

Examining Ethnic Variation in Life Expectancy Among Asians in the United States, 2012–2016

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ABSTRACT As the fastest growing racial group in the United States, understanding the health patterns of Asians is important to addressing health gaps in American society. Most studies have not considered the unique experiences of the ethnic groups contained in the Asian racial group, implying that Asians have a shared story. However, we should expect differences between the ethnic groups given the differences in their timing and place of migration, socioeconomic status, and racialized experiences in the United States. We estimate the life expectancy of the six largest Asian ethnic groups—Chinese, Asian Indians, Filipinos, Vietnamese, Koreans, and Japanese—analyzing data from the Multiple Cause of Death File (2012–2016) and the American Community Survey (2012–2016) in the United States at the national and regional levels. Nationally, Chinese had the highest life expectancy (males $e_0 = 86.8$; females $e_0 = 91.3$), followed by Asian Indians, Koreans, Japanese, Filipinos, and Vietnamese, generally reflecting the pattern expected given their educational attainment, our primary indicator of socioeconomic status. We also found regional differences in life expectancy, where life expectancy for Asians in the West was significantly lower than all other regions. These findings suggest the presence of underlying selection effects associated with settlement patterns among new and traditional destinations. Our results underline the necessity of studying the experiences of the different Asian ethnic groups in the United States, permitting a better assessment of the varying health needs within this diverse racial group.

KEYWORDS Asian Americans • Life expectancy • Asian ethnic groups • Health disparities • Immigrants

Introduction

Asians are the fastest growing racial group in the United States, with a population increase of 43% between 2000 and 2010 (Hoeffel et al. 2012). Yet investigations of their health remain scarce. Research on Asians in the United States has primarily focused on traditional and gateway immigrant destinations in the American West (Holland and Palaniappan 2012; Islam et al. 2010). Further, the aggregation of Asians and the persistence of the model minority myth limit our understanding of the varying experiences of Asian ethnic groups. The millions of people who make up this racial category can trace their histories to a diverse group of nations. Hereafter, we use the terms “Asian” or “Asian groups” to refer to all people who fall within the U.S. Office of Management and Budget’s definition of Asian, including American citizens and noncitizen residents.

Although the health experiences of Asian communities vary by socioeconomic status (SES), ethnicity, and geographic location in the United States, most empirical work has presented them as a homogenous group with a singular story. Nevertheless, prior work underscores the substantial heterogeneity in their general health and their risks for various chronic conditions (Hastings et al. 2015; John et al. 2012; Jose et al. 2014; Staimez et al. 2013; Yoo et al. 2012). For instance, John et al. (2012) found that Chinese and Vietnamese are more likely to report fair/poor physical and mental health than Filipinos. Additionally, Staimez and colleagues (2013) revealed heterogeneity in cardiometabolic risk factors among different Asian groups. Thus, although Asians as an aggregate enjoy the longest life expectancy of any racial group in the United States (Acciai et al. 2015; Elo and Preston 1997; Singh and Hiatt 2006; Singh and Miller 2004), the documented heterogeneity in their health suggests that significant differences in life expectancy exist between ethnic groups.

Considering their rapid growth and variegated experiences, Asians warrant closer attention from researchers. In fact, the collection of ethnic data is vital to our understanding and is needed to consider the effect of the long and complex history of Asian immigration in explicating variations in health outcomes today. We address part of this gap by examining patterns in mortality among the six largest Asian ethnic groups in the United States—Chinese, Asian Indians, Filipinos, Vietnamese, Koreans, and Japanese—at the national and regional levels. To our knowledge, this is the first study to investigate the mortality of disaggregated Asian groups at a subnational level. It builds on previous research highlighting the heterogeneity of mortality schedules and life expectancy among Asian ethnic groups (Elo 1997; Hastings et al. 2015; Lauderdale and Kestenbaum 2002; Mehta et al. 2016). We depict the interethnic and interregional landscape in life expectancy among America's six largest Asian ethnicities. We also examine whether SES, positive selection, and geography explain the observed patterns. Ultimately, we show that the use of *Asian* as a racial category is not helpful because it signifies a shared story about social, physical, and economic disparities of the population; however, this shared story does not exist and hinders progress toward addressing such disparities in American society.

To illustrate our work, we contextualize the current study using the literature on health variation by SES, the spatial distribution of ethnic groups, and the racialized experiences of the ethnic groups. We then proceed to describe the data and methods used to carry out our analyses, followed by the presentation of our results, where we present the characteristics and various measures of mortality (e.g., death rates and life expectancy) of the six largest Asian ethnicities in the United States and examine the regional differences. We conclude with the implications of our findings, which provide ample evidence that the Asian racial category is not informative given the ethnic variation within the racial category.

Background

Socioeconomic Status

Prior research demonstrates that SES is positively associated with good health and longevity (Avenado and Kawachi 2014; Geruso 2012; Link and Phelan 1995; Luftey

and Freese 2005; Phelan et al. 2010; Prag et al. 2016; Preston and Taubman 1998). Although this literature largely excludes Asians, extant research has suggested that the forgoing association also holds among these groups (de Castro et al. 2010; Gong et al. 2012; Zhang and Wu 2017). Given the positive selection of post-1965¹ voluntary migrants, most of the Asian groups in this study are likely to be highly educated and positioned in high-paying and high-status jobs.

Asians, however, face wide interethnic disparities in income and educational attainment, with many Southeast Asians—including Vietnamese—faring worse than those of East Asian heritage (Budiman and Ruiz 2021; Fong 2008; Kao and Thompson 2003; Sakamoto et al. 2009; Takei and Sakamoto 2008). For example, data from the American Community Survey (ACS) for the period 2012–2016 show that of the six largest Asian groups, Asian Indians have the highest median annual household income and Vietnamese the lowest, with Filipinos, Japanese, Chinese, and Koreans falling between the two groups.² However, median household income may not sufficiently capture important aspects of Asian groups' SES. Educational attainment is likely a more useful indicator because it captures access to health care, healthy diet, occupational security, and the ability to understand healthcare information. Thus, we use educational attainment as the main indicator of SES in this study. Data from the National Center for Education Statistics for the year 2014 indicate the percentage of the adult population over the age of 25 with a bachelor's degree or higher (Musu-Gillette et al. 2017). These data show Asian Indians with the highest education attainment at 73%, followed by Chinese (54%), Koreans (54%), Japanese (51%), Filipinos (48%), and Vietnamese (28%). In light of these patterns, we expect that Asian Indians will have a substantially higher life expectancy than the other ethnic groups and that the Vietnamese will have a lower life expectancy.

