



2015

State of Asian American & Pacific Islander Health in Houston / Harris County & Surrounding Areas

 **HOUSTON HEALTH**
DEPARTMENT

 **ASIAN AMERICAN
HEALTH COALITION**

Harris County
HCPHES
Public Health & Environmental Services
www.hcphe.org

2015

State of Asian American & Pacific Islander Health in Houston/Harris County & Surrounding Areas



Note: No comprehensive document exists that provides a detailed report on the overall health status of different AAPI groups in the Greater Houston and surrounding areas. Data compiled for this profile represents the priority four counties in the Greater Houston Areas (Brazoria, Fort Bend, Galveston and Harris Counties), the state of Texas, the City of Houston and finally nationwide. The data interpretation and sources provide information on which population each graph and table reflects.

Suggested Citation:

Nepal, V., Beiyi, C., Childers, M., Gor, B.J., Bryant, W., Banerjee, D. (2015). State of Asian American and Pacific Islander Health in Houston/Harris County and Surrounding Areas. Houston, TX: Houston Health Department.

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Introduction and

Asian Americans and Pacific Islanders (AAPI)

are the fastest growing racial/ethnic group in the United States. The percent of U.S. immigrants of Asian descent rose from 19% in 2000 to 36% in 2010, surpassing Hispanics at 31% (Pew Research Center, 2013). Asian American immigrants or their descendants are those who originate from any of the 54 countries and territories in Asia, including China, India, Japan, the Pacific Islands, Russia, and Vietnam. Immigrants from each Asian country have their own distinctive culture, history, language, beliefs and circumstances surrounding their journey to the U.S., in addition to more observable features such as food and clothing. Since Asian Americans have widely varying characteristics, it is important to collect and report data by the country of origin instead of grouping all under the “Asian Americans” category or as a part of the “others” category. Data specific to each population also can allow for targeted interventions that are most appropriate for that group.

A little more than a century ago, Asian Americans and Pacific Islanders (AAPI) in the United States were low wage, low skilled workers employed primarily in the agriculture, mining or construction sectors. Most of these immigrants lived in ethnic enclaves and had limited exposure or opportunities for integrating into the American mainstream. However, with the Immigration and Nationality Act of 1965, a wave of immigration began. Over the past three decades the wave of immigrants from Asia has gradually become more educated, with more than 65% having a college degree. Many chose occupations in the Science, Technology, Engineering or Mathematics (STEM) fields.

There has been an even greater growth of AAPI populations in certain geographic areas of the U.S. in the last two decades. The state of Texas has the third largest AAPI population in the country after New York and California. Some census tracts in the Houston area have as many as 37% of AAPI groups in the total population. The ZIP code maps on pages 14-16 show areas where Asian Americans from different countries of origin comprise a large proportion of the total population.

Nationally, little is known about the health issues of AAPI groups as compared to other racial/ethnic groups.



National data show that there are varying health needs among the different Asian ancestry groups that comprise AAPI, but more specific information is needed. In many cases, AAPI are omitted when collecting health data, which may partially be due to language barriers when surveys are conducted. When data is collected, any small numbers of AAPI sample information obtained through surveys are frequently combined together into the “others” category.

While little is known about the health issues of AAPI groups in the country as compared to other racial/ethnic groups, even less is known about the health needs of AAPI living in given cities or respective communities. For example, while few studies have examined the health of AAPI living in the Houston area, NO comprehensive document exists that provides a detailed report on the overall health status of different AAPI groups in the area.

In addition, the absence of data specific to AAPI based on their countries of origin means that it is almost impossible to make any recommendations about the health needs of any particular group of AAPI.

nd Background



Photo Credit: Vijay Pallod

“Over the past three decades the wave of immigrants from Asia has gradually become more educated, with more than 65% having a college degree.”

Thus, the aim of this health profile is threefold:

1. To compile all health indicators of AAPI at the local level to serve as a baseline for future research and interventions.
2. To highlight the limited data available.
3. To present examples of national data that were used to guide the priorities for interventions targeted at AAPI, in order to promote health equity.

The geographic scope of this profile is the four county area (Brazoria, Fort Bend, Galveston and Harris Counties) containing and surrounding the City of Houston. We chose these four counties because the concept of ‘Greater Houston’ covers these counties. Aggregation of these four counties as the unit of description of socio-economic as well as other health data allows for a larger sample and thus, more robust inferences can be drawn. Data and other ethnic groups information are compared with Non-Hispanic Whites as available and as appropriate. In some cases, national and state level statistics are used for comparison.

There are four key sections in the profile: demographics, general health conditions and behavioral/mental health, maternal and child health, and local health research. It is our hope that the readers will find this profile to be useful to engage in conversation on AAPI health in the four county area, collect data specific to AAPI countries of origin, identify the health needs of AAPI, and develop appropriate interventions that are geographically targeted.

In conclusion, we urge that attention needs to be focused on identifying health conditions and health needs of AAPI because of their rapid growth and increasing numbers and diversity. Although many are educated and economically well-off, many others, especially in the service and small business sectors are isolated, disconnected and hard to reach due to cultural and language barriers.





