Title: Examining the Rise in Childhood Disability: Does an Immigrant Advantage Exist?

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Abstract: Rates of childhood disability have been rising in the United States, particularly rates of neurodevelopmental disabilities. At the same time, the U.S. has become increasingly diverse: the proportion of residents who are first- or second-generation immigrants has expanded significantly in the last few decades, affecting the demographic composition of the country. While research indicates that immigrant children have health advantages over non-immigrants, including better birth outcomes, lower rates of obesity and asthma, and lower mortality, it is not known whether immigrant children are at lower risk of childhood disability, particularly in the context of rising rates. The current study draws on nationally representative data from the 2008-2019 American Community Survey to investigate whether an immigrant health advantage is observed in childhood disability, and whether this advantage varies by race/ethnicity. Results indicate that disability prevalence increased between 2008-2019 for both immigrant and non-immigrant groups, but that disability rates are significantly lower among immigrant children, relative to non-immigrant children. While this apparent "immigrant advantage" is observed across all racial and/or ethnic groups, it appears strongest for Hispanic children and children in the "other race" group. Notably, the difference between immigrant and non-immigrant children in the odds of having a disability is significantly larger for cognitive disabilities, compared to sensory/ambulatory disabilities. Given the challenges in diagnosing cognitive disabilities and culture-specific stigma toward this disability type, this last finding points to the possibility that the observed "immigrant advantage" in child disability may partially belie disparities in access to diagnosis and treatment of disability.

Introduction

A sizeable body of research has established that immigrant children, including foreign-born children and native-born children with at least one foreign-born parent, have certain health advantages over children with only native-born parents, most notably in birth outcomes (Markides and Coreil 1986) and mortality (Perreira and Ornelas 2011). The current study asks whether this immigrant health advantage extends to childhood disability in the United States. While some studies suggest that the prevalence of disability at older ages has stabilized in the U.S. in recent years (Freedman, Martin, and Schoeni 2002; Hung et al. 2011), childhood disability rates have been rising (Young 2021), particularly rates of neurodevelopmental disabilities (Kaye 1996; Houtrow et al. 2014). Disability in childhood can have implications for later outcomes, including educational attainment and employment opportunities (Baldwin and

[1] This paper is released to inform interested parties of ongoing research and to encourage discussion. Any views expressed on statistical, methodological, technical, or operational issues are those of the authors and not necessarily those of the U.S. Census Bureau. The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY24- POP001-0020.

Johnson 2000; Loe and Feldman 2007; Kaye, Jans, and Jones 2011). Understanding whether certain groups are at lower or higher risk of disability in childhood can help tease out the implications of rising childhood disability rates for social inequality in the U.S.

The current study draws on large-scale, nationally representative data from the 2008-2019 American Community Survey to investigate whether an immigrant health advantage extends to childhood disability. Notably, while some studies of health outcomes and immigrant status fail to disentangle race/ethnicity from immigrant status, the current paper considers how race/ethnicity and immigrant status may interact in shaping childhood disability. Findings reveal that disability prevalence increased for both non-immigrant and immigrant children between 2008-2019, but that disability rates were significantly lower among immigrant children during this time period. Based on analysis of pooled 2017-2019 ACS data, this apparent "immigrant advantage" is strongest among children of Hispanic origin and children in the "other race" category. In the last section of the paper, different explanations for the observed difference in childhood disability prevalence by immigrant status are considered. Ultimately, there is some preliminary evidence that lower rates of disability among immigrant children may be due, in part, to cultural attitudes and differential access to diagnosis, as opposed to differences in the risk of disability.

Immigrant Health Paradox

Immigrant children, including foreign-born children and native-born children with at least one foreign-born parent, appear to fare better on certain health outcomes than other children, an observation that has been linked to a larger "immigrant health paradox" first observed among foreign-born adults (Stephen et al. 1994; Antecol and Bedard 2006). Studies have found, for example, that immigrant children[2] have better birth outcomes (Padilla et al. 2002), lower rates of obesity (Harris, Perreira, and Lee 2009), lower prevalence of asthma (Subramanian et al. 2009; Balcazar, Grineski, and Collins 2015), and lower mortality rates (Perreira and Ornelas 2011) than children with only native-born parents. Immigrant children are more likely to display protective health behaviors, including lower rates of smoking and substance use and healthier diets, which may help explain some of these health advantages (Cobas et al. 1996; Blake et al. 2001; M.D. Guendelman, Cheryan, and Monin 2011). Other cultural factors, such as a strong family support system, are also thought to boost the health of immigrants (Balcazar, Grineski, and Collins 2015). Selection into immigration may also explain better health outcomes among immigrant children, as families that include one or more individuals in poor health, including children, may be less likely to emigrate. Given the link between maternal health and child health, this form of health selection may also matter for the second generation – that is, children born in the immigrant-receiving country.

This immigrant advantage, however, may not extend to all measures of health. Immigrants and their children often live in households and communities with limited socioeconomic resources and may face greater risk of exposure to environmental stressors, such as family separation, discrimination, and community violence (Perreira and Ornelas 2011). Together, these features of the home and community environment may put immigrant children at greater risk of developing certain health conditions, relative to their peers with only native-born parents. Relevant to the current study, some studies suggest that immigrant children are at greater risk for

[2] In this paper, I use the term "immigrant children" to refer to both children born abroad to non-U.S. citizens (i.e., first-generation immigrant children) and U.S.-born children with at least one foreign-born parent (i.e., second-generation immigrant children).

certain developmental problems (Padilla 2002) and neurodevelopmental disorders (Abdullahi et al. 2018), which may translate into higher rates of childhood disability. Notably, however, most of these studies have relied on small sample sizes or restricted analysis to a particular region of the U.S. or another country and other studies of similar design have produced conflicting findings (Croen, Grether, and Selvin 2002). As such, it is not clear whether immigrant children are differentially impacted by rising rates of childhood disability in the U.S. The current study seeks to address this gap in the literature by drawing on large-scale, nationally representative data from the American Community Survey (ACS) to investigate differences in childhood disability prevalence by immigrant status in the U.S. An additional advantage of the ACS is that disability data have been collected over multiple years. This aspect of the data permits the investigation of how childhood disability rates have changed over time, and whether this trend varies by immigrant status. As such, the current study will also examine whether disability rates have increased in recent years for both immigrant and non-immigrant children.

Immigrant Health by Race/Ethnicity

While studies of immigrant health include controls for race/ethnicity, the complex relationship between immigrant status and race/ethnicity often goes unexplored (Moore et al. 2020). Even studies that sort individuals into categories defined by both immigrant status and race/ethnicity generally designate U.S.-born non-Hispanic White individuals as the reference group, thereby limiting the scope of analysis (Becerra et al. 2014). Yet, the relationship between immigrant status and race/ethnicity may add nuance to our understanding of immigrant health advantages, including any advantage that may be observed in childhood disability rates. Some studies of nativity and adult disability, for example, have found an immigrant health advantage for certain racial or ethnic groups but not for others, as well as differences across racial/ethnic groups in how the association between foreign-born status and adult disability changes with age (Moore et al. 2020).

Segmented assimilation theory also points to a potential mechanism for diverging health outcomes among immigrant subgroups. Portes and Zhou (1993) have argued that how immigrants fare in their new country depends not only upon their existing levels of cultural and economic capital, but also on the context of reception. While certain immigrant groups may follow the traditional assimilation pathway into the mainstream middle class, immigrants who are racial minorities may instead be pushed into a downward assimilation pathway or, if their co-ethnic community has sufficient resources, they may pursue a strategy of selective assimilation. Prior research has considered the implications of segmented assimilation for outcomes such as educational attainment and income (Portes, Fernandez-Kelly, and Haller 2005), but health outcomes such as disability have been largely overlooked and are worth investigating (Abraído-Lanza, Echeverría, and Flórez 2016). Differences between immigrant subgroups in childhood disability not only have implications for theory, but also for programs and policies that serve or are targeted at immigrants. By drawing on a dataset with a large enough sample to examine immigrant subpopulations, the current study is well-suited to teasing out these types of distinctions among immigrant children.

Interpreting Differences in Disability Rates

Disability is a challenging concept to measure. According to the social model of disability, disability arises when an individual's health condition or impairment interacts with the local environment to produce barriers to daily activities that may limit full or equal participation in society (Davis 2006; Altman 2016). As such, simply asking about health conditions will not necessarily shed light on whether an individual experiences disability. Given the stigma that can be associated with disability and variation in disability stigma across groups (Saetermoe, Scattone, and Kim 2001; Scior et al. 2015; Someki et al. 2018; Yu, Stronach, and Harrison 2020), asking individuals to directly report disability status is unlikely to result in accurate data (Altman 2016). In recent decades, there has been a shift toward measures of disability that are based on functional limitations or difficulty with daily tasks or activities rather than questions about disability status (Lynch, Brown, and Taylor 2009; Altman 2016). While asking about an array of functional and activity limitations may best capture the full population with disabilities, due to survey space restrictions it is often only feasible to include a short set of functional disability questions (Mont 2007; Madans and Loeb 2013). Since 2008, most national surveys administered by federal agencies, including the ACS, use a short question set that asks about six functional and activity limitations to measure disability.