Regional Differences in Health

Place also matters for health, and in some parts of the country, the geographic divergence in health is widening (Avenado and Kawachi 2014; Case and Deaton 2017; Cullen et al. 2012; Elo et al. 2019; Rogers et al. 2019; Wang et al. 2013). When compared with its European peers, the United States suffers from greater geographic inequalities in mortality, such that life expectancies can vary by nearly seven years across states (NRC et al. 2013; Wilmoth et al. 2010). Large regional differences in disease control, medical treatment, and other risks contribute to these inequalities (Montez and Berkman 2014; Montez et al. 2019; Sheehan et al. 2018). This gap is especially pronounced in the South, with higher death rates and lower life expectancies regardless of race (Case and Deaton 2017; Cossman et al. 2007; Fenelon 2013; Murray et al. 2006). Macro-level studies also showed that southern states maintain some of the highest rates of diseases, such as obesity and HIV, in the United States (Fenelon 2013; Hess et al. 2017; Segal et al. 2016). Last, southern states—particularly in the Southeast—exhibit persistent clusters of high death rates (Cossman et al. 2007) and rising rates of “deaths of despair” (Case

¹ The Hart-Celler Act of 1965 removed previous restrictive immigration quotas that largely prevented mass migration from most Asian countries, thus leading to a new wave of immigration.

² The American Community Survey Public Use Microdata Sample (PUMS) files are available at <https://www.census.gov/programs-surveys/acs/microdata/access.2016.html>.

and Deaton 2017). Unfortunately, research on the subject largely overlooks Asians; thus, it remains unclear whether they fit these patterns.

Immigration and Spatial Patterns in Health

The geographic distribution of Asian groups is closely tied to immigration. Research has suggested that immigrants relocate to areas settled by coethnics to access the financial and social resources of the established ethnic community and to minimize costs associated with migration (Massey 1990; Zhou 1997). These areas, referred to as *traditional destinations*, are home to long-established coethnic community enclaves (Singer 2004). For many Asian groups, these traditional destinations are located mostly in the West and large metropolitan areas in the Northeast (Kasinitz et al. 2008; Logan et al. 2002; Min 2006; Portes and Rumbaut 2014; Takaki 1989; Zhou 1992). However, immigrants in general, and Asians in particular, now disperse beyond the traditional destinations to *new or nontraditional destinations*—especially in the South and the Midwest—where the ethnic communities are smaller and less established (Adelman and Tsao 2016; Ellis et al. 2014; Flippen and Kim 2015; Frey 2011; Hoefel et al. 2012; Joshi and Desai 2013; Marrow 2005; Mohl et al. 2016; Singer 2004, 2009). Considering this phenomenon, how might Asian groups' life expectancy and mortality vary between these regions?

Immigrants generally arrive in the United States healthier than their U.S.-born counterparts, and their health advantage is at least partly attributable to positive selection effects (Akresh and Frank 2008; Ichou and Wallace 2019; Landale et al. 2006; Riosmena et al. 2017; Wallace and Wilson 2019). Asian immigrants, in particular, have better health outcomes than their U.S.-born coethnics and non-Latinx Whites (Cunningham et al. 2008; Lauderdale and Rathouz 2000). Still, the social context of the immigrant destination is also important to promoting well-being (Eschbach et al. 2004).

Studies on Mexican immigrants have shown that ethnic enclaves offer a protective effect attributed to the good mental and physical health produced by coethnic social support (Markides and Eschbach 2005; Palloni and Arias 2004). As such, immigrants who settle in less established destinations forgo the protective health benefits of the ethnic enclaves (Lichter and Johnson 2009). Nevertheless, recent findings on Mexican immigrants demonstrated that a health advantage exists among those who live in nontraditional and new destinations, contradicting long-held assumptions about the advantages of ethnic enclaves (Fenelon 2017). Another study showed that in nontraditional destinations, the Latinx mortality advantage over non-Latinx Whites is larger than in traditional Latinx immigrant destinations (Brazil 2015).

Perhaps immigrants who settle in traditional destinations and ethnic enclaves also have the most to gain from the social, economic, and health resources available there (Alba et al. 2014; LeClere et al. 1997; Portes and Rumbaut 2014). Consequently, those who settle in these areas are also more likely to be those with low skills and social capital. On the other hand, those who settle in less established destinations may be more skilled and more educated and thus benefit from those factors regardless of the resources afforded by the coethnic community. For instance, Adelman and Tsao (2016) found that Asian immigrants are beginning to reach economic parity with non-Latinx Whites in the

South. Also, Flippen and Kim (2015) showed that for Chinese, Asian Indians, Japanese, and Filipinos, residing outside traditional Asian destinations is associated with higher education and higher wages. Considering the robust association between SES and health, the selection for higher-SES individuals in less traditional destinations may partly explain interregional mortality and life expectancy differences among Asian groups. This explanation is relevant given that the majority of the United States' Asian population and more than 70% of its Asian adults are foreign-born (Budiman and Ruiz 2021).

Further, studies investigating immigrant destinations have generally examined subregional units, such as states, counties, and metropolitan areas (Adelman and Tsao 2016; Brazil 2015; Fenelon 2017; Flippen and Kim 2015). These studies underlined that the status of a census region as traditional or new/nontraditional varies by each ethnic group's immigration history and settlement pattern. They showed that the cities and states in the West (including Hawaii) are the traditional gateway destinations for Asians as a whole in the United States; however, groups like Chinese, Koreans, and Asian Indians also have large and long-standing communities in major cities in the Northeast—in particular, New York City (Frey 2011; Kasinitz et al. 2008; Lee 2015; Logan et al. 2002; Takaki 1989; Zhou 1992). Even by the 1980s, these regions were already home to a large proportion of the Chinese, Korean, and Asian Indian populations in the United States (Takaki 1989). On the other hand, the South and the Midwest can be more clearly categorized as new/nontraditional destinations for all groups in the study (Adelman and Tsao 2016; Joshi and Desai 2013; Mohl et al. 2016). Although a few areas in the Midwest (e.g., Chicago) and the South have established Asian ethnic communities (Frey 2011; Glasrud 2001; Joshi and Desai 2013; Mohl et al. 2016), most of the growth in the Asian populations in these regions took place just within the last few decades, and much of it is the result of migration to the United States (Adelman and Tsao 2016; Hoeffel et al. 2012).

Given the forgoing discussion, we expect that our findings will align with the selectivity process associated with traditional versus new/nontraditional destination differences occurring at finer geographic levels. Because we consider the South, Midwest, and for some groups (i.e., Vietnamese, Filipinos, and Japanese) the Northeast as new or nontraditional destinations, we expect them to have younger age structures and larger proportions of immigrants. Therefore, we expect that the six ethnicities of interest will exhibit better health in the South and Midwest compared with the West. For Chinese, Koreans, and Asian Indians, we also expect that those in the South and Midwest will have better health than those in the Northeast. As a result of positive selection, the geographic disadvantage often associated with the South may not be pronounced among the Asian groups in this study. We also expect Filipinos, Vietnamese, and Japanese to have better health in the Northeast relative to the West.