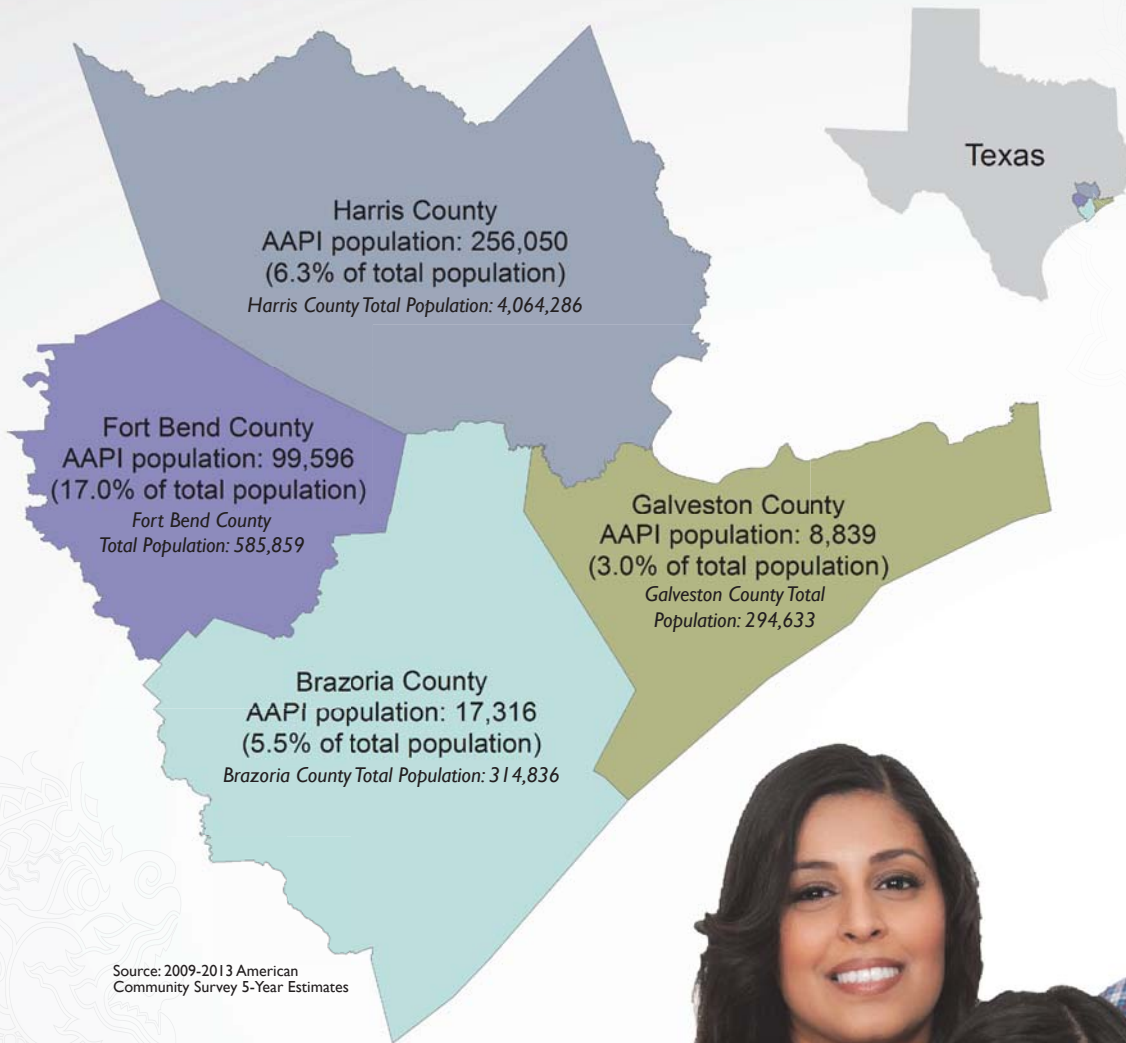


Socio-Demographics

Four County Area: Brazoria, Fort Bend, Harris, and Galveston

This section highlights the key demographic indicators and presents maps showing where the majority of AAPI live in the four county area.
age | sex | income | education | employment

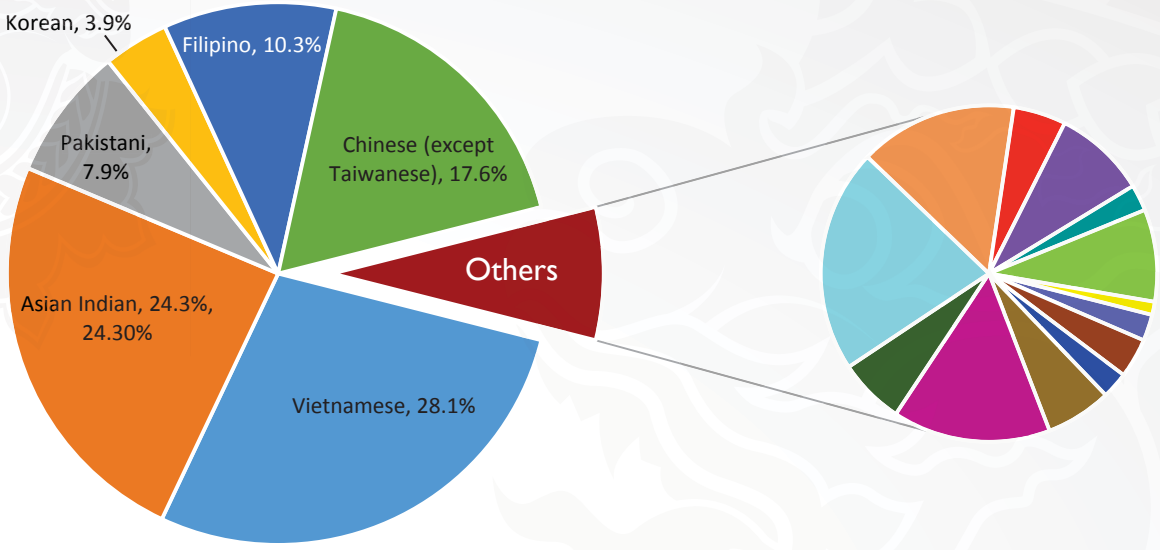
Greater Houston Area Population



Higher proportions of AAPI groups live in Fort Bend County compared to the other three counties. Of the total AAPI groups in the four county area, the largest number of AAPI live in Harris County.

