolated to precede ATUS responses; and ACS data rely on five-year means that precede ATUS surveys.

*Analytic approach*

We first use linear probability models as others have done in comparable work (Ackert & Wikle, 2022; Muchomba & Kaushal, 2022; Negraia et al., 2018) to predict whether (1 if any; 0 if none) parents report direct care for children. Second, we report linear and count models to account for variation in the number and duration of direct care activities. We then compare the above approaches to results from hurdle models – following others (Asad & Baer-Bositis, 2025; Hamermesh & Trejo, 2013; Prickett et al., 2015) – designed to predict the difference between (a) the threshold from zero to any direct care for children and (b) the number of direct care activities. Hurdle models produce estimates for an initial hurdle (0 versus 1 direct care activity) in the dependent variable combined with separate estimates for subsequent hurdles (positive number of direct care activities or minutes) (Burke, 2009). Together with linear and count models, these

results help us determine whether parents participate in direct care for children as well as the number and duration of direct care for children.

## Results

*Descriptive statistics*

Our pooled sample size (N=29,894) includes 24,814 non-Hispanic parents (20,233 are White, 2,762 are Black, and 1,819 are Asian). Of 5,080 Hispanics in the sample, over half (2,678) belonged to Hispanic noncitizen households where the main respondent is a Hispanic noncitizen or at least one Hispanic household member is not a U.S. citizen.[3] Table 1 displays descriptive statistics for our sample (N=29,894). About three-quarters (0.76) of respondents said they engaged in any direct care for children, which is our main dependent variable. The sample was limited to households with at least one child that was 12 years old or younger, and two-thirds reported at least one child under 5 years old. Nearly 80 percent reported being employed in some capacity, and 57 percent of the sample reported working over 40 hours per week.

[Table 1 about here]

Engaging in direct care for children varies by race/ethnicity and U.S. citizenship status. Parents in Hispanic noncitizen households report less engagement than other parents in our analyses. In Table 2, among non-Hispanic parents, the proportion of people reporting any direct care ranged from 72% (Black respondents) to 78-79% (White and Asian respondents, respectively). Among Hispanic parents, 74% of those in U.S. citizen households, and only 67% of those in noncitizen households, reported any direct care. Similarly, for the number of direct care activities, Hispanic parents who did not live with Hispanic noncitizens reported an average

[3] Not included are a small number of respondents (less than 700) who mostly identified as Native American or multiple race categories.

of 3.2 direct care activities per day relative to Hispanic parents in Hispanic noncitizen households who reported 2.4 direct care activities on average. White and Asian respondents reported the most average direct care activities (3.5 and 3.3 on average, respectively), and Black respondents reported 2.8, on average. The pattern across groups holds for developmental care and direct care for children taking place outside the home, with Hispanic parents in Hispanic noncitizen households reporting the lowest average in both categories. As displayed in Table 2, the gaps between parents in Hispanic noncitizen households and other parents are (with one exception) statistically significant when comparing group mean differences.

[Table 2 about here]

*Linear probability results: predicting whether parents reported any direct care for children*

Table 3 reports results from linear probability models for individuals in one of five groups (by race/ethnicity and U.S. citizenship status) where each model accounts for the main independent variable (IPC), common correlates of time use, and other contextual factors. Among parents in households with no Hispanic noncitizens (models 1-4), the relationship between the IPC and direct care for children is *negative* and indistinguishable from zero. One group (Asian parents, model 3) includes a sizeable number of non-Hispanic, noncitizen parents. For them, the relationship remains negative and not significant, too (results not shown). In other words, since there is no reliable relationship between state context and direct care for children among these parents, it seems they were just as likely to provide direct care for their children irrespective of their state's policies toward immigrants.

Only parents in Hispanic noncitizen households (Table 3, model 5) were more likely to report any direct care activities ($\beta = 0.007$; $p < 0.05$) if they lived in a state with a greater IPC value. In ATUS data, 67 percent of parents in Hispanic noncitizen households said they engaged

in any direct care activities. Our results suggest that closer to 71 percent of these parents spent time with their children if their state's IPC is one standard deviation above the mean (approximately five IPC units).[4] In supplementary results (not shown), the positive relationship (Table 3, model 5) is driven by Hispanic parents who are not U.S. citizens. In results reported below, we find that the results apply to parents living with likely unauthorized immigrants. Logistic models (not shown) yield results comparable to Table 3, and results hold when using ATUS weights (wt06 and wt20) or replicate weights.

[Table 3 about here]

Additional correlates of time use account for other, relevant sources of variation in parental time use. Respondents with children under age five and women were more likely to report direct care for children. Respondents were less likely to report direct care for children if they were older, lived in non-metro areas, did not attend college, lived in a single-headed household, worked fewer than 40 hours, or did not live with other adult relatives.