Although functional measures of disability, such as the ACS measure, are less susceptible to social desirability bias than direct reports of disability status (Mont 2007; Altman 2016), attitudes toward disability may still shape a family member's responses to the 6-item question set for children in the household. As such, if immigrant children have lower rates of disability than non-immigrant children, this may indicate a lower risk of disability among immigrant children, or it may point to differences between immigrant and non-immigrant families in their attitudes toward and perceptions of disability, or in the odds of their children being diagnosed with a disability. This is likely a pervasive issue in the disability literature, given that recent research often relies on self-(or proxy-) reports of functional limitations to measure overall disability. The final section of this paper attempts to shed important light on the role of cultural attitudes and disparities in diagnosis in shaping differential disability rates by taking a closer look at cognitive disabilities. Research suggests that cognitive disabilities are heavily stigmatized in some of the top immigrant-sending regions of the world, such as Latin America (Paula et al. 2020; Montenegro et al. 2022), Asia (Minhas et al. 2015; Someki et al. 2018; Yu, Stronach, and Harrison 2020), and Africa (Tekola et al. 2020; Scior et al. 2015), and less stigmatized in other groups, such as among affluent White, native-born families in the U.S. (Angell and Solomon 2017; Lopez et al. 2018; Zuckerman et al. 2018). Previous studies have also revealed socioeconomic disparities in access to diagnosis for neurodevelopmental disabilities (Fountain, King, and Bearman 2011). There may also be racial and cultural biases at play in the diagnosis of certain cognitive disabilities, such as autism and ADHD (Mandell et al. 2007; Mandell et al. 2009; Durkin et al. 2017). Morgan et al. (2014), for example, found that relative to White children, Black children, Hispanic children, and children of another race who exhibited symptoms of autism were significantly less likely to have been diagnosed with autism previously. If cultural attitudes toward disabilities and disparities in access to diagnosis shape how family members respond to functional difficulty questions, it seems likely that questions

about cognitive difficulty would be especially vulnerable, particularly relative to questions about comparatively visible disabilities, such as sensory and ambulatory difficulty. Consequently, in the last section of the paper, I test whether the difference in the disability rate between immigrant and non-immigrant children is larger for cognitive disabilities, relative to sensory and ambulatory disabilities. If a significantly larger gap between immigrant and non-immigrant children is observed for cognitive disabilities, this could provide some preliminary support to the idea that cultural attitudes and unequal diagnosis contribute to differences in disability rates by immigrant status. This finding could have implications for the broader literature on between-group differences in disability, as well.

Data & Methods

1. Data

The current study draws on American Community Survey (ACS) data to investigate whether an immigrant advantage exists for childhood disability. The ACS is a survey of U.S. households and group housing facilities[3] administered by the U.S. Census Bureau. Due to the large sample size – around 3.5 million households are sampled each year – the ACS is well-suited for examining small populations, such as immigrant subpopulations and the population of children with disabilities. In addition, while previous studies of disability-related health outcomes among immigrant children often rely on data from just one region, state, or county, thereby limiting generalizability, the ACS is nationally representative.

In the first part of this study, 1-year ACS data files from 2017-2019 are pooled to examine differences in childhood disability rates by immigrant status and race/ethnicity in the U.S.[4] Three years of ACS data are employed rather than data from a single survey year to increase estimate precision and allow for sufficient power to investigate differences in childhood disability across relatively small subpopulations of children broken down by both immigrant status and race/ethnicity. In the second part of the study, 1-year ACS data files spanning the eleven years since the introduction of the standardized disability question set in 2008 are pooled to examine trends in disability rates over time for immigrant and non-immigrant children. Finally, the 2017-2019 pooled ACS data are employed again to examine differences between immigrant and non-immigrant children in the odds of having cognitive disabilities versus sensory/ambulatory disabilities.[5]

[3] Group housing facilities include university dormitories, nursing homes, and prisons, among others.
[4] Observations from Puerto Rico were excluded from analysis.
[5] Cross-sectional survey weights are available for each 1-year data file. When pooling data, an assumption was made that each year of data in the multi-year, pooled data file(s) should be weighted equally. With this approach, weights can be interpreted as the number of individuals each person represents in the total population, where the total population is the U.S. population times the number of years of data that were pooled. Alternatively, one could divide all survey weights by the number of years of pooled data, so that the final person weight represents the number of people the individual represents in the U.S. population. Since this adjustment would only affect count estimates and not proportion estimates or regression coefficients, this adjustment was not necessary. As an additional check, all analyses were re-run with the weighting adjustment, which confirmed results were identical.

2. Measures

A. Overall Disability

To measure disability in the ACS, respondents are asked a series of six questions about functional limitations and difficulty with daily tasks. The questions are generally answered by the head of the household and ask whether each person in the household has difficulty seeing (asked of all ages), hearing (all ages), concentrating, remembering, or making decisions (ages 5 and up), walking or climbing stairs (ages 5 and up), dressing or bathing (ages 5 and up), and doing errands alone (ages 15 and up). Individuals who have difficulty with at least one of the six tasks in the question set are considered to have a disability.

B. Disability Type

The current paper also tests whether differences between immigrant and non-immigrant children are larger for cognitive disabilities, relative to more visible sensory/ambulatory disabilities. The measure of disability type employed in analysis is based on the same 6-item question set used to construct the measure of overall disability. Since data on cognitive difficulty are not collected for individuals under age 5, analysis is restricted to children ages 5 and over for this part of the paper.

As shown in Table 1, children ages 5 years or older without any activity difficulty are assigned a value of "0" on the measure of disability type, children ages 5 and up who have cognitive difficulty (i.e., difficulty concentrating, remembering, or making decisions) are assigned a value of "1," children ages 5 and up who have sensory difficulty (i.e., difficulty seeing; difficulty hearing) and/or ambulatory difficulty (i.e., walking or climbing stairs) are assigned a value of "2," and children ages 5 and up who have self-care difficulty (i.e., difficulty dressing or bathing) and/or independent living difficulty (i.e., difficulty doing errands alone) are assigned a value of "3."[6] Children under the age of 5 are set to "missing" for the variable.

Table 1 also indicates how children with more than one disability type are coded on the disability type variable. Children with both cognitive difficulty and either self-care and/or independent living difficulty are assigned a value of "1" (i.e., cognitive disability) on disability type. Children with both sensory/ambulatory difficulty and either self-care or independent living difficulty are assigned a value of "2" (i.e., sensory/ambulatory disability). Finally, children who reported both cognitive difficulty and sensory/ambulatory difficulty are assigned a value of "2" (i.e., sensory/ambulatory disability) on the disability type variable, since their disability is arguably more visible than that of other children in the cognitive disability group.

(Table 1 on next page)

[6] Some children had more than one disability type. Children with both cognitive difficulty and either self-care and/or independent living difficulty are assigned a value of "1" (i.e., cognitive disability) on disability type. Children with both sensory/ambulatory difficulty and either self-care or independent living difficulty are assigned a value of "2" (i.e., sensory/ambulatory disability). Finally, children who reported both cognitive difficulty and sensory/ambulatory difficulty are assigned a value of "2" (i.e., sensory/ambulatory disability) on the disability type variable, since their disability is arguably more visible than that of other children in the cognitive disability group.

Table 1: Construction of 4-Category Disability Type Variable

	No disability (dis_type=0)	**Cognitive disability** (dis_type=1)	**Sensory/ Ambulatory disability** (dis_type=2)	**Any other disability** (dis_type=3)	**"Missing"** (dis_type=.)
Child under age 5					X
'No' to all questions	X				
One disability type reported					
Cognitive difficulty		X			
Seeing difficulty			X		
Hearing difficulty			X		
Ambulatory difficulty			X		
Self-care difficulty				X	
Independent living difficulty				X	
Multiple disability types reported					
Cognitive + sensory/ambulatory			X		
Cognitive + any other		X			
Sensory/ambulatory. + any other			X		
Cognitive + sensory/ambul. + any other			X		

An alternative approach to constructing the disability type variable is to group children ages 5 and up with any disability type other than cognitive difficulty into one category. This category could then be compared to the group with cognitive difficulty. The current approach ensures greater conceptual clarity, in that children with cognitive disability are compared to children with two disability types that are generally more outwardly visible and less stigmatized – sensory disability and ambulatory disability.[7]

C. Immigrant Status

Data on the child's place of birth and parental nativity are used to construct a categorical variable for immigrant status, which is the key independent variable used in analysis. Foreign-born children[8] are categorized as "first-generation immigrants," while native-born children with at least one foreign-born parent are categorized as "second-generation immigrants." For the purposes of this study, non-immigrant children are defined as children with only native-born parents. Although these children may be third- or fourth-generation immigrants, research on the immigrant health paradox suggests that health advantages generally disappear by the third generation (Balcazar, Grineski, and Collins 2015).