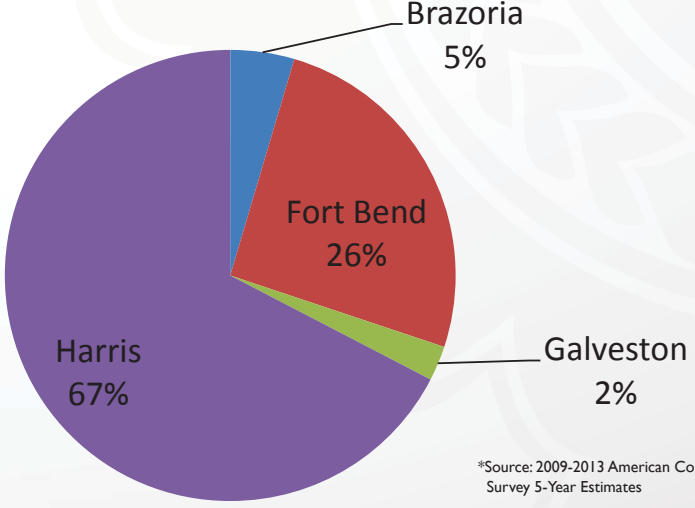


*Population by Asian Ancestry in Four Counties: Brazoria, Fort Bend, Harris, and Galveston



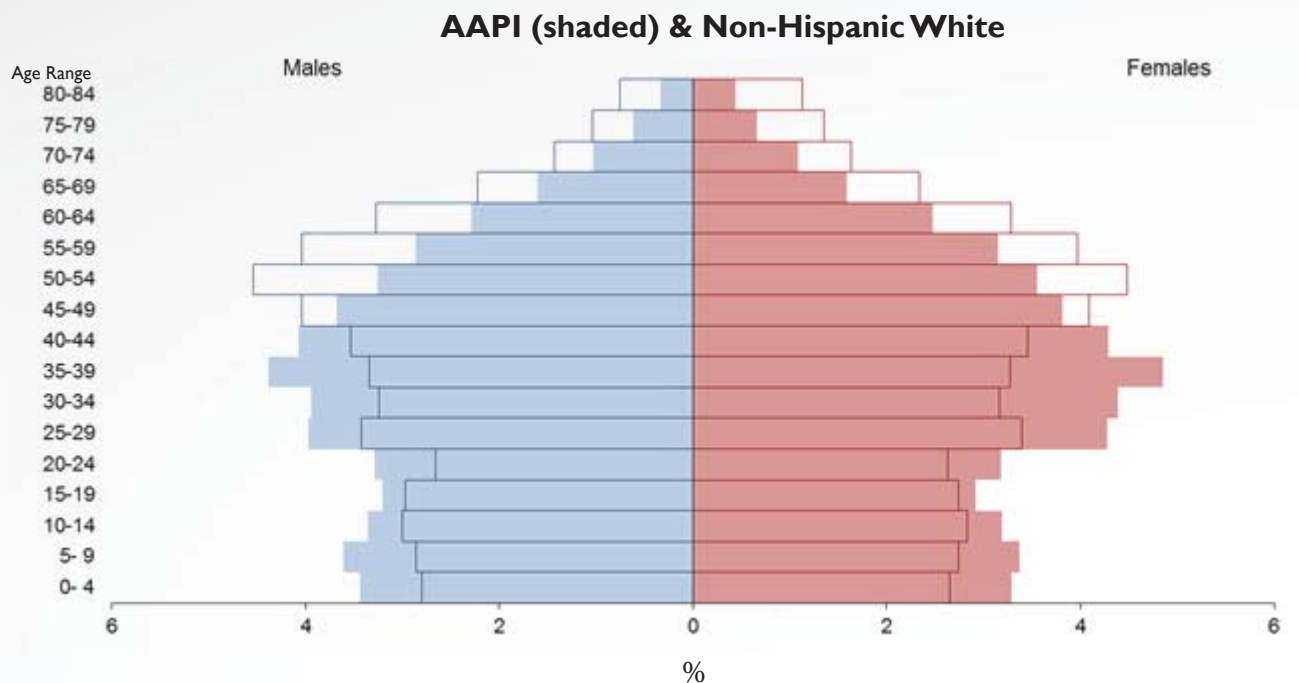
- Vietnamese, 28.1%
- Asian Indian, 24.3%
- Pakistani, 7.9%
- Korean, 3.9%
- Filipino, 10.3%
- Chinese (except Taiwanese), 17.6%
- Sri Lankan, 0.2%
- Nepalese, 0.3%
- Malaysian, 0.2%
- Laotian, 0.5%
- Japanese, 1.2%
- Indonesian, 0.5%
- Taiwanese, 1.7%
- Cambodian, 1.2%
- Burmese, 0.4%
- Bangladeshi, 0.7%
- Bhutanese, 0.2%
- Thai, 0.7%
- Hmong, 0.1%