*Linear and count regression results: predicting the number, duration, type, and location of direct care for children*

ATUS data on frequency and duration of direct care activities allow us to further examine the relationship observed above among select Hispanic parents. Past work has found that immigrants are less likely to engage in certain activities but report more time in those activities when engaging in them at all (Hamermesh & Trejo, 2013). Our results suggest states with higher IPC values may help more parents in Hispanic noncitizen households get over the hurdle of reporting any direct care for children. As an extension of our main question, we examined

[4] In model 5, a standard deviation change in the IPC score ($\beta$ = 0.0073; standard error = 0.003) predicts the following standard deviation change in the outcome: $\beta$ x ($\frac{1}{Y_{sd}}$) x $X_{sd}$ = 0.0073 ($\frac{1}{0.48}$) 5.7 = 0.087; or an 8.7% of a standard deviation change which corresponds to a 4% difference in the mean outcome (from 67% to 71%).

whether a parent's state context also predicts the number of (and time devoted to) these direct care activities.

In Table 4, we present estimates from linear and count models predicting the number (models 1 and 7) and duration (models 2 and 8) of direct care for children. In these results, we focus on parents in Hispanic noncitizen households. In Appendix Tables 4A through 4D, we display results for other parents, none of which are statistically significant. Among parents in Hispanic noncitizen households, the total number of direct care activities is consistently and positively related to the IPC measure of state context where a higher score means inclusive policies outnumber exclusionary ones – in both linear and count models (models 1 and 7). Turning our attention to the duration of direct care for children, the results are mixed: a positive IPC score is related to more minutes in direct care when using a count model (model 8) but not in linear probability model results (model 2). In sum, evidence is mixed regarding whether the IPC predicts the duration of direct care.[5]

If state contexts generally predict direct care for children, then we want to know whether this applies to developmental care time and direct care activities that require time outside the home. Our results for developmental care mirror the above results for the number of developmental care activities and their duration. In Table 4, a positive IPC score predicts more instances of developmental care activities (models 3 and 9), and we find partial evidence of a relationship between context and the duration of developmental care (model 10 but not model 4).

Finally, results for direct care for children taking place outside the home are not consistently related to the IPC score – either in number or duration. These direct care activities

[5] Results employing Cragg hurdle models – using Stata churdle or craggitt commands – are consistent with this interpretation: IPC positively predicts selection into any direct care for children but not a higher number of direct care activities.

only vary according to the IPC score when predicting minutes of direct care using a count model (model 12). In supplementary analyses (not shown), the IPC predicts the number and duration of direct care outside the home before accounting for a state's demographic context and Census region.

[Table 4 about here]

*Sensitivity and robustness checks*

Next, we report a series of sensitivity and robustness checks. Are the main results we observe among all parents in Hispanic noncitizen households driven by parents living with someone who is likely an unauthorized immigrant? If so, that implies the relationship we find between state policies and direct care for children may be due to an elevated risk of exclusion from state policy benefits as well as potential deportation. To begin, we find results similar to the main results in Table 3 among Mexico-born parents in noncitizen Hispanic households (N = 1,705; $\beta = 0.007$; $p < 0.05$). Furthermore, although the CPS does not ask respondents for their legal status, we used an established approach for imputing likely unauthorized status.[6] This approach confirms that the main results extend to Mexico-born parents in noncitizen Hispanic households where someone is likely an unauthorized immigrant (N = 1,133; $\beta = 0.010$; $p < 0.05$). However, it remains unclear whether we can say the same about other parents in Hispanic noncitizen households. Although the coefficients remain positive, no other results are statistically significant when examining either Mexico-born parents (where no one else is a likely unauthorized immigrant) or non-Mexico-born parents (whether or not they live with someone

[6] Using a residual method (Passel & Cohn, 2016), we consider someone to be likely unauthorized if they (a) are Hispanic, (b) are not a U.S. citizen, (c) reported less than a high school degree and no GED, and (d) arrived in the US after 1981 (i.e., ineligible to adjust their status after federal immigration reform of 1986). Past work (Amuedo-Dorantes et al., 2022; Amuedo-Dorantes & Lopez, 2015; Vargas & Pirog, 2016) uses a similar approach to designate unauthorized legal status. Other methods exist to identify likely unauthorized immigrants including probabilistic approaches and random assignment (Bachmeier et al., 2014; Ro & Van Hook, 2022; Van Hook et al., 2015; Warren & Warren, 2013).

who is likely an unauthorized immigrant). These results recommend caution because the associated sub-samples (between 421 and 572) are smaller than the ones above. In addition, given the complexity of identifying likely unauthorized immigrants beyond the case of Mexico, the approach we use may not adequately account for variation in eligibility for family reunification, temporary protected status, and other options for lawful presence.