[7] Analyses were also run using this alternative categorization of disability types as a robustness check. Results and conclusions are consistent with those presented in the current paper.

[8] Some children in the analytic sample were born abroad to U.S. citizen(s). Since U.S. citizens born abroad are likely quite different from individuals whose families immigrated to the U.S., these children are generally classified as non-immigrant children. If one or both of the child's parents were themselves born abroad, however, the child is classified as a second-generation immigrant.

D. Race/ethnicity

For each member of the household, ACS respondents are asked to indicate whether the individual is of Hispanic, Latino, or Spanish origin. They are then asked to select the race of the household member from the following list: White, Black/African American, American Indian/Alaska Native, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese, Native Hawaiian, Samoan, Chamorro, Other Pacific Islander, or "Some other race." In the current paper, responses to these two questions are used to sort children into five racial/ethnic groups: Hispanic (children of Hispanic origin of any race), non-Hispanic White, non-Hispanic Black, non-Hispanic Asian, and non-Hispanic children of another race. The last group includes children identified in the survey as "Some other race," and children of more than one race (e.g., "White" and "Chinese").[9] For simplicity of presentation, in the remainder of the paper these five groups are referred to as "White," "Black," "Asian," "Hispanic," and "Other race."

E. Control Variables

Several control variables that may correlate with both immigrant status and disability are included in the regression models, including age, sex, language spoken at home (English; some other language), region (East; South; Midwest; West), and survey year. Two controls for socioeconomic status are also employed: household income and maternal education.[10] Household income is defined as the sum of all income earned by household members aged 15 and older in the reference year.[11] Maternal education is a 6-level categorical variable: 1) less than a high school diploma/GED; 2) high school diploma or GED; 3) some college but no degree; 4) associate degree; 5) bachelor's degree; 6) graduate degree.

3. Analytic Strategy

The final analytic sample includes all children under the age of 18 who were living with at least one parent and were the child, grandchild, or sibling of the householder (as opposed to another relative or a non-relative of the householder) at the time of interview.[12] A limitation of the ACS data is that immigrant status cannot be determined for children who do not live with either parent and/or who are not the child, grandchild or sibling of the householder.[13] While these

[9] Respondents can report more than one race on the ACS. The current paper uses a race-alone concept, where individuals are defined as a particular race if they reported that race alone (and no other race). Multiracial individuals are classified as "other race" in the current paper. Other ways of defining race are also possible with ACS data and no single approach is necessarily preferable.

[10] Research suggests maternal education is more closely associated with children's outcomes than paternal education (Marks 2008). In the case of children with same-sex parents, the education level of the parent with the most years of schooling is used.

[11] This paper uses the Consumer Price Index Series (CPI-U) to adjust estimates of household income for changes in the cost of living. All income estimates in this paper are adjusted to be in 2019 dollars. The Census Bureau uses the Consumer Price Index retroactive series using current methods (R-CPI-U-RS) to adjust published estimates of income for inflation.

[12] Children living in Puerto Rico were also excluded from analysis.

[13] To construct immigrant status, the nativity of at least one parent is needed. Unfortunately, the ACS does not collect full information on family relationships. Survey respondents are asked to identify the householder and to indicate how each member of the household is related to the householder. As such, if a child is not the child,

exclusion criteria only eliminate about 6 percent of the total sample of children, findings from the study may not be generalizable to the entire population of children in the U.S., particularly to the subpopulation of children who live without either parent. The final analytic sample includes around 2.8 million children, or about 11.8 million children for the part of the study that uses data from 2008-2019. For the last section of the paper, which examines the odds of cognitive disabilities versus sensory/ambulatory disabilities, analysis is further restricted to children ages 5 and up (about 2.1 million children), since the ACS does not collect cognitive disability data for individuals under 5.

The first set of results present descriptive statistics for first-generation, second-generation, and non-immigrant children on household and demographic characteristics, as well as disability prevalence. A series of logistic regression models are then estimated to further examine the association between childhood disability and immigrant status. While initial models only control for survey year, later models adjust for age, sex, household income, maternal education, language spoken at home, region, and race/ethnicity. To investigate whether race/ethnicity moderates the relationship between immigrant status and childhood disability, an interaction term is added in a later model.

The second part of the paper will examine differences between immigrant and non-immigrant children in the trend in childhood disability prevalence between 2008 and 2019. A logit regression model of disability status on immigrant status will be estimated, with controls for race/ethnicity and all other sociodemographic control variables. Key to the analysis will be the inclusion of an interaction term between immigrant status and survey year. The inclusion of this interaction term will allow for the examination of differences between immigrant and non-immigrant children in change over time in the odds of having a disability.

Finally, the last set of analyses will examine whether patterns by immigrant status look different for cognitive disabilities versus sensory and ambulatory disabilities. A multinomial logit regression model is estimated, with disability type as the outcome variable and immigrant status as the key independent variable. The odds of having a cognitive disability relative to no disability at all, and conditional on not having another disability type, is estimated for first-generation, second-generation, and non-immigrant children. Simultaneously, the odds of having a sensory/ambulatory disability relative to no disability, and conditional on not having another disability type, is estimated for these same groups of children.[14] Differences between immigrant and non-immigrant children in the odds of cognitive disability are then compared to differences in the odds of sensory/ambulatory disability.

Results

1. Descriptive Statistics

Table 2 presents key descriptive statistics for immigrant and non-immigrant children, based on pooled 2017-2019 ACS data. On average, first- and second-generation immigrant children live in households with a lower annual household income than non-immigrant children.

grandchild, or sibling of the householder, and/or if neither of the child's parents reside within the household, it is not possible to determine the nativity of the parent(s) and, in turn, the child's immigrant status.

[14] The odds of a child having some other disability type (i.e., self-care and/or independent living difficulty), relative to no disability and conditional on not having a different disability type, will also be estimated for immigrant and non-immigrant children. This fourth group – children with some other disability type – is not of analytical interest. It is simply included in the model to ensure that the reference group only includes children without a disability.

Immigrant children are also more likely to have a mother with less than high school education, although first-generation immigrant children are more likely than non-immigrant children to live with a mother who has completed a graduate degree. Not surprisingly, given recent trends in immigration to the U.S. (Esterline and Batalova 2022), a larger proportion of immigrant children are of Hispanic or Asian heritage, relative to the non-immigrant population of children, which is predominantly White. Although about one in three children reside in southern states, immigrant children are significantly less likely to live in the Midwest than non-immigrant children, while immigrant children are more likely than non-immigrant children to live in western states, such as California. As expected, immigrant children are much more likely than non-immigrant children to speak a language other than English at home.[15] Notably, disability rates also differ between immigrant and non-immigrant children. About four percent of non-immigrant children are identified as having a disability, compared to 3 percent of immigrant children.[16] Put another way, the disability rate for immigrant children is about 25 percent lower than the rate for non-immigrant children. Table 2 also provides preliminary evidence that the immigrant disability gap looks different by disability type. The next section of the paper investigates the relationship between disability and immigrant status further by adjusting for various socioeconomic and demographic characteristics of the two populations, such as age, maternal education, household income, and region.

2. Relationship Between Immigrant Status and Child Disability

In line with the results presented in Table 2, a simple bivariate logistic regression reveals a strong relationship between immigrant status and childhood disability (Table 3). First-generation immigrant children have 27 percent lower odds of disability than non-immigrant children, while the odds of second-generation immigrant children having a disability are about one-third lower than those of non-immigrant children. As shown in the column for Model 2, the relationship between immigrant status and childhood disability remains statistically significant after adjusting for socioeconomic and demographic characteristics. Moreover, the gap between first-generation immigrant children and non-immigrant children widens: first-generation immigrant children now have 44 percent lower odds of disability than non-immigrant children.

As shown in Table 3, there is also a relationship between race/ethnicity and childhood disability. Compared to White children and controlling for immigrant status, Black children and Asian children have lower odds of disability, while Hispanic children and children in the "other race" group have higher odds of disability. The relationship between immigrant status and disability, however, remains strong and statistically significant. In other words, an immigrant child is less likely to have a disability than a non-immigrant child of the same race/ethnicity.

[15] Given the high correlation between immigrant status and language spoken at home, as a robustness check, all of the models estimated in the paper were run both with and without a control for language spoken at home. Results were largely consistent. In this paper, I present the results of models that include a control for language.

[16] The fact that only a small percent of children in the sample had a disability may raise questions about the suitability of logistic regression with conventional maximum likelihood for modeling the relationship between disability status and immigrant status. Due to ACS's large sample size, however, there were more than enough cases with a value of "1" on disability status, as well as within each category of the disability type variable, to use a conventional modeling approach. For more information on when adjustments are needed for modeling rare events, see https://statisticalhorizons.com/logistic-regression-for-rare-events/.