*AAPI in Four Counties



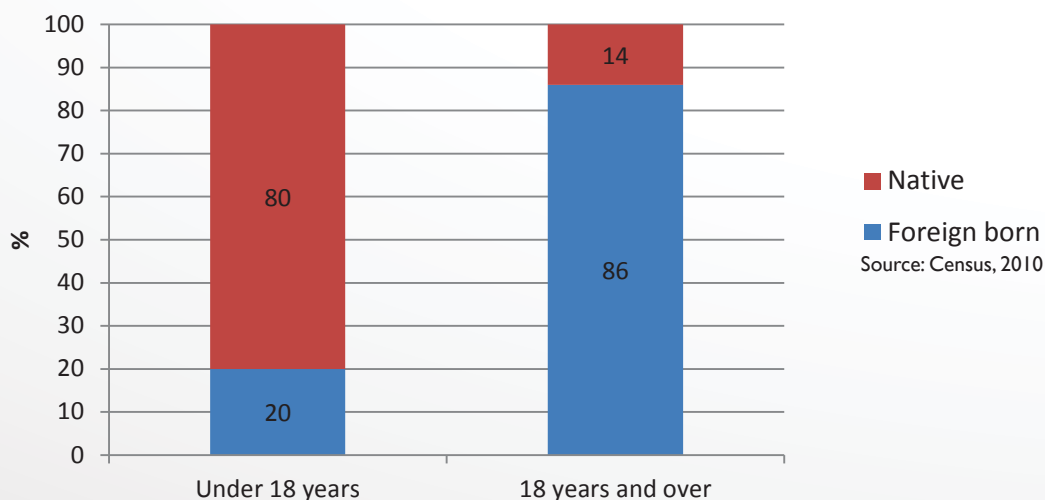
*Source: 2009-2013 American Community Survey 5-Year Estimates

Greater Houston Area Population Pyramid and Nativity



The age pyramids for the four county area are represented as a horizontal bar graph that shows the percentages of male population in each age group on the left side and the percentages of females on the right. The age categories are grouped into five year increments, with the youngest in the population located at the bottom (U.S. Census Bureau, 2010). The pyramid above shows that the AAPI have higher proportions of children, youth and younger adults (up to the age of 44 years) as compared to Whites. AAPI groups have lower proportions of adults (45 years and above) as compared to Whites. However, the age group 25 to 44 years will be turning into an older age group soon, which will have implications for the care of older AAPI groups.

AAPI Age by Nativity (Four County Houston Area)



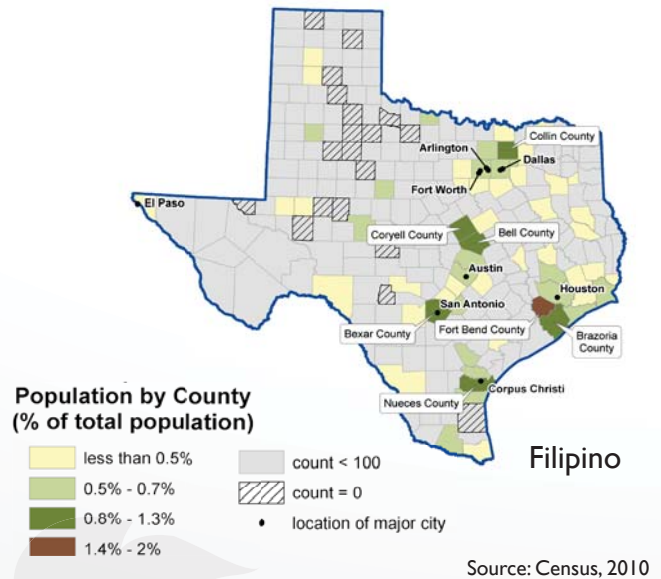
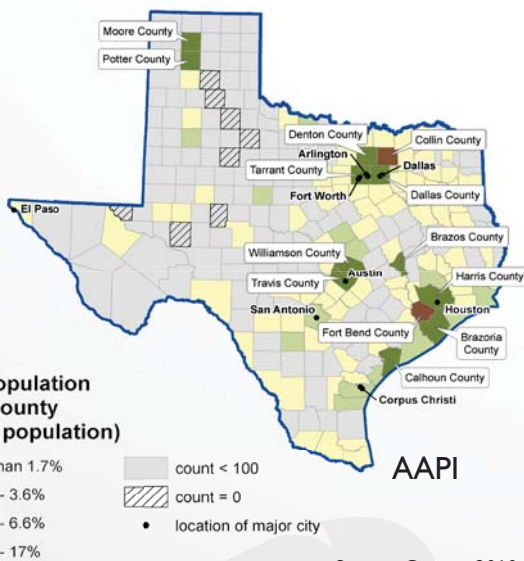


Four-fifths of the AAPI under the age of 18 years are native born while only 14% of the AAPI 18 years and over are native born. Of the foreign born AAPI living in the four county area, 61% are naturalized citizens, the rest are non U.S. citizens. Native born AAPI have obvious advantages over foreign born AAPI in many areas including language and health status.

Geographic Distribution of AAPI Groups in Texas

This section of the profile presents maps of the individual counties showing where the AAPI population is concentrated. Following this, the next four pages of the profile present maps of the four county area showing where the AAPI population group by ancestry is concentrated. The population counts are presented as the percentage of total population by ZIP codes. ZIP codes that have less than 100 counts of the population group identified for the map are not included.