We also assess whether results are sensitive to model specification by using an established method (Young, 2018). Following this approach, we analyze unweighted ATUS responses to account for model uncertainty due to sampling (i.e., mean of the standard errors for estimates) and modeling distribution (i.e., the standard deviation of estimates across alternate specifications). The unweighted results yield a robustness ratio of 2.11; indicating results are robust when comparing results across more than two million alternate models. Across these models, we find a mean coefficient of 0.005 (i.e., a 5.9% rise in the likelihood of reporting any direct care for children per standard deviation change in the IPC) compared with 0.007 in Table 3.[7] Although these robustness checks are similar to our earlier results, we did not find comparable results when pooling all Hispanic residents in the same model and testing an interaction between living in a Hispanic noncitizen household and the IPC score. In that case, the estimated relationship was smaller ($\beta = 0.002$), unreliable ($p > 0.50$), and indistinguishable from zero.

We also test whether the results extend through 2020 (when ATUS paused data collection for two months) or differ when taking into account the 2016 election year. When including 2020 respondents, the relationship remains positive and substantively similar ($\beta = 0.0067$; $p < 0.05$).

[7] Similar to the mixed evidence across models in Table 4, robustness results also yield lower robustness ratios when predicting the number and duration of direct care activities: only the number of developmental care activities are statistically significant after accounting for modeling standard error (i.e., robustness ratio: 1.97).

In addition, the positive association between IPC and direct care for children holds when including an indicator for the 2016 election season and beyond (0: 2010-2015; 1: 2016-2020). When introducing an interaction between the post-2015 era and IPC, however, the relationship between state context and direct care for children is not distinguishable from zero. Therefore, it is unclear whether results systematically differ with the onset of the 2016 election season.

The above results focus on respondents with children under age 13. Among parents in Hispanic noncitizen households, results are retained for respondents with children under age 16, 15, 14, 13, 12, 11, 10, 9, or 8 ($p < 0.05$) and positive but not significant when analyzing parents with children under 18 or 17. Estimates for respondents with children under age 7 are positive but indistinguishable from zero ($p > 0.05$).

**Discussion and Conclusion**

Is direct care for children more common in state contexts with more inclusive than exclusionary policies toward immigrants? Yes, a state's policies toward immigrants predict parental time devoted to direct care for children. Specifically, we find parents in Hispanic noncitizen households are more likely to report engaging in direct care for children if they live in states with more inclusive than exclusionary policies, as measured by the IPC. The pattern holds for the number of direct care activities, including developmental care time, but these results do not always extend to the duration of these activities. By participating in children's direct care activities (e.g., playtime, sports, reading, etc.) in states with a higher IPC score (i.e., where exclusionary policies are outnumbered by inclusive ones), Hispanic noncitizen parents and parents in Hispanic noncitizen households invest in their children. Based on these results, it

seems immigrant integration efforts could effectively support parents in Hispanic noncitizen households – and, by extension, their children.

No comparable pattern between direct care for children and parents' state of residence was evident among other parents. Presumably, these parents are no more or less responsive to their state's immigration policies because – unlike parents in Hispanic noncitizen households – they are not the most common targets of exclusionary policies. If living in a state with fewer exclusionary than inclusionary policies helps parents in Hispanic noncitizen households lower or mitigate the risk of exposure to exclusion, including the risk of deportation, such protections do not translate into a higher likelihood of direct care for children among the other parents in the rest of the sample.

After answering our main questions, our results speak to a dividing line between Hispanic parents in Hispanic noncitizen households and everyone else. Sociologists have called attention to noncitizens' potentially transformative interactions across state policy contexts (Menjívar & Lakhani, 2016). State policies may have functioned as a transformative signal to households with Hispanic noncitizens with limited (or no) access to adjusting their citizenship status. By opting into direct care for children, parents in Hispanic noncitizen households made intentional decisions and broke from past trends if their state had more inclusive than exclusionary policies. These results extend what we know about how a balance of policies that provide tangible protections from deportation can foster protective outcomes in noncitizen households (Giuntella et al., 2021; Hainmueller et al., 2017; Patler & Laster Pirtle, 2018). To be clear, providing noncitizen households access to tangible resources could eventually benefit everyone – U.S. citizens and noncitizens alike. When parents and their children enjoy the requisite support and

peace of mind to spend time together in a supportive context, the long-term benefits can accrue beyond individual household units.

Our results rule out two competing scenarios. First, living in a state with a higher IPC score supports immigrant parents in ways that do not limit direct care for children. Consider access to driver's licenses for undocumented immigrants – a central policy included in the IPC index that can promote immigrant integration (Enriquez et al., 2019; Lueders et al., 2017). Past work has shown that expanding licenses can expand immigrants' labor prospects (Amuedo-Dorantes et al., 2020) and prompts the need to examine whether such employment opportunities potentially limit the time parents spend with their children. We find that parents in states where exclusionary policies are outnumbered by inclusionary policies, including access to licenses, report more direct care for children.