3. Race/Ethnicity as a Moderator in the Relationship Between Immigrant Status and Child Disability

To test whether an immigrant advantage[17] in childhood disability is experienced by all racial and ethnic groups, in Model 4 an interaction is added between immigrant status and race/ethnicity (Table 3). To aid interpretation, predicted probabilities are estimated after the model and presented in Figure 1.[18] Overall, the immigrant advantage in childhood disability does appear to be observed across all racial/ethnic groups: for White children, Black children, Asian children, Hispanic children, and children of some other racial group, the predicted probability of disability is significantly lower for first- and second-generation immigrants, relative to non-immigrants. There are, however, notable differences by race/ethnicity. The largest immigrant advantage is observed for Hispanic children and children in the "other race" group: while non-immigrant Hispanic children have a predicted probability of disability around 4 percent, the probability for first-generation immigrant children of Hispanic origin is under 2 percent. Similarly, first-generation immigrant children in the "other race" group have a predicted probability of disability that is more than 2 percentage points lower than non-immigrant children in the "other race" group. In contrast, White children who are first-generation immigrants have a predicted probability of disability that is just 0.74 percentage points lower than White children born in the U.S. to native-born parents. The immigrant advantage also looks smaller for Asian children and Black children, relative to Hispanic children and children in the "other race" group.

Another notable finding is that for Black immigrants, Hispanic immigrants, and immigrants in the "other race" group, the probability of child disability appears to increase with immigrant generation. That is, disability rates are comparatively low among first-generation immigrant children, with significantly higher rates observed among the second generation. For White immigrants and Asian immigrants, in contrast, the probability of child disability is not any higher among second-generation immigrants, relative to first-generation immigrants.

Estimating predicted probabilities of disability by both race/ethnicity and immigrant status also permits us to examine whether racial/ethnic disparities in childhood disability look different for immigrants, compared to non-immigrants. As shown in Figure 2, sizeable racial/ethnic disparities in disability are observed among non-immigrant children. Non-immigrant children in the "other race" group have the highest predicted probability of disability (4.5 percent), while non-immigrant Asian children have one of the lowest probabilities of disability (2.9 percent). As such, the largest racial/ethnic difference in disability among non-immigrant children is about 1.6 percentage points. Racial/ethnic disparities in disability are significantly smaller among immigrant children. The largest gap in the probability of disability within the second-generation immigrant group is between children in the "other race" category (2.7 percent) and Asian children (2.0 percent) and is just 0.7 percentage points. For first-generation immigrants, the largest disability gap is between White children (2.8 percent) and Black children (1.8 percent), a gap of about 1 percentage point. Both of these gaps – 0.7 percentage points and 1 percentage

[17] For ease of presentation, in the remainder of the results section I use the terms "immigrant advantage" or "immigrant advantage in childhood disability" to refer to a lower rate of disability among immigrant children, relative to non-immigrant children. As I discuss later in the paper, however, a lower disability rate among immigrant children does not necessarily mean that immigrant children are "advantaged" relative to their non-immigrant counterparts in terms of their risk of disability. Various explanations for the observed immigrant disability gap will be discussed and considered, some of which even imply an immigrant "disadvantage" in childhood disability.

[18] To estimate predicted probabilities, all covariates included in the model were set to their mean value (including survey year).

point – are significantly smaller than the largest racial/ethnic gap observed among non-immigrant children – 1.6 percentage points.

In addition to differences in the magnitude of racial/ethnic disparities, the patterns by race and ethnicity are different for immigrants and non-immigrants (Figure 2). These differences are particularly stark when comparing first-generation immigrants to non-immigrants. While Asian children have one of the lowest probabilities of disability among non-immigrants, when comparing first-generation immigrants, the disability rate among first-generation Asian children is on par with or higher than most other racial/ethnic groups. Even more striking, White children are in the middle of the pack in terms of disability rates among non-immigrants, but among first-generation immigrants, White children have a higher probability of disability than any other racial/ethnic group. As shown in Figure 2, racial/ethnic patterns of disability among second-generation immigrant children look more similar to the patterns observed among non-immigrants than to racial/ethnic patterns observed among first-generation immigrants.

4. Change in Child Disability Rates Over Time: Differences by Immigrant Status

Previous research suggests that the percentage of children in the U.S. with a disability has increased significantly in recent years (Young 2021). In light of the observed differences between immigrant and non-immigrant children in the odds of experiencing disability, this section investigates whether immigrant and non-immigrant children have been differentially affected by rising childhood disability rates. Table 4 presents the results of a series of models in which child disability status is regressed on survey year, with the addition of immigrant status as a covariate in the last model.

As shown in Model 1, there is a positive, statistically significant relationship between survey year and the odds of a child having a disability. This relationship is still observed after adjusting for sociodemographic characteristics in Model 2. In other words, disability rates among children appear to have increased over time. By including an interaction between year and immigrant status in Model 3, it is possible to assess whether the pattern of change in disability prevalence looks different for immigrant children, relative to non-immigrant children. The coefficient on survey year in the third column of Table 3 represents the relationship between survey year and disability status for the reference group: non-immigrants. The results indicate that with each one-unit increase in survey year, the odds of a non-immigrant child having a disability increased by 0.2 percent. The coefficients on the interaction between survey year and immigrant status shed light on whether the change over time in the odds of disability differs for immigrant children. The coefficients on the interaction between a) survey year and first-generation immigrant status and b) survey year and second-generation immigrant status are positive and statistically significant, indicating that immigrant children have experienced a steeper increase in disability over time than their non-immigrant counterparts. Notably, however, these differences are small in magnitude.

To aid in the comparison of over time change in disability rates by immigrant status, predicted probabilities were estimated after running Model 3. As shown in Figure 3, the predicted probability of having a disability increased over time for all three groups of children – non-immigrants, second-generation immigrants, and first-generation immigrants. While the slopes of the three lines significantly differ from each other, these differences are difficult to detect visually in Figure 3. Perhaps a more important takeaway is that the immigrant advantage in childhood disability has persisted over time, from 2008 through 2019. Regardless of the year

compared, immigrant children had a lower predicted probability of having a disability than non-immigrant children. What is left unanswered, however, is whether lower disability rates among immigrant children, relative to non-immigrant children, represent a lower *risk* of disability. That is, were immigrant children less likely to experience disability during this time period, or were immigrant parents just less likely to report that their child has difficulty with ordinary activities? In the next section, this question is investigated further.

5. Differences in the Relationship between Immigrant Status and Disability, by Disability Type

Table 5 displays the results of a multinomial logit regression model in which the gap between immigrant and non-immigrant children in the odds of disability is estimated for cognitive difficulty versus sensory/ambulatory difficulty.[19] Overall, as shown in Table 5, the relationship between immigrant status and childhood disability does look different by disability type. Although immigrant children are less likely than non-immigrant children to experience either sensory/ambulatory difficulty or cognitive difficulty, the gap is significantly larger for cognitive disabilities. Conditional on not having another type of disability, first-generation immigrant children have 17 percent lower odds of sensory/ambulatory disability than non-immigrant children, while they have 57 percent lower odds of cognitive disability. Similarly, second-generation immigrants have 26 percent lower odds of sensory/ambulatory disability than non-immigrant children but 40 percent lower odds of cognitive disability. Taken together, these findings indicate that the difference between immigrant and non-immigrant children in the odds of having a disability is significantly larger for cognitive disabilities, compared to sensory/ambulatory disabilities. Put another way, there is a larger "immigrant advantage" in cognitive disabilities than in sensory/ambulatory disabilities.

It is possible that immigrant children are in fact at a much lower risk of cognitive disability, particularly if immigrant self-selection and protective health behaviors among immigrant groups have greater implications for cognitive disability than for sensory/ambulatory disability. Yet, there is not much evidence to support this interpretation. In fact, some of the most common cognitive disabilities among children (e.g., ADHD) are diagnosed later in childhood and thus likely shape immigration pathways – and the immigrant disability gap – to a lesser extent than other childhood disabilities, such as congenital blindness or deafness. Further, the results presented in Table 5 suggest that children whose families speak a language other than English at home, a proxy measure of assimilation, are less likely to have a cognitive disability, but they are not less likely to have an sensory/ambulatory disability. This finding points to another possible explanation for the larger immigrant gap in cognitive disability, relative to sensory/ambulatory disability: namely, cultural attitudes may shape reports of cognitive disability to a greater extent than they shape reports of sensory and/or ambulatory disability. Overall, these findings may be preliminary evidence that the observed difference in disability rates between immigrant and non-immigrant children, particularly the difference in cognitive disability rates, is shaped in part by differences in cultural attitudes and access to medical diagnosis, rather than simply by differences in the risk of disability.

[19] The gap between immigrant and non-immigrant children in the odds of disability is also estimated for a third disability type – some other disability (i.e., self-care/independent living difficulty) – but this group is not of analytical interest. It is simply included in the model to ensure that the reference group only includes children without a disability.

Discussion

By drawing on large-scale, nationally representative data from a U.S. survey that includes a standardized measure of disability, the current paper is uniquely suited to address whether an "immigrant advantage", which has been observed for health measures such as birth weight and obesity, extends to child disability. This question is particularly relevant in the context of rising disability rates among U.S. children, a concerning trend with implications not only for the health care system, but also for public education and social welfare programs.