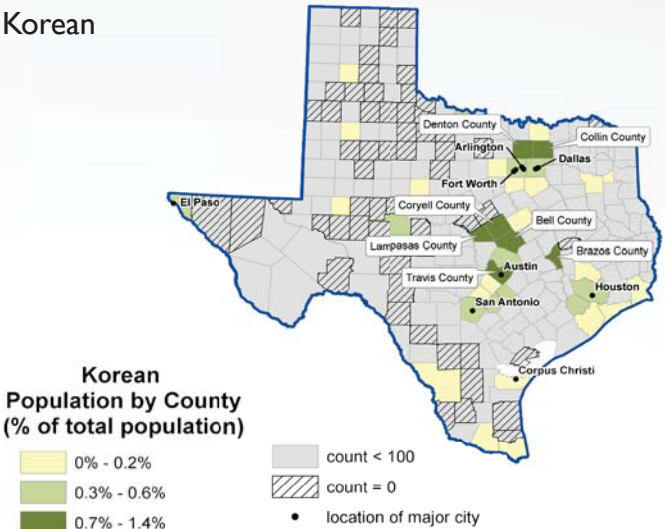
Technical Note: The five AAPI groups selected for the geographic distribution in Texas have the largest populations in Texas. Scalings vary depending on maps of different ancestral groups. We have used the Jenks Natural Breaks Classification Method, which is a data clustering method designed to determine the best arrangement of values into different classes. This method seeks to reduce the variance within classes and maximize the variance between classes.



The map above shows the distribution of AAPI in Texas. Dallas/Fort Worth, Houston and Austin are the largest cities in Texas where the majority of AAPI live. Surrounding areas of these cities also have notable numbers of AAPI.

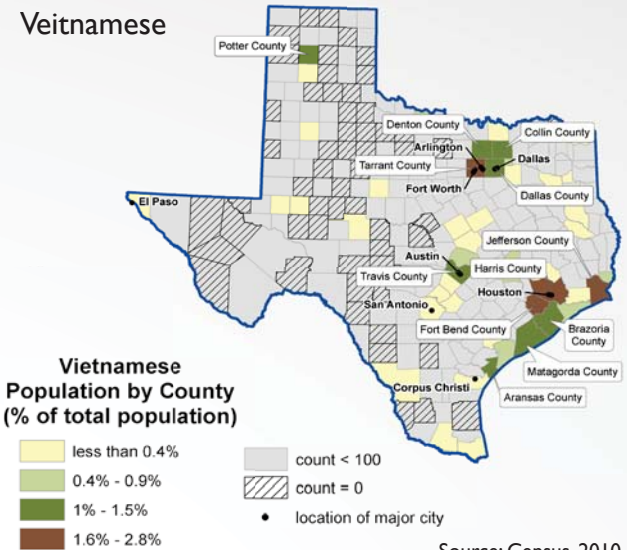
In Texas, Fort Bend County houses a higher proportions of Filipinos than any other county.

Korean



Source: Census, 2010

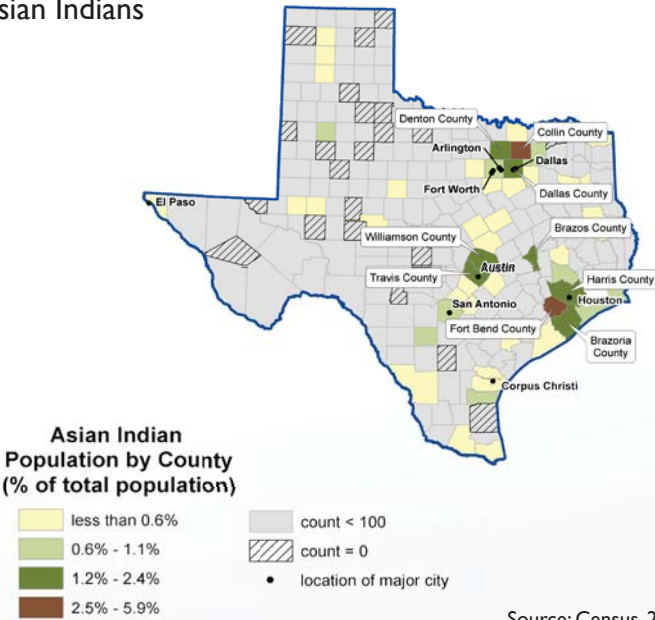
Vietnamese



Source: Census, 2010

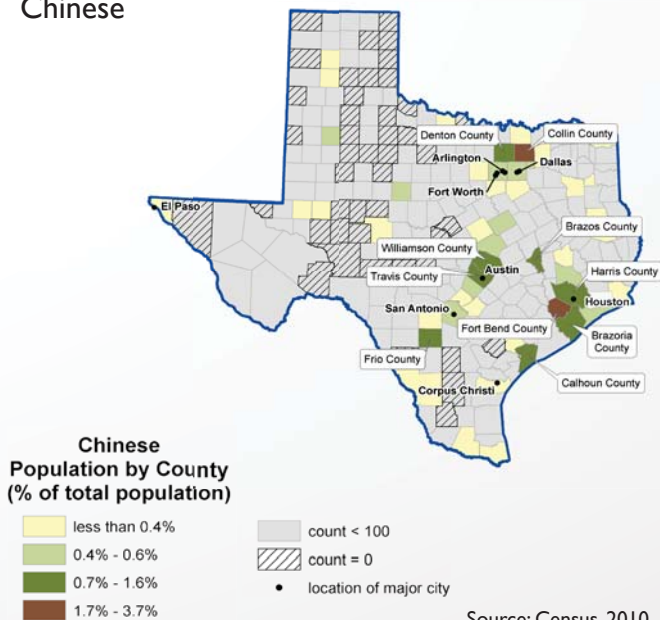
Overall in Texas, Fort Bend County has the largest proportions of Koreans. However, higher proportions of Koreans live in the suburbs Dallas and Austin. Higher proportions of Vietnamese live in Tarrant County, Jefferson County, Harris County, and Fort Bend County as compared to the rest of the counties in Texas.