Absent direct evidence of a link between state policies and direct care for children, we consider a number of possible explanations for these findings. Hispanic parents in noncitizen households may have benefitted from living in states with few exclusionary policies when compared to access to driver's licenses and better jobs (even with longer commutes) in ways that lifted constraints on their child care decisions. Other inclusive policies in the IPC (e.g., access to education, employment, and safety net resources) may have provided similar support in the absence of a large number of exclusionary policies. Parents in Hispanic noncitizen households could have enrolled in classes, received work credentials, and qualified for health or nutritional programs. Such support could mean that Hispanic parents might have benefitted from relatively stable jobs – at least compared to exclusionary contexts with few supportive initiatives. The added flexibility could have helped parents in noncitizen households balance their work and

child care responsibilities (Chaudry et al., 2011; Yoshikawa, 2011), including the option of spending more time providing direct care for their children.

Second, we can also rule out the possibility that inclusive policies were offset by exclusionary policies. Our results complement what we have learned from research on immigrants' time use during a time of rising exclusionary immigration policies. Exclusionary policies saddled immigrants at risk of deportation with economic uncertainty (Amuedo-Dorantes et al., 2018; East & Velásquez, 2022; Pedroza, 2022a). As deportations and related policies became more common, immigrants avoided contact with mainstream organizations (Asad, 2023) and expressed diminished trust in these institutions (Cruz Nichols et al., 2018). Immigrant parents also opted not to enroll children in school, interacted with others less often, and stayed home more often (Arenas-Arroyo & Schmidpeter, 2022; Dee & Murphy, 2019). Crucially, our results show that states with more inclusive than exclusionary policies can support parents in Hispanic noncitizen households. They are more likely to spend time with their young children, including some evidence of added developmental care and direct care for children taking place outside the home. In sum, if exclusionary policies push immigrant parents out of the workforce (East et al., 2018) or into lower-paying jobs (Bansak et al., 2024) and compel them to avoid mainstream institutions, then a large volume of inclusive policies can shift the balance of direct care for children in favor of children's long-term outcomes.

Our results are especially encouraging given the well-documented obstacles to promoting immigrant integration. Recent evidence suggests a muted relationship between civic engagement and inclusive policies in locations with a parallel history of exclusionary policies (Vo, 2024). Given past work on how immigrants are less likely to engage in integrative activities (Hamermesh & Trejo, 2013), we would not have been surprised to find no reliable relationship

between the IPC and direct care for children. The fact that parents in Hispanic noncitizen households are more likely to report providing direct care for children in states with a higher IPC score points to the value of paying close attention to everyday decisions in immigrant households.

We acknowledge key limitations. First, time diaries cover a short period (24 hours) and miss decisions made beyond that time window. Second, although sub-state policy contexts can also matter, the small number of respondents at lower levels of geography recommends examining variation across state contexts. Third, although we find that living with a likely unauthorized immigrant partially accounts for the main results, our sample size limits what we can say beyond the case of Mexico-born parents in Hispanic noncitizen households. Although we are unable to determine whether the results also apply to refugees, green card holders, or other noncitizen household members, we believe the diversity of noncitizen groups warrants future study. Despite these limitations, time diaries offer valuable insights from CPS respondents who are sampled into the ATUS each year. Their responses reflect parental time use and capture variation in direct care activities across state contexts.

Future work should devote attention to identifying which initiatives can similarly support noncitizen households. For instance, access to community health centers (Parker, 2021; Parker et al., 2024), expanded access to work permits and relief from deportation (Hamilton et al., 2021), and meaningful 'sanctuary' protections for noncitizens suspected of criminal offenses (Ortiz et al., 2021) might support these households' short- and long-term integration prospects. Our results highlight the value of measuring everyday decisions. Immigrant integration outcomes of all kinds require investments to help immigrants adjust to host societies (Bloemraad, 2006; Jiménez et al., 2021). Supporting Hispanic immigrant parents who wish to spend more

developmental care time with their children may, in turn, lead to well-known benefits for child development and well-being.

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**Replication materials**: Files to replicate results presented in this paper are available online: https://doi.org/10.7910/DVN/PUWBIH. ATUS data are available from IPUMS (Flood et al., 2022) at www.atusdata.org. All variables we used in our analyses are noted in replication materials. IPC data can be requested online: https://www.goleensamari.com/data. We also include a data file with each variable used to measure state-level contexts. All analyses were conducted using Stata version 18.