The current study reveals that disability rates in the U.S. are lower among immigrant children than they are among non-immigrant children. This lower rate of disability persists even after adjusting for socioeconomic and demographic characteristics of children and their families, and it is observed across all racial/ethnic groups considered. Notably, the immigrant disability gap also persists over time: while disability rates increased between 2008-2019 for all children, first- and second-generation immigrant children had lower rates of disability than non-immigrant children in every year of this eleven-year period. While there is some evidence that disability rates have increased at a faster rate among immigrant children, relative to non-immigrant children, the observed difference is small. Overall, these findings could be interpreted as evidence of an "immigrant advantage" in child disability. Other research has demonstrated that immigrants and their children are advantaged relative to non-immigrants in the U.S. on multiple indicators of health. Obesity rates, rates of cardiovascular disease, and mortality rates are all lower among immigrants (Padilla et al. 2002; Gordon-Larsen et al. 2003; Harris, Perreira, and Lee 2009; Subramanian et al. 2009; Perreira and Ornelas 2011; Balcazar, Grineski, and Collins 2015; Kennedy et al. 2015; Philipneri et al. 2019). Various explanations have been proposed for this "immigrant health advantage," some of which may also be relevant for the observed lower rate of disability among immigrant children. Among these explanations is the idea of immigrant self-selection (Landale, Gorman, and Oropesa 2006; Riosmena, Kuhn, and Jochem 2017). That is, individuals with health issues may be less likely to immigrate, resulting in the immigrant population having better health, on average, than the non-immigrant population. Immigrant self-selection could also contribute to the observed lower rate of disability among first-generation immigrant children, as families that include a child with a disability may be hesitant to emigrate away from established networks of care and support in their home country.[20] Self-selection likely plays a smaller role, however, in the health advantages observed among second-generation immigrants. For individuals born in the U.S. to immigrant parents (i.e., second-generation immigrants), the decision to migrate necessarily preceded any health issues – or disability – that they personally experience, although maternal health may play some role in both the decision to migrate and the child's disability status.

In addition to self-selection, scholars have pointed to culture as an explanation for the immigrant health advantage, including health advantages observed in the second generation. Research suggests that immigrants are less likely to engage in unhealthy behaviors, such as smoking, drinking, and eating fatty, sugary, or heavily processed foods, than are non-immigrants, contributing to lower rates of obesity (Gordon-Larsen et al. 2003; Harris, Perreira, and Lee 2009), asthma (Subramanian et al. 2009; Balcazar, Grineski, and Collins 2015; Philipneri et al. 2019), and chronic conditions (Kennedy et al. 2015). Although these health-related behaviors

[20] Alternatively, some parents of children with disabilities may immigrate to another country to access specialized health care for their child. This situation, however, would not contribute to the observed lower rate of disability among first-generation immigrant children.

may be weakly associated with one's own risk of disability, some of these behaviors, such as smoking and drinking, do have implications for maternal health and fetal development. As such, the healthier behaviors of immigrant parents may reduce their children's risk of disability, which could help account for the observed lower rates of disability among first- and second-generation immigrant children, relative to non-immigrant children.

Yet there is reason to suspect that the lower rate of disability among immigrant children that has been documented in this study does not entirely represent an "immigrant advantage," but instead is due to differences in parental reporting of children's difficulty with activities. Another key finding from the current study is that the difference in disability rates by immigrant status is significantly larger for cognitive difficulties than it is for sensory and ambulatory difficulties. Although it could be the case that immigrant children are at much lower risk of cognitive disability, previous research indicates that neurodevelopmental disability is heavily stigmatized in many immigrant-sending countries, including countries in Latin America (Paula et al. 2020; Montenegro et al. 2022), Asia (Minhas et al. 2015; Someki et al. 2018; Yu, Stronach, and Harrison 2020), and Africa (Tekola et al. 2020; Scior et al. 2015). Immigrant parents from these regions may be hesitant to report difficulties their child experiences with cognitive activities, and perhaps more so than sensory and ambulatory difficulties, which are not only less stigmatized but also more outwardly visible. Studies also suggest that marginalized groups in the U.S., including ethnic and racial minorities, are less likely to be diagnosed with neurodevelopmental disabilities such as autism and ADHD than are other members of the population, likely due to barriers to health care and racial/ethnic and cultural biases in disability diagnosis (Cuccaro et al. 1996; Mandell et al. 2002; Mandell et al. 2009; Durkin et al. 2017). Whether or not one's child has been diagnosed with a neurodevelopmental disability likely also shapes parental reports of difficulty with cognitive activities. Although the models presented in this paper adjust for race/ethnicity and socioeconomic characteristics of children and their families, immigrant children may face barriers and discrimination in obtaining a diagnosis of disability beyond those associated with their race/ethnicity and/or socioeconomic status alone. Studies have found, for example, that immigrants are less likely to have health insurance and a regular source of medical care, compared to non-immigrants (S. Guendelman, Schauffler, and Pearl 2001; Perreira and Ornelas 2011). Taken together, this points to the possibility that the observed "immigrant advantage" in child disability may partially belie disparities between immigrant and non-immigrant children in access to diagnosis and treatment of disability, particularly neurodevelopmental disability. Given that neurodevelopmental disability is the most common and rapidly-growing disability type among U.S. children (Young 2021), this finding has important implications for health inequities in the U.S.

Finally, the current study reveals that the observed immigrant disability gap looks different by race/ethnicity. Disparities in disability rates between immigrants and non-immigrants are largest for Hispanic children and children in the "other race" group. In addition, for Hispanic children, Black children, and children in the "other race" group, there appears to be a pattern of rising disability rates over immigrant generations: the disability rate is lowest among first-generation immigrant children, rises significantly among second-generation immigrant children, and then reaches its peak among children whose ancestors arrived in the U.S. three or more generations ago. This pattern contrasts with that of Asian children and White children: for these racial/ethnic groups, there is no evidence that disability rates significantly increase in the second generation.

Segmented assimilation theory may provide some insight into racial/ethnic differences in the immigrant disability gap. According to segmented assimilation theory, immigrants may enter into one of three pathways upon arriving in the U. S. First, they may begin a process of acculturating into the mainstream White American middle-class, a pathway that is usually reserved for immigrants who are not perceived as racial minorities. Alternatively, their perceived minority status may push them down a path of assimilating into a marginalized, lower-income segment of American society, resulting in downward mobility. The third pathway, sometimes called "selective assimilation," involves maintaining one's cultural identity and a strong sense of membership in the immigrant community and eschewing cultural assimilation in favor of economic assimilation alone, a pathway that allows for upward economic mobility despite perceived minority status (Portes and Zhou 1993).

The pathway an immigrant takes depends in large part on features of the local co-ethnic community. Many Black and Hispanic communities in the U.S. are under-resourced (Logan 2011), putting Black and Hispanic immigrants at greater risk for downward assimilation. While immigrant self-selection and health-protective cultural practices and behaviors may contribute to lower rates of child disability among first-generation Black and Hispanic immigrant children, neighborhood features, including high levels of poverty, low housing quality, limited access to nutrient-rich foods, and heightened exposure to pollution and other health risks, raise the risk of disability in the second and subsequent immigrant generations. White and Asian immigrants, on the other hand, are more likely to reside in comparatively resource-rich communities, lowering their exposure to environmental hazards and putting their children at lower risk of disability across immigrant generations (Portes and Zhou 1993). By virtue of their membership in a privileged racial group, many White immigrants eventually assimilate into the mainstream White middle class, a group that is increasingly aware of neurodevelopmental conditions and other types of child disability and that has the resources required to obtain diagnosis and treatment (Bussing et al. 2007; Angell and Solomon 2017; Lopez et al. 2018). This situation could help explain why rates of disability are higher among White children whose families have lived in the U.S. for three or more generations, relative to first- and second-generation White immigrant children. Asian immigrants, who do not have access to the traditional assimilation pathway due to their status as a racial minority, are more likely to be pushed into a selective assimilation pathway. As a result, Asian immigrants may be slower than White immigrants to adopt mainstream American attitudes toward disability, leading to underreporting of disability, particularly cognitive disability, among Asian parents. This could be one reason children of Asian descent have one of the lowest disability rates among all non-immigrant children, including White children, and despite first-generation Asian children having a disability rate comparable to other racial/ethnic groups. Altogether, the nuanced patterns of childhood disability by race/ethnicity and immigrant status help highlight the complexities of disability, as well as disability measurement.