Racialization and Place

Differential exposure to anti-immigrant and race-related antagonism may also partly explain spatial patterns in health. We know that chronic exposure to racism and prejudice significantly increases the risk of poor health (Gee and Ford 2011; Gee and Ponce 2010; Gee et al. 2007; Morey et al. 2018; Paradies et al. 2015; Williams et al.

2019). Areas with long histories of Asian immigration have long endured anti-Asian tensions (Boyd 1971; Takaki 1989). Also, places such as the American South, with its long history of racial conflict, tension, and violence, may continue to expose non-White groups to race-related stressors (Bonilla-Silva 2018; Feagin and Ducey 2018; Omi and Winant 2014). Such stressors are detrimental to health and longevity (Geronimus 1992; Pearlin 1989; Turner 2013).

However, it may also be the case that Asian groups in new or nontraditional destinations experience some protective insulation against such race-based stressors. Given our assumption regarding new destination selection effects, a larger portion of Asians outside the West may be perceived as model minorities. Drawing on Allport's (1954) intergroup contact hypothesis, we propose that the higher status of Asians in new destinations compared with those in traditional destinations may facilitate positive interactions with other racial groups. Another possibility is that in places with large or growing populations of specific ethnic groups, such groups may face more prejudice and hostility as a result of being perceived as growing threats to the existing social hierarchy (Blumer 1958; Bobo and Hutchings 1996). Moreover, research suggested that U.S.-born Asians, compared with their immigrant counterparts, are at higher risk of death in communities with greater anti-immigrant prejudice (Morey et al. 2018). Consequently, it is likely that the negative health effects of anti-Asian prejudice are more pronounced in traditional destinations, where a larger proportion of the Asian population is U.S.-born. Thus, even with the presence of large Asian communities, racial discrimination remains an important aspect of the Asian American experience in places like California, and it remains a significant predictor of poor health (Gee and Ponce 2010). Therefore, it is not unreasonable to expect that most Asian groups in the South, Northeast, and Midwest will experience longer life expectancies than Asians in the West.

Still, the racialized experiences of Asian groups will likely vary by ethnicity. For instance, research demonstrated that some ethnic groups, such as Asian Indians, are less likely to be classified by others as members of the Asian category (Lee and Ramakrishnan 2019). Other groups, like Filipinos, report being racialized as non-Asian partly due to their physical features and cultural similarities to Latinos (Ocampo 2016). Consequently, these groups may experience differential treatment when compared with groups like Chinese or Japanese. Bonilla-Silva (2002, 2018) posited that the experiences of Asians will continue to diverge, such that groups with higher SES and fairer skin (e.g., Chinese, Koreans, Japanese) will benefit from being racialized as "honorary Whites," whereas those with lower SES and darker skin tone (e.g., Vietnamese, Cambodians, Laotians, etc.) will be racialized as members of the "collective Black." Therefore, it would not be surprising to find that Vietnamese—with their relatively low SES and purported membership in the collective Black—exhibit the shortest life expectancy of any group in this study.

Summary

Prior work has highlighted multiple directions and potential explanations for the patterns of life expectancy that we may observe among Asian ethnic groups in the United States. First, we have reason to expect that life expectancy among individual

ethnic groups will follow an SES gradient (indicated by educational attainment) such that Asian Indians will exhibit the longest life expectancy and Vietnamese the shortest. However, this expectation is complicated by prior research speaking to the high levels of morbidity in the Asian Indian population. Second, we anticipate that Asians in the Midwest and South will have longer life expectancies than their counterparts in the West. We also expect Chinese, Koreans, and Asian Indians in the Midwest and South to have longer life expectancies than coethnics in the Northeast. Moreover, we expect to see longer life expectancies for Filipinos, Vietnamese, and Japanese in the Northeast than those in the West. These hypotheses take into account the research linking immigration, race, and geography to health.

Prior scholarship showed that positive selection at least partly explains the immigrant health advantage. Consequently, our regional-level findings may be suggestive of positive selection effects similar to international migrants. The positive selection may also be present among all groups in the South and Midwest and among some in the Northeast. Further, historical immigration patterns differentiate the West as the region with a larger proportion of Asians in the second and later generations, which means that their health has likely deteriorated compared with when they first migrated to the United States. These patterns also suggest that the West and the Northeast (for Chinese, Koreans, and Asian Indians) will have a larger proportion of people who are more perceptive of racism and its mental and physical impact on health. These expectations, however, may be complicated by the differential racialization of Asian ethnicities that result from distinctions in physical appearances, the stereotypes attached to the ethnic groups, and the perceived threat that they may pose to existing racial hierarchies.

Data and Methods

Data Source

Our analyses primarily depended on age-specific death rates for Asians overall, age-specific death rates for the six largest Asian ethnicities (Chinese, Asian Indians, Filipinos, Vietnamese, Koreans, and Japanese), regionally age-specific death rates overall, and regionally age-specific death rates for the six largest Asian ethnicities. For the numerators, we used the pooled mortality data from the All Counties Multiple Cause of Death File (MCDF) from the National Center for Health Statistics (NCHS) (2018) for the five-year period, 2012–2016. The All Counties MCDF is a restricted data set collected and made available by the National Vital Statistics System, the Centers for Disease Control and Prevention (CDC), and the NCHS. The All Counties MCDF contains all officially recorded deaths in the United States, including the District of Columbia, Puerto Rico, and all other United States territories. The records also provide information based on death certificates completed jointly by a medical examiner and a licensed funeral director. The death certificate includes information such as the underlying cause of death, age, gender, country of birth, state of residence, county, race, Latinx ethnicity, and ethnicity for Asian decedents. Mortality data are coded by states and are then submitted to the NCHS through the Vital Statistics Cooperative Program or coded by NCHS based

on copies of original death certificates provided by state registration offices.³ We examined the deaths that occur within the 50 states and the District of Columbia.

We obtained the population denominators from the Public Use Micro Sample (PUMS) data file of the ACS five-year population estimates (2012–2016), which contains data on disaggregated Asian ethnic groups. The PUMS ACS data are publicly available and were accessed through Data Ferret. As part of the U.S. Census Bureau's Decennial Census Program, the ACS provides current demographic, social, economic, and housing estimates throughout the period between each census. The survey randomly samples approximately 3.5 million addresses in the United States and Puerto Rico every year. Thus, the data are representative of the U.S. population. It asks respondents a range of questions, ranging from sociodemographic information (e.g., age, sex, country of birth, and income) to subjects such as language spoken at home and shelter costs. For the current study, we used five-year population estimates (2012–2016), disaggregated by race/ethnicity, age, sex, and census region. Population denominators for each ethnic group include only single-race individuals. That is, to avoid overestimation of population denominators, we excluded population estimates for people who reported more than one ethnicity and/or race.