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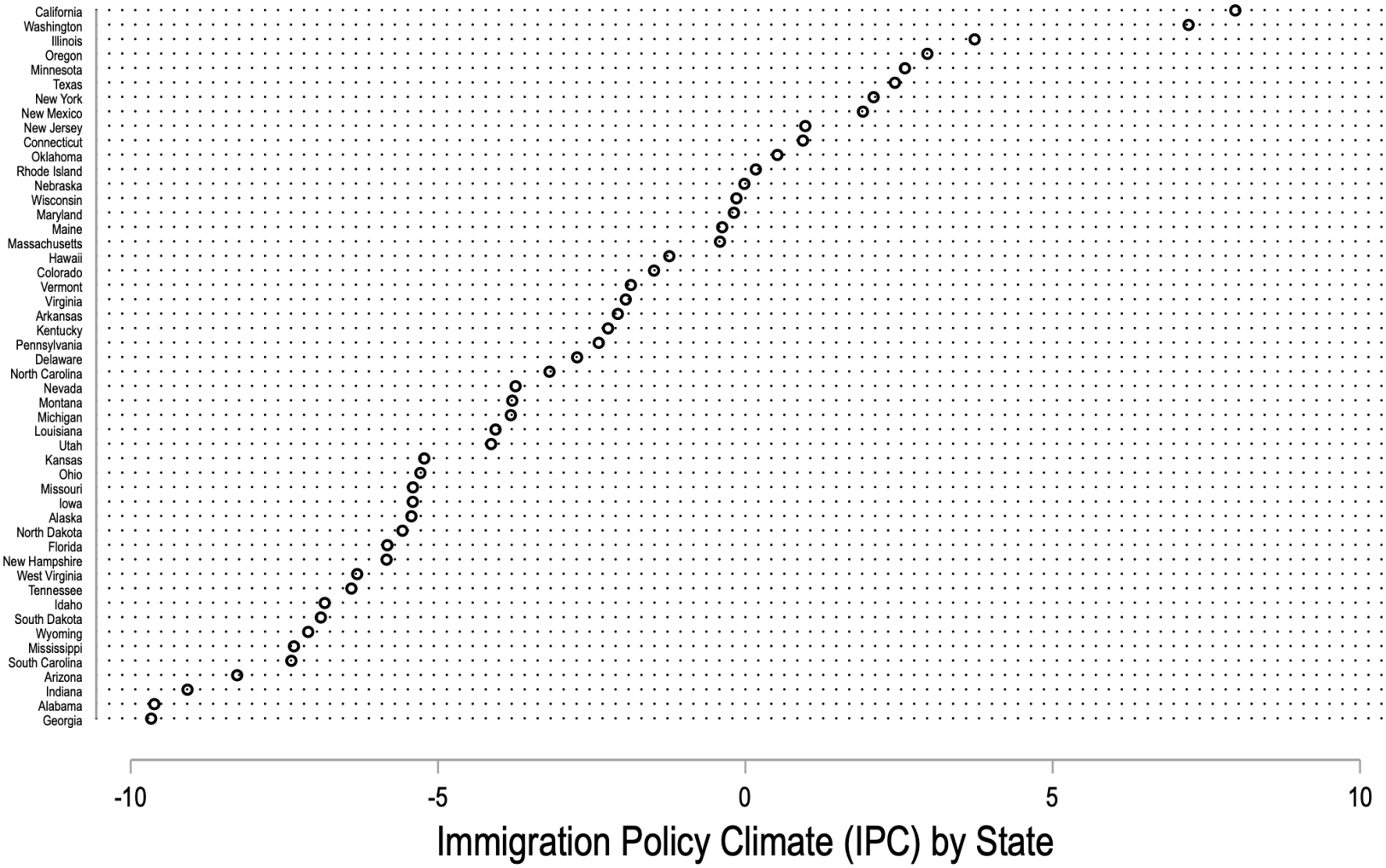
**Figure 1: Immigration Policy Climate (IPC) by State**




Note: The figure above captures each state's mean IPC score across 10 repeated cross-sections (2010 through 2019). The IPC ranges from -11 to 11.

**Table 1: ATUS Sample Characteristics and Correlation Matrix (ATUS 2010-2019; N=29,894)**

| | Variable | Mean | St. Dev. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Any direct care for children | 0.76 | 0.43 | . | | | | | | | | | |
| 2 | Number of children under age 5 | 0.66 | 0.75 | 0.19 | . | | | | | | | | |
| 3 | Age | 36.75 | 8.13 | -0.14 | -0.44 | . | | | | | | | |
| 4 | Female | 0.55 | 0.50 | 0.24 | 0.00 | -0.20 | . | | | | | | |
| 5 | Single-headed household | 0.14 | 0.35 | 0.02 | 0.07 | -0.33 | 0.15 | . | | | | | |
| 6 | Family income, categorical | 11.56 | 3.90 | 0.05 | -0.08 | 0.26 | -0.11 | -0.32 | . | | | | |
| 7 | Bachelor's degree or higher | 0.38 | 0.48 | 0.12 | 0.01 | 0.21 | 0.00 | -0.23 | 0.46 | . | | | |
| 8 | Employed | 0.77 | 0.42 | -0.12 | -0.09 | 0.12 | -0.29 | -0.08 | 0.27 | 0.16 | . | | |
| 19 | Working 40+ hours in a week | 0.57 | 0.50 | -0.13 | -0.07 | 0.13 | -0.39 | -0.12 | 0.29 | 0.16 | 0.54 | . | |
| 10 | Grandparent(s) in household | 0.06 | 0.24 | 0.01 | 0.02 | -0.17 | 0.10 | 0.23 | -0.04 | -0.11 | -0.06 | -0.09 | . |
| 11 | Other non-parenting adults in household | 0.10 | 0.31 | -0.01 | 0.02 | -0.15 | 0.03 | 0.24 | -0.09 | -0.15 | -0.05 | -0.07 | 0.27 |