Limitations

The current study has a number of limitations that point to avenues for future research. First, although I attempt to investigate the role of cultural attitudes and health care disparities as potential contributors to the immigrant "advantage" in child disability, this is challenging to accomplish with survey data alone. Qualitative research is needed to assess the extent to which cultural attitudes and access to diagnosis shape parental reports of children's difficulty with

cognitive activities. Second, in examining racial and ethnic differences in the immigrant disability gap, I employ relatively large categories – White, Black, Asian, Hispanic, "Other race" – to avoid sacrificing statistical power. I do not distinguish, for example, between children of East Asian, South Asian, and Southeast Asian descent, despite evidence of meaningful heterogeneity within the Asian American population (Lowe 1991; Islam et al. 2010; Yi et al. 2016). Though controlling for maternal education and household income should help account for socioeconomic differences, future research might explore differences in rates or patterns of childhood disability *within* these broad racial/ethnic categories, particularly within the Asian American and Hispanic populations. On a related note, while I present segmented assimilation theory as a potential explanation for racial/ethnic differences in the immigrant disability gap, additional work – likely qualitative – is needed to determine whether assimilation pathways do, in fact, account for these differences. Finally, a weakness of the ACS is it collects limited information on parent-child relationships in the household, which led me to exclude about 6 percent of children from analysis due to incomplete information on parental nativity. Consequently, results from the current study are not generalizable to the entire population of children in the U.S. and, in particular, cannot shed light on differences in disability rates between non-immigrant and immigrant children who live without their parents.

Conclusion

This paper is the first to draw on large-scale, nationally representative data to test whether an "immigrant advantage" exists for childhood disability in the United States. The study contributes to the literature on the immigrant health paradox by revealing that disability rates are lower among immigrant children, relative to non-immigrant children, across all years considered. Yet, findings from the study also raise questions about the interpretation of differences in disability rates. Other researchers have suggested that rising disability rates among U.S. children may be the result of changes in children's developmental contexts that have led to a heighted risk of disability in childhood (Houtrow et al. 2014). They have also acknowledged, however, that higher rates of childhood disability could relate to rising awareness and shifts in diagnosis of neurodevelopmental conditions such as autism and ADHD. Similarly, while a lower disability rate among immigrant children could point to differences between immigrants and non-immigrants in exposure to environmental toxins and/or in health-related behaviors that affect fetal and child development or could result from selection into immigration pathways, the lower disability rate among immigrant children could also be due to differences in awareness of and attitudes toward disability, as well as disparities in access to, and cultural biases in, medical diagnosis. This distinction is important, since a lower risk of disability would put immigrant children at an advantage relative to their non-immigrant peers, while underreporting or underdiagnosis of disability among immigrant children would imply that immigrant children with a disability are less likely to receive assistance and/or accommodations at school for their disability. Disparities in access to these resources may lead to inequalities between immigrant and non-immigrant children with disabilities in various outcomes, including educational attainment and income.

By highlighting these important challenges to the interpretation of differences in disability rates between subpopulations, the current study also raises questions about the interpretation of

other observed health disparities between immigrants and non-immigrants or other groups. Some studies on the immigrant health paradox, for example, have relied on self-reports of conditions such as diabetes (Oza-Frank and Narayan 2010), asthma (Philipneri et al. 2019), and heart disease (Kennedy et al. 2015) to estimate differences in health outcomes by immigrant status. While there may be less racial/ethnic and cultural bias in the diagnosis of diabetes, asthma and heart disease than in the diagnosis of neurodevelopmental conditions, health condition reporting is still shaped by access to medical diagnosis and cultural attitudes. As the current study has shown, it is worth considering whether lower rates of certain health conditions among immigrants are due in part to differences in cultural attitudes toward these health conditions and/or barriers in accessing health care or bias in diagnosis. This situation could point to immigrant disadvantages, rather than advantages, in health.

The current paper also has implications for the literature on immigrant incorporation and assimilation. As discussed, the observed differences in the "immigrant advantage" by race/ethnicity could be the result of differences between immigrant subgroups in the assimilation process and in characteristics of local co-ethnic communities. The sharper increase in child disability rates among Hispanic immigrants, immigrants in the "other race" group, and Black immigrants between the first- and second- immigrant generations, relative to White and Asian immigrants, could be due to these immigrant subpopulations assimilating to local culture more quickly, including behaviors that put children at higher risk of disability. It could also be the result of exposure to environmental toxins and other health risks within the neighborhoods in which Hispanic immigrants, Black immigrants, and immigrants in the "other race" group typically settle. The smaller "immigrant advantage" observed among White children and children of Asian heritage may be the product of lower exposure to environmental hazards in the communities in which most White and Asian families reside. Finally, prior research has found that many Asian immigrants enter selective assimilation pathways, maintaining strong ties to a well-resourced local ethnic community and eschewing cultural assimilation as a strategy of upward economic mobility (Gibson 1988; Portes and Zhou 1993; Zhou and Bankston 1998; Zhou 2014). This situation may explain why non-immigrant children of Asian heritage have a lower disability rate than their White counterparts, as many Asian families may be slower to adopt mainstream middle-class attitudes toward disability. Taken together, these racial/ethnic differences in the relationship between child disability and immigrant status may represent a previously overlooked aspect of segmented assimilation, addressing a gap other scholars have noted in the literature – namely, the dearth of research on the implications of segmented assimilation for health-related outcomes (Abraído-Lanza, Echeverría, and Flórez 2016).

Tables & Figures

Table 2: Weighted Descriptive Statistics by Immigrant Status

		Mean or percent[1]		
Variable	**All children**	**Non-immigrant children**	**Second-gen. immigrant children**	**First-gen. immigrant children**
Annual household income (in 2019 dollars)[2]	$106,600	$108,700	$101,700	$91,790
Maternal education				
Less than HS diploma	11.67	6.70	25.70	26.14
HS diploma or GED	21.49	21.19	22.63	20.33
Some college, no degree	20.95	23.48	14.28	10.17
Associate degree	9.98	11.15	6.85	5.37
Bachelor's degree	21.97	23.23	17.75	22.96
Graduate degree	13.94	14.25	12.78	15.02
Race/ethnicity				
White alone (non-Hispanic)	51.12	63.41	16.27	16.26
Black alone (non-Hispanic)	12.62	13.97	8.28	12.46
Asian alone (non-Hispanic)	4.85	0.59	15.39	27.95
Hispanic (any race)	25.21	15.63	54.16	39.84
Other race (including multiracial) (non-Hispanic)	6.19	6.40	5.89	3.48
Region				
Northeast	15.98	15.27	17.62	20.64
Midwest	21.23	24.32	12.23	14.10
South	38.46	39.39	35.32	39.16
West	24.33	21.02	34.82	26.11
Speak other language at home	33.52	14.35	87.85	87.95
Age	8.64	8.58	8.51	10.88
Male	51.14	51.20	51.04	50.42
With any disability	4.05	4.42	2.98	3.25
Disability type (ages 5+)				
No disability	94.71	94.18	96.42	96.14
Cognitive disability	3.44	3.92	1.64	2.19
Sensory/ambulatory disability	1.68	1.72	1.81	1.52
Any other disability	0.17	0.18	0.13	0.15

Source: 2017-2019 American Community Surveys, 1-year data files (pooled)

[1] Standard errors are available upon request

[2] This paper uses the Consumer Price Index Series (CPI-U) to adjust estimates of mean annual household income for changes in the cost of living. All income estimates in this paper are adjusted to be in 2019 dollars. The Census Bureau uses the Consumer Price Index retroactive series using current methods (R-CPI-U-RS) to adjust published estimates of income for inflation.