Methodology

We conducted the analyses at the national and regional levels. Concerning regional-level analyses, we computed life expectancies for the four geographic regions used in the U.S. Census: West, South, Midwest, and Northeast.⁴ Given the level of disaggregation we sought to study, we examined the age-compositions for the six ethnicities by region to determine whether it was feasible to break down the analysis by ethnicity and region and to better understand migration effects on the age structures of each region. Another constraint was that the numerators (number of deaths) for each age-specific death rate had to be at least 10, as dictated by the CDC.

One would expect that some regions might not have sizable Asian populations, even using five years of pooled data, in the youngest and oldest age groups. Thus, we analyzed the size and age structures of the Asian populations in each region to produce population pyramids by ethnicity. We present population pyramids for disaggregated ethnic groups at the national level and for aggregated Asians by region. This exercise proved to be informative for the estimation of life expectancy by Asian ethnicity and region: it revealed that in some regions, certain ethnic groups had less than 1,000 person-years in age intervals below 25 and older than 65. This finding led us to calculate both life expectancy at birth (e_0) and working-age life expectancy ($_{40}e_{25}$)—specifically, the number of expected years one could live between ages 25 and 65—and to include confidence intervals.

³ For more information on the Multiple Cause of Death File, please see Multiple Cause of Death 1999–2017 on CDC Wonder Online Database, released in 2018, and the National Center for Health Statistics website: <https://www.cdc.gov/nchs/nvss/nvss-restricted-data.htm>.

⁴ The West region includes Hawaii and Alaska. For more information, see U.S. Census Bureau Geographic Terms and Definitions: <https://www.census.gov/programs-surveys/popest/about/glossary/geo-terms.html>.

We produced abridged standard life tables to examine the life expectancy at birth (e_0) for all Asians in the United States and in each of the four regions. We also calculated overall life expectancy in the United States for each of the six Asian ethnicities of interest. In accordance with CDC data restrictions, and because small cell sizes in some age groups could potentially bias estimates, we did not compute life expectancy at birth for ethnic groups that contained fewer than 10 deaths in any age group. Thus, except for Asian Indian and Chinese males, we did not estimate life expectancy at birth for disaggregated ethnicities by region. However, because we were still interested in comparing regional differences in health, and small numerators were only a problem for the youngest and oldest age groups, we computed working-age (25–64) life expectancy (${}_{40}e_{25}$) for Asians overall, and for each of the six ethnic groups, at the national and regional levels.

Except for the open age group (85+), we used five-year age intervals in our abridged life tables, beginning with the age group 0–4 for e_0 estimates and 25–29 for ${}_{40}e_{25}$ estimates. Moreover, we assumed that ${}_na_x = n/2$ for all age groups except for the first (0–4). For the age group 0–4, we assumed that ${}_na_x = 0.261$ for males and ${}_na_x = 0.279$ for females, using data from the aggregate Asian group for each ethnicity and for the aggregate Asian group for each region. To derive the estimate, we first determined the ${}_1a_0$ and ${}_4a_1$ using Preston et al.'s (2001:48) adaptation. From there, we calculated the ${}_5a_0$ values using the life table values expressed as follows:

$${}_5a_0 = ({}_1a_0 \times {}_1d_0 + {}_4a_1 \times {}_4d_1) / ({}_1d_0 + {}_4d_1).$$

Last, we computed confidence intervals for life expectancy estimates following Chiang's (1984:153–164) approach, which uses the central limit theorem to derive formulas to calculate standard errors. All life expectancy and confidence interval computations utilized a function created by the authors using SAS 9.4, and we used Microsoft Excel for the remaining calculations and figures.

Results

Key Population Characteristics

Table 1 presents some key characteristics of the groups in this study. In general, the regional distribution of each ethnicity and the proportion of each group that is foreign-born in each region aligned with our expectations. The West remains home to the largest portion of Asians as an aggregate and each disaggregated ethnicity except for Asian Indians. This finding is unsurprising because the West, especially California, has been a gateway destination for most Asian immigrants in the United States. Moreover, Table 1 shows that the Northeast, Midwest, and South have higher proportions of immigrants among aggregated Asians and for disaggregated groups except Vietnamese. This finding indicates that a larger number and a larger proportion of Asian individuals in the West are the children or grandchildren of immigrants.

Further, concerning SES, Table 1 highlights that for most groups—except for Vietnamese and Koreans—those who reside in new and/or nontraditional regions are more likely to have a bachelor's degree than those in traditional destinations. Recall that the West is a traditional region for all six ethnic groups, and the Northeast is

Table 1 Key population characteristics by ethnicity and region, 2012–2016 (proportions presented)

	All Asians	Chinese	Asian Indians	Filipino	Vietnamese	Korean	Japanese
Ethnic Population							
National	1.00	1.00	1.00	1.00	1.00	1.00	1.00
West	.46	.45	.26	.65	.48	.44	.71
South	.22	.17	.29	.17	.34	.24	.12
Northeast	.21	.29	.29	.11	.09	.21	.10
Midwest	.11	.09	.16	.08	.09	.11	.08
Foreign-born							
National	.66	.69	.71	.65	.68	.72	.41
West	.62	.67	.71	.62	.68	.71	.30
South	.70	.71	.72	.71	.67	.73	.64
Northeast	.70	.70	.71	.72	.68	.73	.75
Midwest	.69	.75	.72	.70	.66	.74	.63
Educational Attainment							
Is High school or More, for People Aged 25+							
National	.86	.82	.92	.93	.73	.92	.95
West	.87	.84	.92	.92	.73	.92	.96
South	.87	.88	.93	.94	.73	.91	.93
Northeast	.84	.75	.90	.95	.69	.94	.96
Midwest	.87	.87	.94	.94	.74	.92	.95
Educational Attainment							
Is Bachelor's Degree or More, for People Aged 25+							
National	.52	.54	.73	.48	.28	.55	.50
West	.48	.53	.74	.43	.29	.53	.48
South	.55	.64	.75	.54	.27	.51	.48
Northeast	.54	.47	.68	.64	.27	.60	.67
Midwest	.57	.64	.78	.57	.26	.57	.57

Notes: Each ethnic group captures individuals who only reported one ethnicity (e.g., Chinese alone, Filipino alone, etc.). “All Asians” excludes individuals who identified as having more than one race.

Source: American Community Survey Public Use Microdata Sample five-year estimates (2012–2016).

also a traditional destination for Chinese, Asian Indians, and Koreans. Table 1 also shows that Asian Indians have a sizable educational advantage over all other groups, whereas Vietnamese have a considerable disadvantage at the national level and across all regions. Last, when ethnic differences in SES are examined by region, we see that Asian Indians maintain the highest position and Vietnamese the lowest across all four regions.