Note: Percent and mean figures are weighted (using person weights variable, wt06) and sample is limited to ATUS respondents (age 15 and older) between 2010 and 2019 in households (a) living with any children under age 13 and (b) without missing data on individual, household-level, or state-level correlates of time use. Only individuals in our analysis sample (i.e., persons in one of the five groups by race/ethnicity and citizenship status in Tables 2-5) are included in the total.

**Table 2: Gaps in Parent's Direct Care for Children by Race/Ethnicity and Household Members' Citizenship Status (ATUS respondents, 2010-2019)**

| | Any direct care for children (percent) | Number of direct care activities, overall (mean) | Number of direct care activities, developmental care (mean) | Number of direct care activities, outside the home (mean) | Observations (unweighted) |
|---|---|---|---|---|---|
| A: White parent (non-Hispanic) • | 0.78 | 3.51 | 0.98 | 0.79 | 20,233 |
| B: Black parent (non-Hispanic) • | 0.72 | 2.81 | 0.63 | 0.75 | 2,762 |
| C: Asian parent (non-Hispanic) • | 0.79 | 3.27 | 1.03 | 0.73 | 1,819 |
| D: Hispanic parent • | 0.74 | 3.23 | 0.79 | 0.83 | 2,402 |
| E: Hispanic parent in Hispanic noncitizen household | 0.67 | 2.38 | 0.58 | 0.70 | 2,678 |
| Group A mean vs. Group E mean | *** | *** | *** | *** | |
| Group B mean vs. Group E mean | * | *** | not significant | * | |
| Group C mean vs. Group E mean | *** | *** | *** | *** | |
| Group D mean vs. Group E mean | *** | *** | *** | *** | |
| **Total** | 0.76 | 3.25 | 0.88 | 0.77 | 29,894 |

Note: Percent and mean figures are weighted (using person weights variable, wt06) and sample is limited to ATUS respondents (age 15 and older) between 2010 and 2019 in households with (a) any children under age 13 and (b) no missing data on individual, household-level, or state-level correlates of time use. Only individuals in our analysis sample (i.e., persons in one of the five groups displayed above) are included in the total.

• Parent lives in a household where no one is a Hispanic noncitizen.

*** p<0.001, ** p<0.01, * p<0.05

**Table 3: Engaging in Direct Care for Children by Race/Ethnicity and Household Members' Citizenship Status (N=29,894)**

| Variables | (1) White (non-Hispanic) parent • | (2) Black (non-Hispanic) parent • | (3) Asian (non-Hispanic) parent • | (4) Hispanic parent • | (5) Hispanic parent in Hispanic noncitizen household |
|---|---|---|---|---|---|
| IPC | -0.001 | -0.002 | -0.005 | -0.001 | 0.007* |
| | (0.001) | (0.003) | (0.004) | (0.003) | (0.003) |
| Observations | 20,233 | 2,762 | 1,819 | 2,402 | 2,678 |
| R-squared | 0.126 | 0.124 | 0.131 | 0.164 | 0.192 |

Note: All models account for correlates of time use: year; citizenship status; children under age 5 in home; age; gender; education; single-headed household; family income; employment status; whether respondent usually worked 40+ hours per week; presence of grandparent(s); presence of other non-parenting adult(s); metro area status and Census region; and day and month of interview. Results also account for the following contextual measures (merged with ATUS data): the Immigrant Welfare Scale; demographic and economic state context; percent of votes for Republican presidential candidate; proportion of counties with an active Secure Communities program. Models use replicate weights (rwt06_1-rwt06_160) for individuals age 15 and over who responded to the ATUS between 2010 and 2019. Only respondents living with children under age 13 present are included in analyses.

• Parent lives in a household where no one is a Hispanic noncitizen.