Table 3: Logit Regression of Disability Status on Immigrant Status

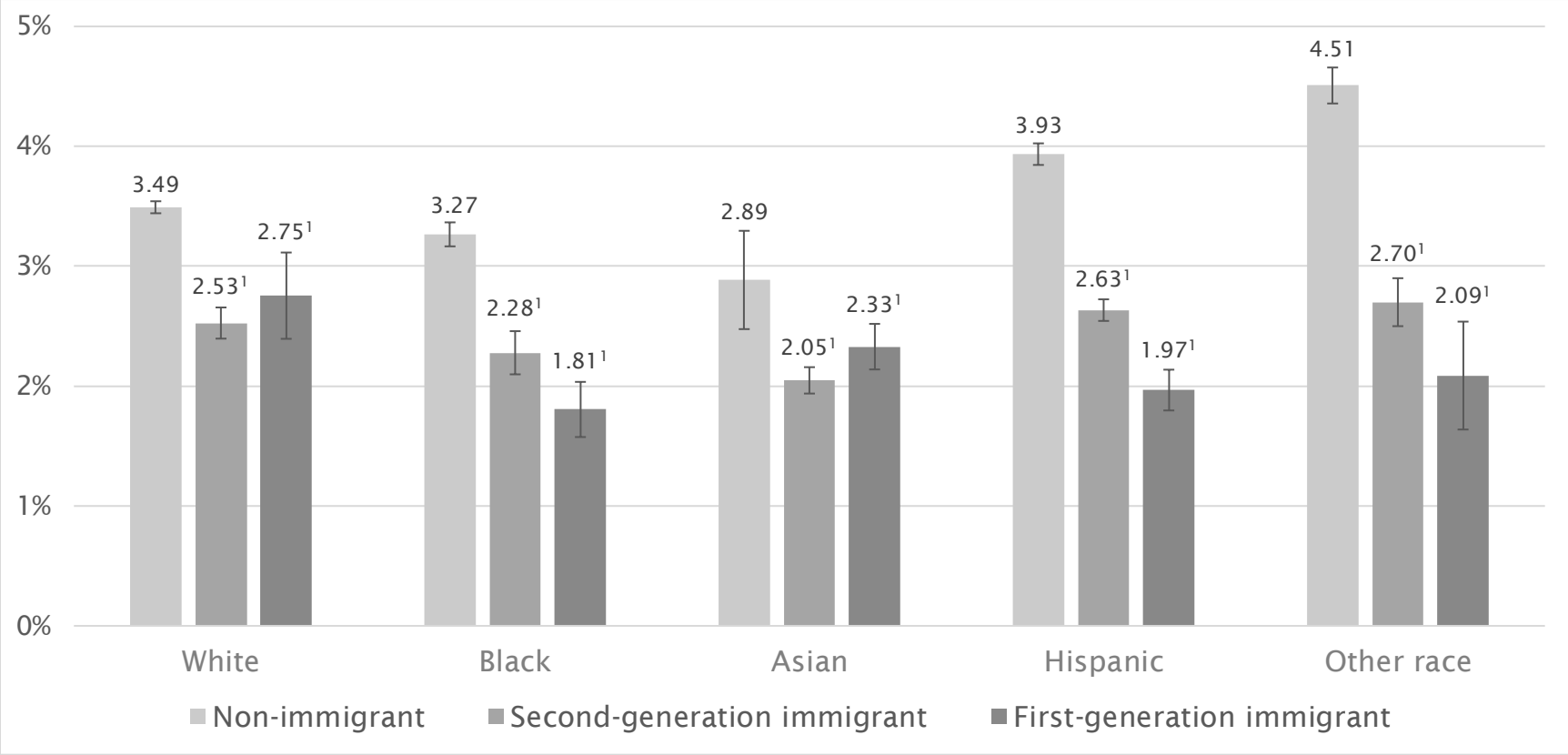
	Model 1	Model 2 (+ basic controls)	Model 3 (+ race/ethnicity)	Model 4 (+ interaction)
Immigrant status				
(Ref: non-immig.)				
second-gen.	-0.410***	-0.414***	-0.404***	-0.334***
	(0.013)	(0.016)	(0.016)	(0.029)
first-gen	-0.319***	-0.576***	-0.536***	-0.245***
	(0.027)	(0.031)	(0.032)	(0.069)
Race/Ethnicity				
(Ref: White)				
Black			-0.074***	-0.069***
			(0.015)	(0.017)
Asian			-0.102***	-0.197**
			(0.027)	(0.075)
Hispanic			0.101***	0.124***
			(0.013)	(0.013)
Other race			0.240***	0.266***
			(0.018)	(0.019)
Immig. status##race/ethnicity				
second-gen.##Black				-0.036
				(0.053)
second-gen.##Asian				-0.018
				(0.082)
second-gen.##Hispanic				-0.081*
				(0.034)
second-gen.##Other				-0.197***
				(0.047)
first-gen.##Black				-0.363***
				(0.098)
first-gen.##Asian				0.025
				(0.112)
first-gen.##Hispanic				-0.469***
				(0.080)
first-gen.##Other				-0.550***
				(0.131)
Age		0.104***	0.105***	0.105***
		(0.001)	(0.001)	(0.001)
Male		0.502***	0.502***	0.502***
		(0.009)	(0.009)	(0.009)
Region				
(Ref: Midwest)				
Northeast		0.148***	0.150***	0.149***
		(0.015)	(0.015)	(0.015)
South		0.056***	0.057***	0.058***
		(0.010)	(0.010)	(0.010)
West		-0.022	-0.048***	-0.050***
		(0.013)	(0.013)	(0.014)

Speak other language at home		-0.063***	-0.116***	-0.123***
		(0.013)	(0.015)	(0.014)
Logged income		-0.287***	-0.289***	-0.288***
		(0.004)	(0.004)	(0.004)
Maternal education				
(Ref: HS diploma)				
Less than HS		0.144***	0.133***	0.137***
		(0.016)	(0.016)	(0.016)
Some college, no degree		0.125***	0.126***	0.125***
		(0.014)	(0.014)	(0.014)
Associate degree		0.029	0.032*	0.031*
		(0.016)	(0.016)	(0.016)
Bachelor's degree		-0.231***	-0.223***	-0.224***
		(0.014)	(0.014)	(0.014)
Graduate degree		-0.232***	-0.221***	-0.222***
		(0.016)	(0.016)	(0.016)
Survey year	0.013**	0.022***	0.022***	0.022***
	(0.005)	(0.005)	(0.005)	(0.005)
_cons	-28.65**	-46.42***	-45.46***	-45.52***
	(9.561)	(9.689)	(9.690)	(9.674)
N	2,752,000	2,752,000	2,752,000	2,752,000

Source: 2017-2019 American Community Surveys, 1-year data files (pooled).

Note: Standard errors in parentheses estimated using successive difference replication method.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 1: Predicted Probability of Having a Disability, by Race/Ethnicity and Immigrant Status of the Child, 2017-2019[a]



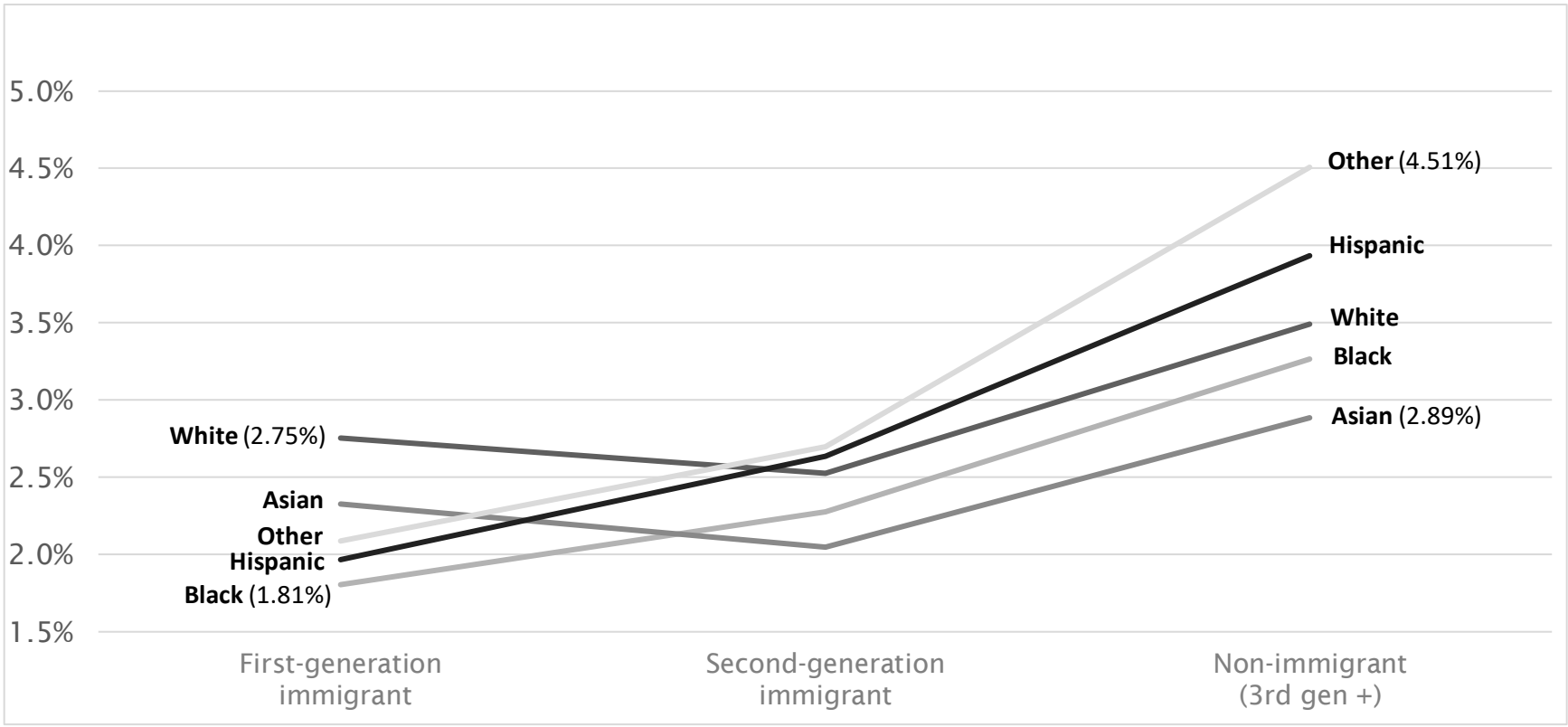
Source: 2017-2019 American Community Surveys, 1-year data files (pooled).

[a] Where all covariates are set to their mean values (including survey year).