Asian Indians



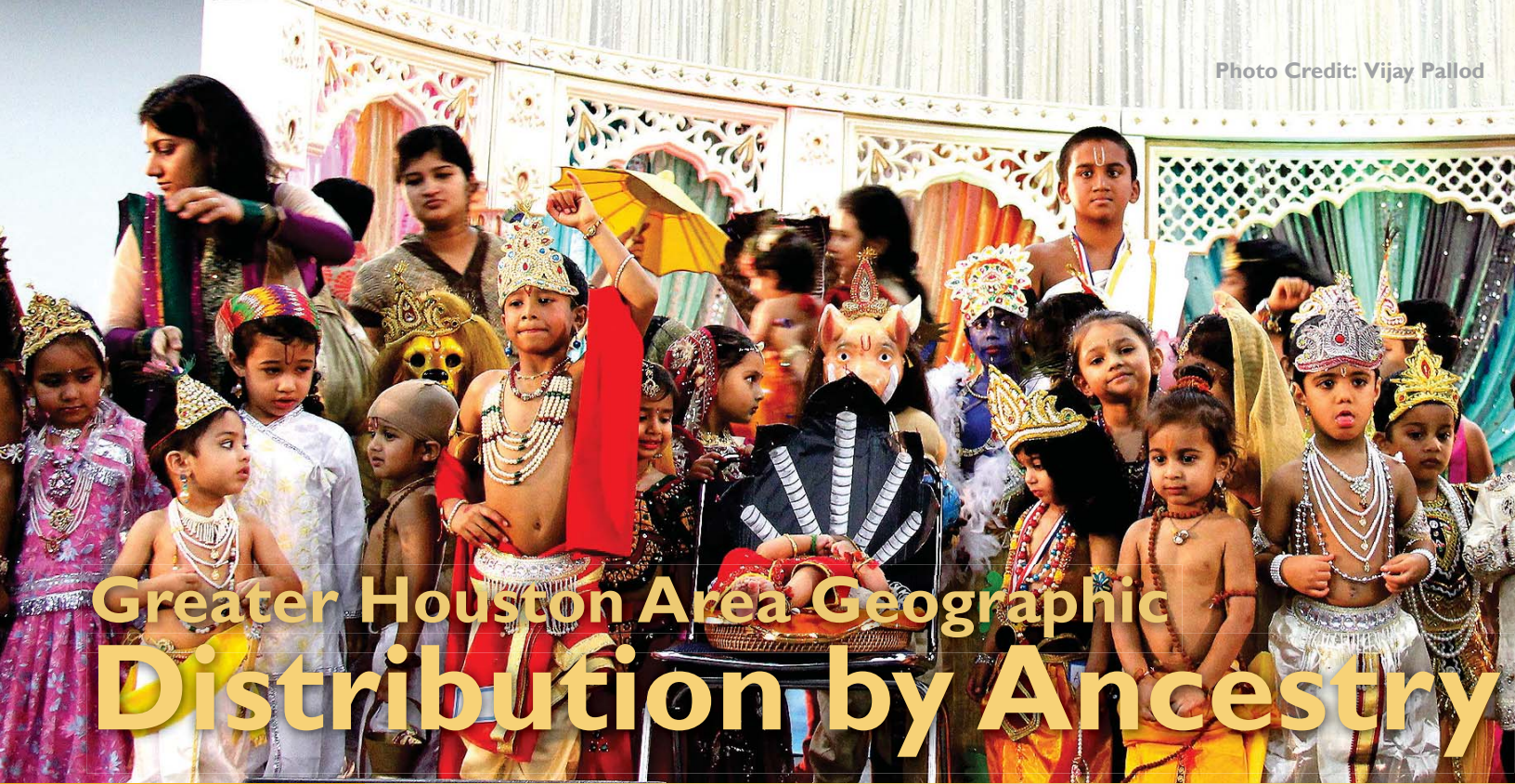
Source: Census, 2010

Chinese

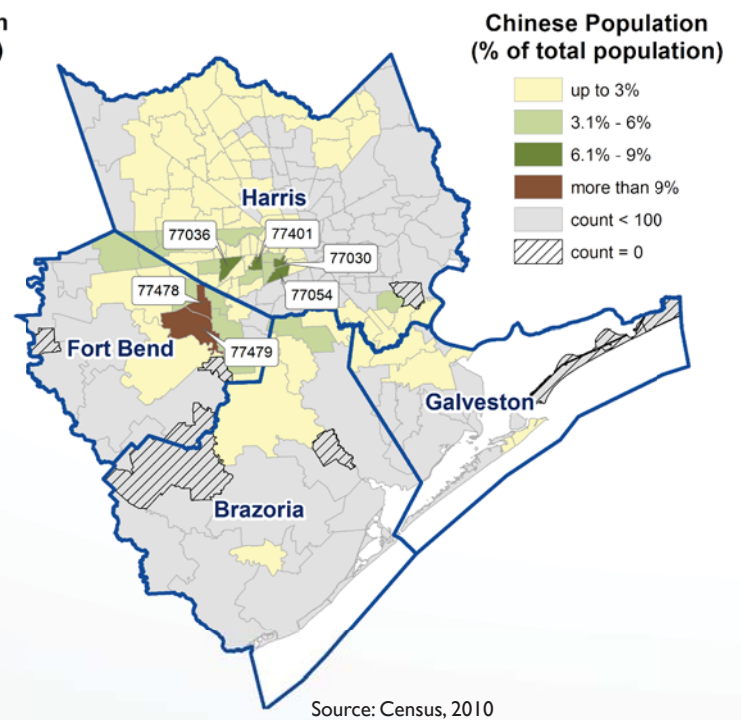
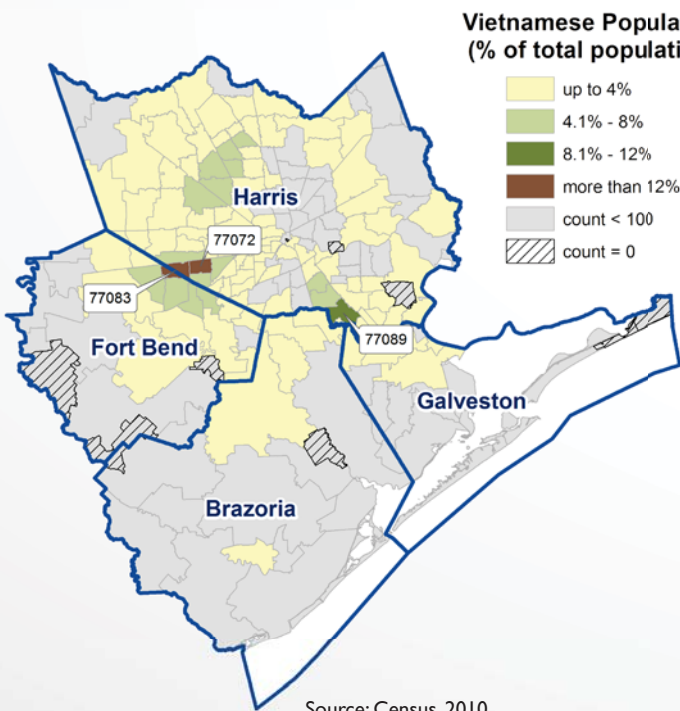


Source: Census, 2010