Differences in Age Structures

To demonstrate the heterogeneity of Asian groups, we first examined their age composition at the national level. The patterns in Figure 1 generally meet our expectations. Groups who are more recent settlers (e.g., Asian Indians, Koreans, Vietnamese) in the United States have relatively younger populations than those who have been

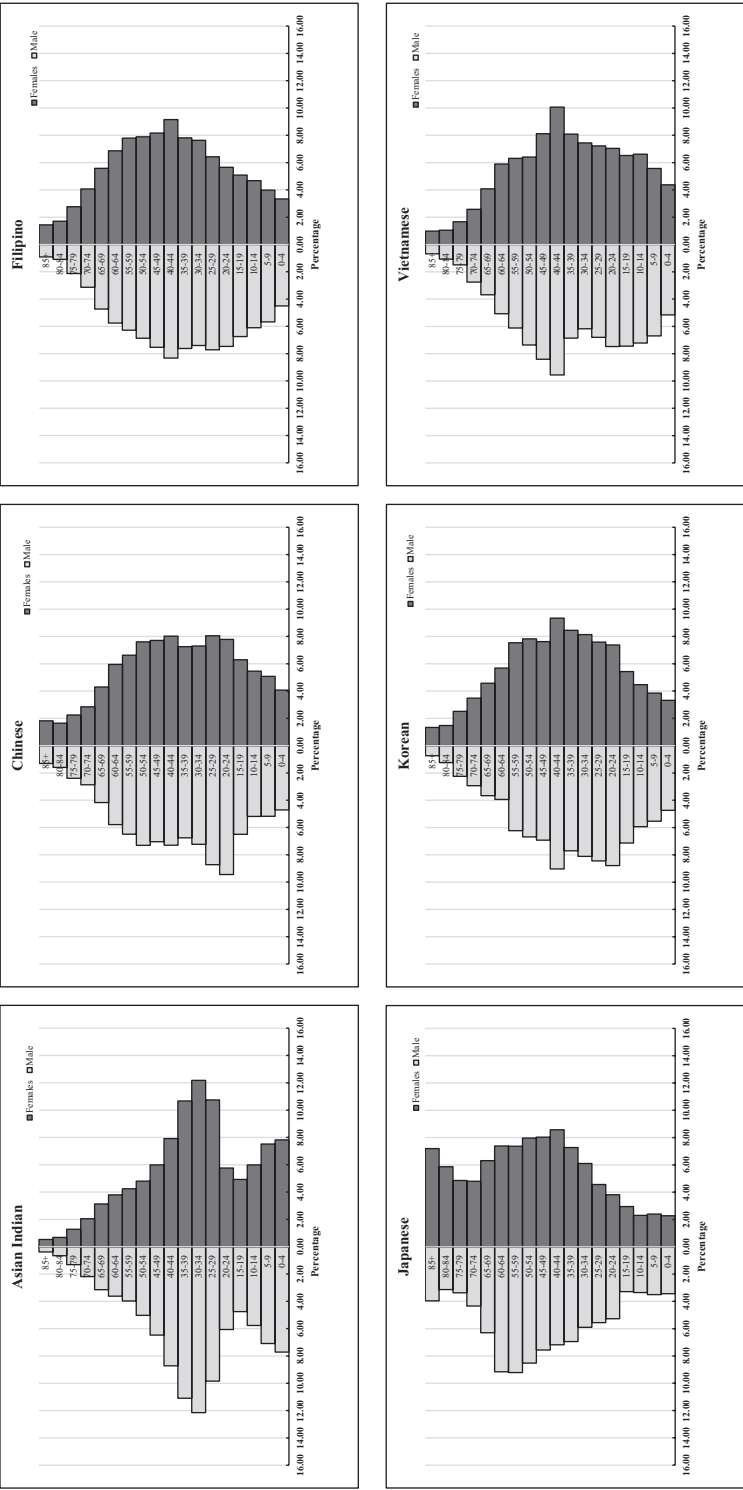


Fig. 1 Population pyramids for disaggregated Asians in the United States, 2012–2016. Source: Pyramids created by authors using data from the American Community Survey five-year estimates (2012–2016).

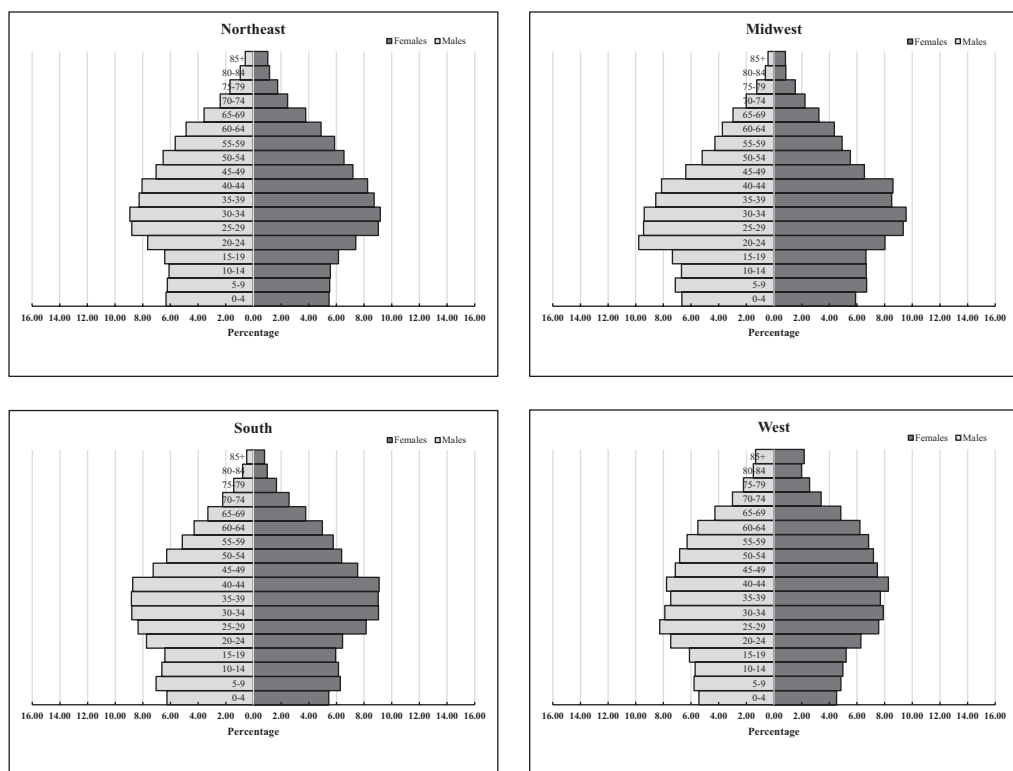


Fig. 2 Population pyramids for aggregated Asians by region, 2012–2016. *Source:* Pyramids created by authors using data from the American Community Survey five-year estimates (2012–2016).

here longer (e.g., Japanese, Chinese). We then looked at age structures by region. The age composition of the Asian populations in each census region reflected our expectations regarding population proportions by region. For the period 2012–2016, we found that for aggregated Asian males and females, the Northeast, South, and Midwest had higher proportions of people below 10 years old compared with the West (Figure 2).