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

**Table 4: Alternate Measures of Direct Care for Children among Parents in Hispanic Noncitizen Households (N=2,678)**

**Panel A: Linear Models (OLS Regressions)**

| Variables | (1) Number direct care activities, overall | (2) Minutes of direct care, overall | (3) Number direct care activities, developmental care | (4) Minutes of direct care, developmental care | (5) Number direct care activities, outside home | (6) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | 0.034* | 0.746 | 0.015** | 0.748 | 0.011 | 0.366 |
| | (0.017) | (0.604) | (0.005) | (0.465) | (0.008) | (0.282) |
| Observations | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |
| R-squared | 0.279 | 0.208 | 0.096 | 0.073 | 0.120 | 0.052 |

**Panel B: Count Models (Negative Binomial Regressions)**

| Variables | (7) Number direct care activities, overall | (8) Minutes of direct care, overall | (9) Number direct care activities, developmental care | (10) Minutes of direct care, developmental care | (11) Number direct care activities, outside home | (12) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | 0.016* | 0.024** | 0.026** | 0.037* | 0.018 | 0.047* |
| | (0.007) | (0.009) | (0.010) | (0.015) | (0.012) | (0.018) |
| Observations | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 | 2,678 |

Note: All models account for correlates of time use and contextual measures noted in Table 3. Models use replicate weights (rwt06_1-rwt06_160) for individuals age 15 and over who responded to the ATUS between 2010 and 2019. Only respondents living with children under age 13 present are included in analyses.

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

**Appendix 1. ATUS Activity Codes**

***Parent-child activities:*** 21 ATUS activity codes displayed below are included in our analyses.

***Location of activities:*** Parents report whether they engaged in any of the activities below. ATUS time diaries also note the location of each activity (variable: *where*) and how long it lasted (in minutes). Analyses of activities 'outside the home' include any parent-child activities except those located in the respondent's home or yard (category: 101).

***Developmental care time:*** We code an activity as 'developmental care time' if a parent reported one or more of the following twelve activity codes (see table below for description): 30102, 30103, 30104, 30105, 30106, 30108, 30110, 30199, 30201, 30202, 30299, and 30301. Activity codes with an asterisk below are the 12 codes that are included as developmental care time; ancillary, optional, and potentially important for a child's well-being and development.

| ATUS Group | ATUS Activity | ATUS Code |
|---|---|---|
| Caring for and Helping Household Children | Physical care for household children | 30101 |
| | Reading to/with household children* | 30102 |
| | Playing with household children, not sports* | 30103 |
| | Arts and crafts with household children* | 30104 |
| | Playing sports with household children* | 30105 |
| | Talking with/listening to household children* | 30106 |
| | Organization and planning for household children* | 30108 |
| | Looking after household children (as a primary activity) | 30109 |
| | Attending household children's events* | 30110 |
| | Waiting for/with household children | 30111 |
| | Picking up/dropping off household children | 30112 |
| | Caring for and helping household children* | 30199 |
| Activities Related to Household Children's Education | Homework (with household children) * | 30201 |
| | Meetings and school conferences (for household children) * | 30202 |
| | Home schooling of household children | 30203 |
| | Waiting associated with household children's education | 30204 |
| | Activities related to household child's education* | 30299 |
| Activities Related to Household Children's Health | Providing medical care to household children* | 30301 |
| | Obtaining medical care for household children | 30302 |
| | Waiting associated with household children's health | 30303 |
| | Activities related to household child's health | 30399 |

**Table 4A: Alternate Measures of Direct Care for Children among White (non-Hispanic) Parents with no Hispanic noncitizen household members (N=20,233)**

**Panel A: Linear Models (OLS Regressions)**

| Variables | (1) Number direct care activities, overall | (2) Minutes of direct care, overall | (3) Number direct care activities, developmental care | (4) Minutes of direct care, developmental care | (5) Number direct care activities, outside home | (6) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.008 | -0.208 | -0.001 | -0.068 | -0.000 | 0.006 |
| | (0.010) | (0.312) | (0.003) | (0.232) | (0.004) | (0.141) |
| Observations | 20,233 | 20,233 | 20,233 | 20,233 | 20,233 | 20,233 |
| R-squared | 0.254 | 0.217 | 0.122 | 0.085 | 0.073 | 0.031 |

**Panel B: Count Models (Negative Binomial Regressions)**

| Variables | (7) Number direct care activities, overall | (8) Minutes of direct care, overall | (9) Number direct care activities, developmental care | (10) Minutes of direct care, developmental care | (11) Number direct care activities, outside home | (12) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.004 | -0.004 | -0.003 | -0.002 | -0.002 | -0.004 |
| | (0.003) | (0.003) | (0.004) | (0.005) | (0.005) | (0.008) |
| Observations | 20,233 | 20,233 | 20,233 | 20,233 | 20,233 | 20,233 |

Note: All models account for correlates of time use and contextual measures noted in Table 3. Models use replicate weights (rwt06_1-rwt06_160) for individuals age 15 and over who responded to the ATUS between 2010 and 2019. Only respondents living with children under age 13 present are included in analyses.