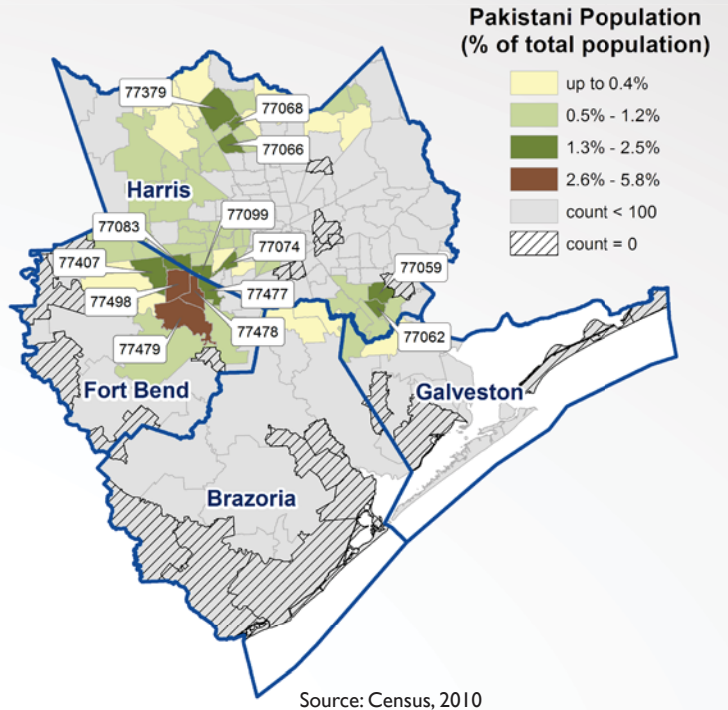
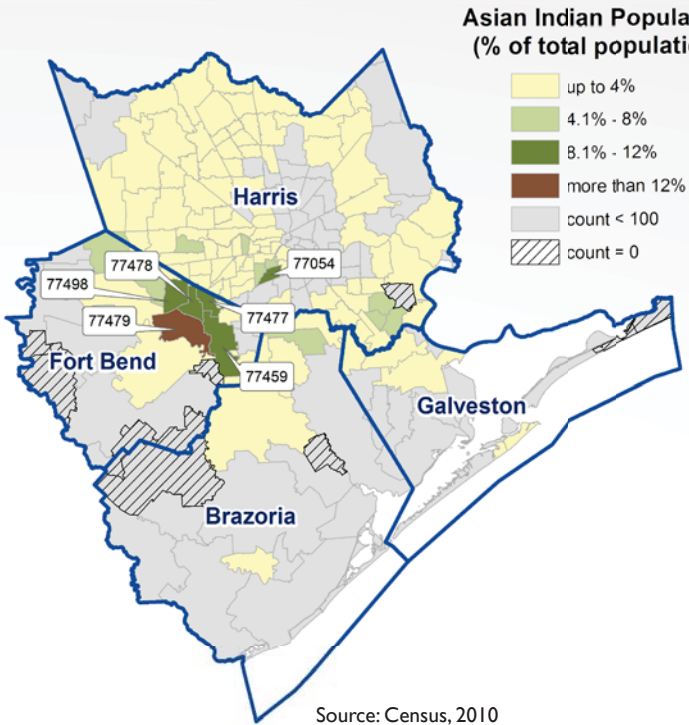
In Texas, Collin County and Fort Bend County have higher proportions of Asian Indians and Chinese.