At the other end of the age spectrum, we found the opposite: the proportion of the Asian population aged 85+ in those regions is much smaller than that in the West. For example, the proportion of Asians aged 85+ in the South is nearly 60% smaller than the proportion of people of the same age group in the West. Thus, compared with the West, a larger proportion of aggregated Asians in these regions are in less vulnerable age groups, including prime working years. This finding bolsters our expectation that the Northeast, Midwest, and South will have relatively healthier Asian populations compared with the West.

When disaggregated, the Asian ethnic groups demonstrate interethnic and inter-regional differences in age compositions (not presented but available upon request). In general, we found that groups outside the West have fewer people above age 65 and more people under age 10. Notably, the age structure of Asian Indians across all four regions was relatively consistent, showing no large difference between the West

Table 2 Life expectancy at birth by ethnic group, region, and sex, 2012–2016 (with 95% confidence intervals [CI])

	Sex	Life Expectancy (e_0)	95% CI
All Asians	Male	83.68	(83.62, 83.74)
	Female	88.67	(88.61, 88.73)
By Ethnicity			
Chinese	Male	86.82	(86.70, 86.93)
	Female	91.30	(91.19, 91.42)
Asian Indian	Male	86.53	(86.34, 86.72)
	Female	89.48	(89.29, 89.68)
Filipino	Male	83.34	(83.20, 83.49)
	Female	89.22	(89.08, 89.36)
Vietnamese	Male	77.50	(77.36, 77.64)
	Female	79.70	(79.58, 79.83)
Korean	Male	85.58	(85.37, 85.80)
	Female	89.89	(89.68, 90.01)
Japanese	Male	83.55	(83.34, 83.76)
	Female	89.54	(89.36, 89.72)
By Region			
West	Male	82.76	(82.67, 82.84)
	Female	88.08	(88.00, 88.16)
South	Male	84.79	(84.63, 84.95)
	Female	88.79	(88.64, 88.95)
Northeast	Male	85.32	(85.18, 85.47)
	Female	90.75	(90.59, 90.90)
Midwest	Male	83.69	(83.49, 83.89)
	Female	88.41	(88.20, 88.62)

Source: Authors’ calculations using the Multiple Cause of Death File (2012–2016) and the American Community Survey (2012–2016).

and the other regions. The Japanese, on the other hand, showed sizable differences in age composition across regions, with substantially larger proportions of people in the oldest age groups in the Midwest and the West.

Differences in Life Expectancy at Birth

Table 2 presents life expectancy by sex for the disaggregated ethnic groups, region, and for Asians as an aggregate.⁵ Based on SES differences, we anticipated Asian Indians experiencing a considerable longevity advantage over all other ethnic groups, with Vietnamese encountering a substantial disadvantage. At the national level, we found that life expectancy at birth largely aligned with those expectations. Recall that nationally, Asian Indians had the highest education attainment, followed by Chinese

⁵ Non-Latinx White life expectancy is as follows: national (male e_0 = 76.65; female e_0 = 81.38); West (male e_0 = 77.76; female e_0 = 82.20); South (male e_0 = 75.53; female e_0 = 80.43); Northeast (male e_0 = 77.66; female e_0 = 82.46); and Midwest (male e_0 = 77.64; female e_0 = 81.26).

and Koreans, Japanese, Filipinos, and Vietnamese (see [Table 1](#)). Nevertheless, Chinese males ($e_0 = 86.82$) and females ($e_0 = 91.30$) outlived all their counterparts; Vietnamese, on the other hand, conformed to our expectations, exhibiting the lowest life expectancy, with males expected to live 77.5 years and females 79.7 years. That Vietnamese male lag of 9.3 years behind their Chinese counterparts and female lag of 11.6 years is not surprising considering their substantially lower SES. All other groups fall between the Chinese and Vietnamese; except for the Vietnamese, no ethnic group lagged more than four years behind the Chinese. Notably, although the Chinese SES is lower than that of Asian Indians, the two groups have comparable life expectancies. This finding was unexpected, especially when considering the large SES advantage Asian Indians have over the other groups.

Comparing across regions, we found that for aggregated Asian males and females, those in the West (male $e_0 = 82.76$; female $e_0 = 88.08$) have the shortest life expectancy, and all other regions have a significant longevity advantage over that region ([Table 2](#)). As the region with the longest history as a traditional destination for Asian groups in the United States, we expected the West to have the shortest life expectancy in the country. Moreover, although small or zero numerators in the youngest and oldest groups prevented us from estimating life expectancy at birth by region for all ethnic groups, we were able to calculate values for Chinese and Asian Indian males (not presented). We found significant differences among Chinese: those in the West (male $e_0 = 86.40$) and Northeast ($e_0 = 86.36$) had lower life expectancy than those in the South ($e_0 = 90.10$) and Midwest ($e_0 = 87.08$). However, we found no significant differences across regions among Asian Indian males. For both ethnic groups, the West and Northeast are traditional destinations. Thus, we found only partial support for our expectations regarding regional differences in life expectancy.

Working-Age Life Expectancy

When we examined life expectancy only among working-age adults (25–64), much of the pattern from the life expectancy at birth analyses remained at the national level ([Table 3](#)). The Chinese (male ${}_{40}e_{25} = 39.34$; female ${}_{40}e_{25} = 39.60$) and Asian Indians (male ${}_{40}e_{25} = 39.29$; female ${}_{40}e_{25} = 39.62$) remain the healthiest, and Vietnamese are the least healthy (male ${}_{40}e_{25} = 38.50$; female ${}_{40}e_{25} = 39.02$). Japanese, Filipinos, and Koreans fall in between, with no statistically significant difference among them. Again, these findings align with our expectation that life expectancy would follow an SES gradient based on education. [Table 3](#) also corroborates findings from [Table 2](#) regarding regional differences for aggregated Asians. Moreover, except for Filipino males' advantage in the Northeast relative to their coethnic counterparts in the West, and Vietnamese males' and females' disadvantage in the West compared with coethnics in other regions, life expectancies are equivalent across regions for most groups. Thus, we found only partial support for a new destination advantage.