[1] Significantly lower than the estimate for non-immigrant children of the same race/ethnicity at the 95 percent confidence level.

Note: Weighted using replicate weights. Standard errors estimated using successive difference replication method. Includes controls for age, sex, language at home, income, maternal education, region, and year.

Figure 2: Racial/Ethnic Differences in Predicted Probability of Child Disability, by Immigrant Status[a]



Source: 2017-2019 American Community Surveys, 1-year data files (pooled).

[a] Where all covariates are set to their mean values (including survey year).

Note: Weighted using replicate weights. Includes controls for age, sex, language at home, income, maternal education, region, and year.

Table 4: Logit Regression of Disability Status on Survey Year and Immigrant Status

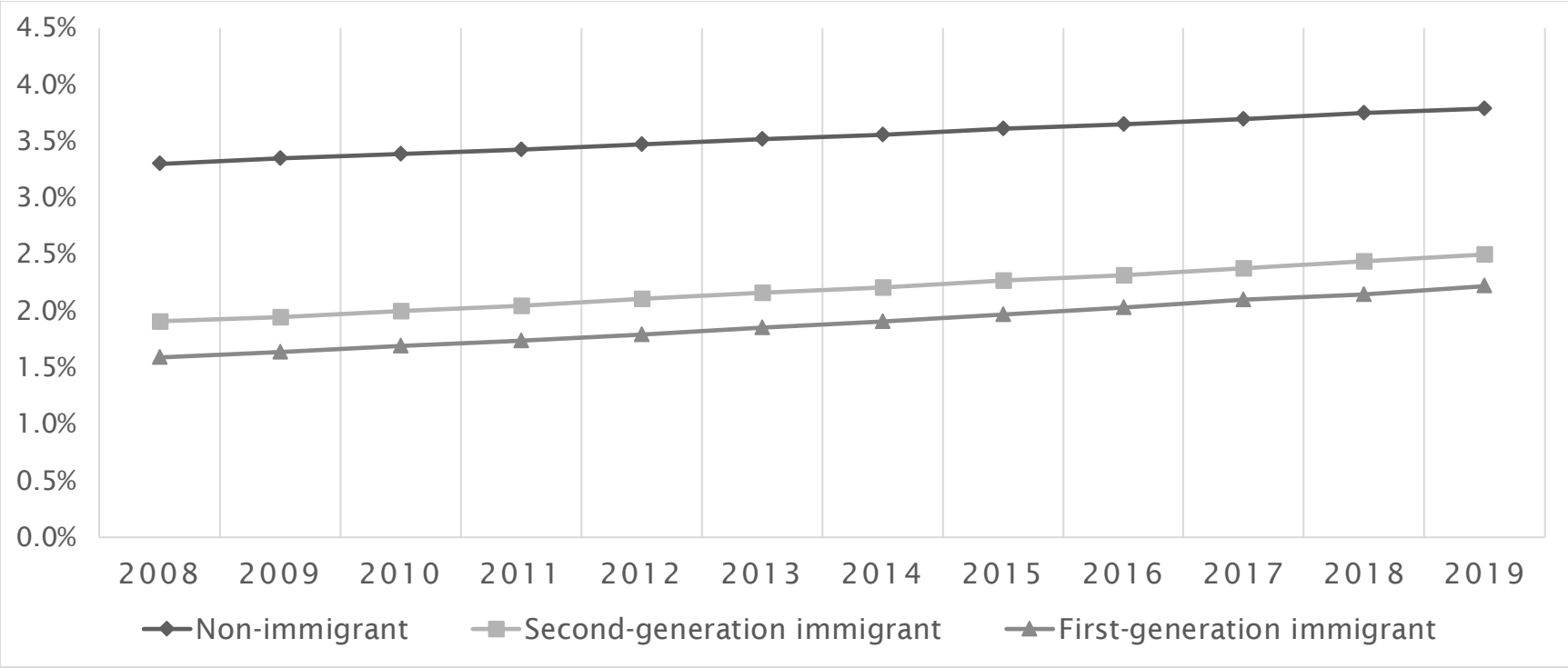
	Model 1	Model 2 (+immig. status & basic controls)	Model 3 (+ interaction)
Survey year	0.009***	0.020***	0.013***
	(0.001)	(0.001)	(0.001)
Immigrant status			
(Ref: non-immig.)			
second-gen.		-0.492***	-25.24***
		(0.009)	(3.848)
first-gen		-0.651***	-37.17***
		(0.014)	(8.008)
Immig. status##Survey year			
second-gen.##survey year			0.012***
			(0.002)
first-gen.##survey year			0.018***
			(0.004)
Race/Ethnicity			
(Ref: White)			
Black		-0.069***	-0.069***
		(0.007)	(0.007)
Asian		-0.112***	-0.112***
		(0.014)	(0.014)
Hispanic		0.069***	0.070***
		(0.007)	(0.007)
Other race		0.256***	0.257***
		(0.008)	(0.008)
Age		0.101***	0.101***
		(0.000)	(0.000)
Male		0.508***	0.508***
		(0.004)	(0.004)
Region			
(Ref: Midwest)			
Northeast		0.119***	0.118***
		(0.007)	(0.007)
South		0.032***	0.032***
		(0.005)	(0.005)
West		-0.100***	-0.100***
		(0.007)	(0.007)
Speak other language at home		-0.072***	-0.073***
		(0.007)	(0.007)
Logged income		-0.294***	-0.294***
		(0.002)	(0.002)
Maternal education			
(Ref: HS diploma)			

Less than HS		0.193***	0.193***
		(0.007)	(0.007)
Some college, no degree		0.091***	0.092***
		(0.006)	(0.006)
Associate degree		-0.006	-0.005
		(0.006)	(0.006)
Bachelor's degree		-0.284***	-0.284***
		(0.006)	(0.006)
Graduate degree		-0.239***	-0.238***
		(0.008)	(0.008)
_cons	-21.67***	-32.00***	-27.33***
	(1.183)	(1.225)	(1.382)
N	11,840,000	11,840,000	11,840,000

Source: 2008-2019 American Community Surveys, 1-year data files (pooled).

Note: Standard errors in parentheses estimated using successive difference replication method.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Figure 3: Predicted Probability of Having a Disability, by Year & Immigrant Status of the Child[a]



Source: 2008-2019 American Community Surveys, 1-year data files (pooled).

[a] Where all covariates are set to their mean values.

Note: Weighted using replicate weights. Includes controls for age, sex, language at home, income, maternal education, and region.

Table 5: Multinomial Logit Regression of Disability Type on Immigrant Status

	Disability outcome		
	Cognitive difficulty (vs. no disability)	Sensory or ambulatory difficulty (vs. no disability)	Other disability type (vs. no disability)
Immigrant status (Ref: non-immig.)			
second-gen.	-0.516***	-0.301***	-0.186*
	(0.017)	(0.029)	(0.090)
first-gen	-0.837***	-0.185***	-0.447**
	(0.042)	(0.049)	(0.135)
Race/Ethnicity (Ref: White)			
Black	-0.099***	-0.027	-0.143
	(0.018)	(0.028)	(0.083)
Asian	-0.189***	0.001	-0.065
	(0.034)	(0.048)	(0.094)
Hispanic	0.080***	0.136***	-0.241**
	(0.017)	(0.023)	(0.079)
Other race	0.286***	0.156***	0.092
	(0.025)	(0.030)	(0.079)
Age	0.028***	0.040***	0.094***
	(0.001)	(0.002)	(0.006)
Male	0.765***	0.096***	0.176***
	(0.010)	(0.014)	(0.041)
Region (Ref: Midwest)			
Northeast	0.193***	0.069**	0.201**
	(0.016)	(0.022)	(0.067)
South	0.043**	0.066***	0.107
	(0.012)	(0.019)	(0.056)
West	-0.073***	-0.060**	0.112
	(0.016)	(0.022)	(0.064)
Speak other language at home	-0.184***	0.011	0.012
	(0.018)	(0.025)	(0.082)
Logged income	-0.305***	-0.284***	-0.167***
	(0.005)	(0.006)	(0.020)
Maternal education (Ref: HS diploma)			
Less than HS	0.082***	0.220***	0.098
	(0.020)	(0.024)	(0.083)
Some college, no degree	0.164***	0.041	0.107
	(0.015)	(0.024)	(0.063)
Associate degree	0.053**	-0.032	0.148
	(0.017)	(0.027)	(0.077)
Bachelor's degree	-0.213***	-0.264***	0.013
	(0.018)	(0.022)	(0.062)

Graduate degree	-0.210*** (0.020)	-0.272*** (0.030)	-0.072 (0.076)
Survey year	0.033*** (0.006)	0.006 (0.009)	-0.013 (0.026)
_cons	-66.78*** (12.16)	-13.72 (17.51)	20.27 (52.29)
N	2,059,000	2,059,000	2,059,000

Source: 2017-2019 American Community Surveys, 1-year data files (pooled).

Note: Standard errors in parentheses estimated using successive difference replication method.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

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