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

**Table 4B: Alternate Measures of Direct Care for Children among Black (non-Hispanic) Parents with no Hispanic noncitizen household members (N=2,762)**

**Panel A: Linear Models (OLS Regressions)**

| Variables | (1) Number direct care activities, overall | (2) Minutes of direct care, overall | (3) Number direct care activities, developmental care | (4) Minutes of direct care, developmental care | (5) Number direct care activities, outside home | (6) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.002 | -0.038 | 0.005 | -0.100 | -0.005 | -0.253 |
| | (0.020) | (0.685) | (0.007) | (0.442) | (0.010) | (0.351) |
| Observations | 2,762 | 2,762 | 2,762 | 2,762 | 2,762 | 2,762 |
| R-squared | 0.207 | 0.185 | 0.101 | 0.070 | 0.071 | 0.038 |

**Panel B: Count Models (Negative Binomial Regressions)**

| Variables | (7) Number direct care activities, overall | (8) Minutes of direct care, overall | (9) Number direct care activities, developmental care | (10) Minutes of direct care, developmental care | (11) Number direct care activities, outside home | (12) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.007 | -0.012 | 0.004 | -0.016 | -0.012 | -0.032 |
| | (0.007) | (0.010) | (0.012) | (0.016) | (0.012) | (0.019) |
| Observations | 2,762 | 2,762 | 2,762 | 2,762 | 2,762 | 2,762 |

Note: All models account for correlates of time use and contextual measures noted in Table 3. Models use replicate weights (rwt06_1-rwt06_160) for individuals age 15 and over who responded to the ATUS between 2010 and 2019. Only respondents living with children under age 13 present are included in analyses.

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

**Table 4C: Alternate Measures of Direct Care for Children among Asian (non-Hispanic) Parents with no Hispanic noncitizen household members (N=1,819)**

**Panel A: Linear Models (OLS Regressions)**

| Variables | (1) Number direct care activities, overall | (2) Minutes of direct care, overall | (3) Number direct care activities, developmental care | (4) Minutes of direct care, developmental care | (5) Number direct care activities, outside home | (6) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.019 | 0.271 | -0.009 | 0.158 | -0.002 | -0.008 |
| | (0.033) | (1.088) | (0.011) | (0.651) | (0.012) | (0.358) |
| Observations | 1,819 | 1,819 | 1,819 | 1,819 | 1,819 | 1,819 |
| R-squared | 0.247 | 0.267 | 0.138 | 0.125 | 0.082 | 0.061 |

**Panel B: Count Models (Negative Binomial Regressions)**

| Variables | (7) Number direct care activities, overall | (8) Minutes of direct care, overall | (9) Number direct care activities, developmental care | (10) Minutes of direct care, developmental care | (11) Number direct care activities, outside home | (12) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.006 | 0.001 | -0.008 | 0.005 | -0.005 | -0.017 |
| | (0.010) | (0.011) | (0.011) | (0.015) | (0.018) | (0.025) |
| Observations | 1,819 | 1,819 | 1,819 | 1,819 | 1,819 | 1,819 |

Note: All models account for correlates of time use and contextual measures noted in Table 3. Models use replicate weights (rwt06_1-rwt06_160) for individuals age 15 and over who responded to the ATUS between 2010 and 2019. Only respondents living with children under age 13 present are included in analyses.

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

**Table 4D: Alternate Measures of Direct Care for Children among Hispanic Parents with no Hispanic noncitizen household members (N=2,402)**

**Panel A: Linear Models (OLS Regressions)**

| Variables | (1) Number direct care activities, overall | (2) Minutes of direct care, overall | (3) Number direct care activities, developmental care | (4) Minutes of direct care, developmental care | (5) Number direct care activities, outside home | (6) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | -0.003 | -1.283 | -0.004 | -0.918 | 0.005 | -0.311 |
| | (0.027) | (0.829) | (0.009) | (0.516) | (0.010) | (0.333) |
| Observations | 2,402 | 2,402 | 2,402 | 2,402 | 2,402 | 2,402 |
| R-squared | 0.269 | 0.220 | 0.105 | 0.067 | 0.087 | 0.038 |

**Panel B: Count Models (Negative Binomial Regressions)**

| Variables | (7) Number direct care activities, overall | (8) Minutes of direct care, overall | (9) Number direct care activities, developmental care | (10) Minutes of direct care, developmental care | (11) Number direct care activities, outside home | (12) Minutes of direct care, outside home |
|---|---|---|---|---|---|---|
| IPC | 0.002 | -0.007 | -0.002 | -0.014 | 0.005 | -0.010 |
| | (0.008) | (0.010) | (0.011) | (0.014) | (0.012) | (0.017) |
| Observations | 2,402 | 2,402 | 2,402 | 2,402 | 2,402 | 2,402 |

Note: All models account for correlates of time use and contextual measures noted in Table 3. Models use replicate weights (rwt06_1-rwt06_160) for individuals age 15 and over who responded to the ATUS between 2010 and 2019. Only respondents living with children under age 13 present are included in analyses.

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05