Last, when examining ethnic group differences within each region, we found significant interethnic gaps only in the West ([Table 3](#)). The pattern among males in the West mirrors the pattern seen at the national level: Chinese and Asian Indians had the highest life expectancy, and Vietnamese had the lowest. Among females in the West, Filipinos and Vietnamese had significantly lower life expectancies than the other ethnic groups.

Table 3 Working-age (25–65) life expectancy by ethnic group, region, and sex, 2012–2016 (with 95% confidence intervals [CI])

	National			West			South			Northeast			Midwest		
	Est.	95% CI		Est.	95% CI		Est.	95% CI		Est.	95% CI		Est.	95% CI	
All Asians	38.97	(38.94, 39.00)		38.80	(38.76, 38.85)		39.03	(38.96, 39.10)		39.19	(39.13, 39.26)		39.07	(38.98, 39.16)	
Chinese	39.44	(39.41, 39.46)		39.36	(39.32, 39.40)		39.46	(39.41, 39.51)		39.56	(39.50, 39.61)		39.49	(39.41, 39.57)	
	39.34	(39.28, 39.39)		39.29	(39.21, 39.37)		39.46,	(39.21, 39.37)		39.32	(39.22, 39.42)		39.40	(39.21, 39.59)	
Asian Indian	39.60	(39.56, 39.65)		39.58	(39.51, 39.64)		39.65	(39.54, 39.77)		39.60	(39.51, 39.68)		39.65	(39.49, 39.81)	
	39.29	(39.22, 39.35)		39.35	(39.22, 39.48)		39.27	(39.15, 39.39)		39.27	(39.15, 39.40)		39.23	(39.05, 39.42)	
Filipino	39.62	(39.56, 39.67)		39.65	(39.54, 39.77)		39.59	(39.49, 39.70)		39.61	(39.50, 39.72)		39.61	(39.47, 39.75)	
	38.94	(38.87, 39.02)		38.85	(38.76, 38.95)		39.08	(38.88, 39.28)		39.19	(38.96, 39.41)		39.08	(38.80, 39.37)	
Vietnamese	39.43	(39.37, 39.48)		39.40	(39.33, 39.47)		39.40	(39.26, 39.54)		39.55	(39.39, 39.72)		39.47	(39.28, 39.65)	
	38.50	(38.41, 38.60)		37.70	(37.56, 37.85)		39.40	(39.26, 39.55)		39.17	(38.83, 39.50)		38.85	(38.56, 39.13)	
Korean	39.02	(38.94, 39.10)		38.65	(38.53, 38.76)		39.40	(39.25, 39.54)		39.62	(39.41, 39.83)		39.04	(38.79, 39.28)	
	39.11	(39.00, 39.21)		39.04	(38.87, 39.20)		39.23	(39.00, 39.46)		39.10	(38.89, 39.31)		39.13	(38.80, 39.46)	
Japanese	39.46	(39.38, 39.54)		39.44	(39.33, 39.56)		39.52	(39.36, 39.68)		39.47	(39.30, 39.64)		39.39	(39.13, 39.65)	
	39.04	(38.91, 39.17)		38.94	(38.78, 39.10)		39.14	(38.73, 39.56)		39.35	(38.92, 39.77)		39.33	(38.95, 39.71)	
	39.52	(39.43, 39.62)		39.48	(39.36, 39.60)		39.53	(39.23, 39.82)		39.66	(39.33, 39.99)		39.65	(39.31, 39.98)	

Note: For each ethnic group, the top row shows data for males, and the bottom row shows data for females.
Source: Authors' calculations using the Multiple Cause of Death File (2012–2016) and the American Community Survey (2012–2016).

Discussion

Explaining Patterns Among Aggregated Asians

The findings on regional life expectancy variation among aggregated Asians (Table 2) may be explained by selection effects associated with immigration and the development of new and nontraditional destinations. The West, which is home to the largest and longest-standing Asian communities in the United States, exhibited the shortest life expectancy among the four census regions. Even Asians in the South—generally described in the literature as the region having some of the worst health outcomes in the United States (Murray et al. 2006; Zang et al. 2021)—had a life expectancy advantage over those in the West. Moreover, the disadvantage observed in the West may be explained by positive selection effects associated with immigration. Larger proportions of aggregated Asians in the South are immigrants than in the West. Immigrants also make up a larger portion of Asian populations in the Northeast and Midwest. Consequently, the aggregated Asian populations outside the West are likely to be more positively selected for health, thus affording them a longevity advantage over those in the West. This finding corroborates research demonstrating that the health of immigrants in general (Ichou and Wallace 2019; Kennedy et al. 2015; Riosmena et al. 2017), and Asians in particular (Frisbie et al. 2001), benefit from immigrant selectivity.

These positive selection effects may also be associated with the formation of new immigrant destinations. For aggregated Asians, the proportion of the population in the oldest age group in the South and Midwest is smaller than that in the West and the Northeast (Figure 1). This age composition reflects the fact that Asian populations have grown only recently in these areas and suggests that the more traditional destinations, particularly the West, are home to a large proportion of people who are the children and grandchildren of immigrants and people who have lived in the region longer. That aggregated Asians in the West exhibit shorter life expectancies than those in other regions is no surprise given the literature pointing to the attenuation of migration stream and immigrant health advantages over time and across generations (Abraído-Lanza et al. 2005; Abraído-Lanza et al. 2016; Antecol and Beddard 2006; Giuntella and Stella 2017). Although these findings add nuance to the narrative surrounding geographic patterns of health in the United States, they largely align with recent research that interrogated the assumptions regarding the purported advantages of residing in traditional immigrant destinations (Brazil 2015; Fenelon 2017). This recent research is complicated, however, by the findings that Asians in the Northeast showed the longest life expectancy of any region (Table 2). As we noted previously, the Northeast is also a traditional destination for some Asian groups, including Chinese, Asian Indians, and Koreans. However, because the regional variation shown in Table 2 covers Asians only as an aggregate, it remains unclear how e_0 estimates may vary between regions for each ethnicity.

Patterns Among Disaggregated Groups

Our findings at the national level (Table 2) also suggest that ethnic variation in life expectancy at birth follows an SES gradient based on educational attainment. In general, these findings align with our expectations and with the existing literature on

education and health (Brown et al. 2012; Hendi 2017; Jackson and Kihara 2019; Leopold 2018; Montez et al. 2019). These findings also suggest that the marginal longevity benefits associated with SES decrease as one goes up the SES gradient, which might explain why the gap between Vietnamese and Filipinos is much wider (5.84 years among males and 9.52 years among females) than the gap between Chinese and Asian Indians (0.29 among males and 1.82 years among females) at the national level. The substantial educational attainment advantage that Asian Indians have over the Chinese was not associated with a comparable e_0 advantage. Thus, the Chinese overperformed expectations of life expectancy, whereas Asian Indians underperformed.

The underperformance of Asian Indians is likely associated with factors other than SES, including experiences of discrimination and prejudice. Growing research has demonstrated that South Asians experience racialized antagonism and violence qualitatively different from that targeted toward other Asians. For instance, South Asians are frequently exposed to racialized surveillance (Cainkar and Selod 2018; Selod 2018, 2019; Shahms 2020). These race-related stressors are detrimental to mental and physical health (Geronimus 1992; Pearlin 1989; Turner 2013), and they may undercut the benefits of educational attainment on the health of Asian Indians and other South Asians.

When we looked at variations in working-age life expectancy by region (Table 3), we found that the SES gradient is less salient across the various regions than nationally. Of the four regions, the West most closely echoes the national level pattern of ethnic health stratification based on educational attainment (Table 3). Noticeably, although Chinese had lower educational attainment than Asian Indians across all regions, they consistently had equal or longer life expectancy than Asian Indians. This finding suggests that SES alone cannot explain longevity patterns, particularly when examined in smaller geographic units. Moreover, it is also possible that educational attainment alone does not fully capture the SES of various Asian ethnic groups (Gong et al. 2012). Perhaps other measures, such as wealth, occupation, and homeownership, may better capture differences in social status among these groups (Yoo et al. 2012). It is also important to note that the lack of significant interethnic differences in the Northeast, Midwest, and South may be due to restricting the analysis to only the working-age population. We suspect greater interethnic differences in mortality schedules by region for age groups below and above the working ages.

Further, we found only partial support for a new destination advantage when we examined working-age life expectancy among disaggregated ethnic groups by region (Table 3). Filipino males in the Northeast had a significant advantage over their coethnics in the West. This finding is not surprising because the Northeast is a new destination for Filipinos, and a larger proportion of Filipinos in the Northeast are foreign-born and have a bachelor's degree when compared with the West. Moreover, Vietnamese males and females in the South, Northeast, and Midwest outlived their counterparts in the West. The South, Northeast, and Midwest are new regions for Vietnamese. However, Table 1 shows no sizable differences in percentage foreign-born or educational attainment between regions among Vietnamese. Thus, the advantage that new destination regions (Northeast, Midwest, and South) have over the West may be due to healthier individuals moving to those regions. The significant working-age life expectancy disadvantage faced by Filipino males and Vietnamese males and females in the West may also be attributable to greater exposure to stressors such as racism and anti-immigrant prejudice. The West is home to the largest Asian population, with 65%

of Filipinos and nearly 50% of Vietnamese in the country (Table 1). Given the long history of Asian settlement in the region, anti-Asian prejudice may be more salient in the West than in new destinations.

Last, we found larger longevity gaps between males than between females at the national level. This finding is consistent with existing studies on the male-female health-survival paradox, which notes that although females fare worse than males in regard to disability and many health outcomes, they tend to exhibit lower death rates than males (Case and Paxson 2005; Crimmins et al. 2010; Nathanson 1975; Oksuzyan et al. 2010). However, scholars have yet to come to a consensus on how to explicate this paradox.

Limitations

This study is not without limitations. First, the findings are limited by the lack of disaggregated data on other Asian ethnic groups, including most Southeast Asian ethnic groups, who may exhibit more sizable health disadvantages than the groups included in this study. These groups may also have such small population sizes that disaggregation would not be possible. If we take into consideration the research that shows the disproportionate impact of COVID-19 on already disadvantaged communities, an analysis of data from 2020 that includes other Southeast Asian groups may reveal even wider life expectancy gaps by ethnicity (Le et al. 2020; Wang et al. 2020). Thus, the life expectancy patterns in our study do not fully capture the health disparities within the Asian racial category. Additionally, because of the use of single-race categories for population denominators, our calculated values may be underestimates or overestimates. It is unclear how biracial and multiracial Asians were categorized in the MCDF data. Thus, we utilized population denominators for single race categories only.

However, even with single race categories, it is still possible that a numerator-denominator bias exists, given the possibility of differential identification of ethnicity in death certificates (numerator) and the ACS (denominator). For instance, the death counts for Chinese may include individuals who were counted as Taiwanese or Vietnamese in the ACS. If that were the case, then it is also possible that deaths for Vietnamese were undercounted. Last, the death counts for Asian Indians may also include other South Asians (e.g., Pakistanis, Bangladeshis) who are tabulated separately in the ACS. Thus, it is possible that we underestimated the life expectancies of Chinese and Asian Indians and overestimated that of Vietnamese.

Further, given the nature of our data, we did not directly test the association between immigrant selectivity by region and mortality risk. Data restrictions also prohibited an investigation of e_0 differences by ethnic group and region. Regional differences in life expectancy are suggestive of processes associated with new immigrant destination formation and selection effects, but our data and analyses focus on large geographic regions. An investigation of differences in health outcomes between new and traditional Asian immigrant destinations would require analyses at the county and/or metropolitan regions, as others have done for various immigrant groups and key outcomes (Fenelon 2017; Flippen and Kim 2015; Frank and Akresh 2016; Gurak and Kritz 2016; Hall 2013). Estimating life expectancy at such fine geographic units,

however, requires pooling more years of data than what is currently available for many individual ethnic groups. Still, our findings expand our understanding of the heterogeneity of the Asian population in the United States and make a strong case for studying Asians at the ethnic level when possible.

Conclusion

In this study, we compared the variations in mortality measures among the six largest Asian ethnic groups in the United States: Chinese, Filipino, Asian Indian, Vietnamese, Korean, and Japanese. Our demographic analyses yielded three key findings. First, the health of disaggregated Asian ethnic groups at the national level generally follows an SES gradient; however, other factors such as exposure to racism and prejudice may also undercut the benefits of high SES. Second, among aggregated Asians, those who reside in the traditional destination of the West experience a significant longevity disadvantage compared with those in new and nontraditional regions. Third, we found partial support for a new-destination advantage when ethnic groups are disaggregated. However, the differences in life expectancy at birth cannot be explained by migration-related factors or age composition alone.

Future research should investigate the underlying mechanisms and specific causes of death that produce differential life expectancy among various ethnic groups. Such studies should incorporate the roles of racialization/racism, migration patterns, contexts of reception, and geography. The conditions necessary for these factors to advantage or disadvantage specific groups remain open questions. Most importantly, this study demonstrates the heterogeneity of Asian groups' health experiences in the United States. The ethnic differences in life expectancy at the national and regional levels highlight the need for more detailed investigations concerning the ethnic groups that make up the monolithic Asian category. As the Asian population in the United States continues to grow and disperse geographically, it is imperative that the needs of more disadvantaged groups—such as Vietnamese and other Southeast Asians—do not get overshadowed by the success of other groups. We do a disservice to marginalized communities by clumping their unique experiences into a singular story. ■

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