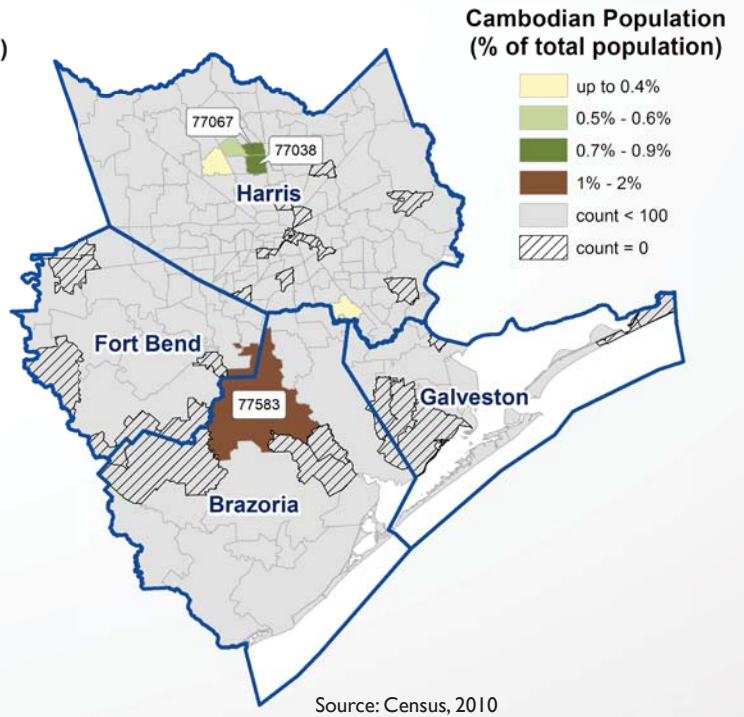
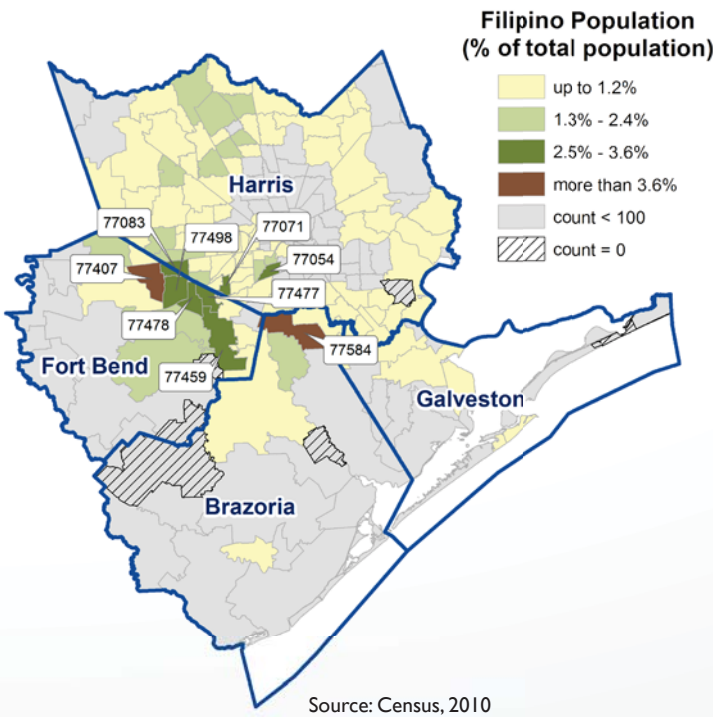
Greater Houston Area Geographic Distribution by Ancestry



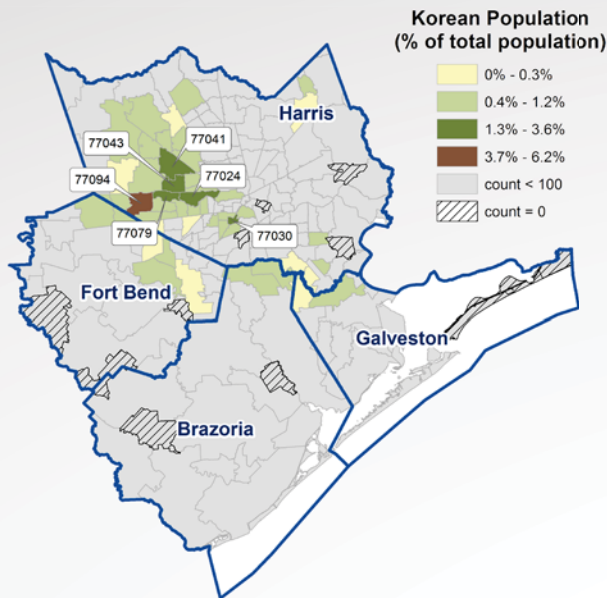
There is some overlap in areas where many AAPI have settled. Both Fort Bend and Harris Counties have multiple ZIP codes where more than 6% of the population is Chinese or Vietnamese.



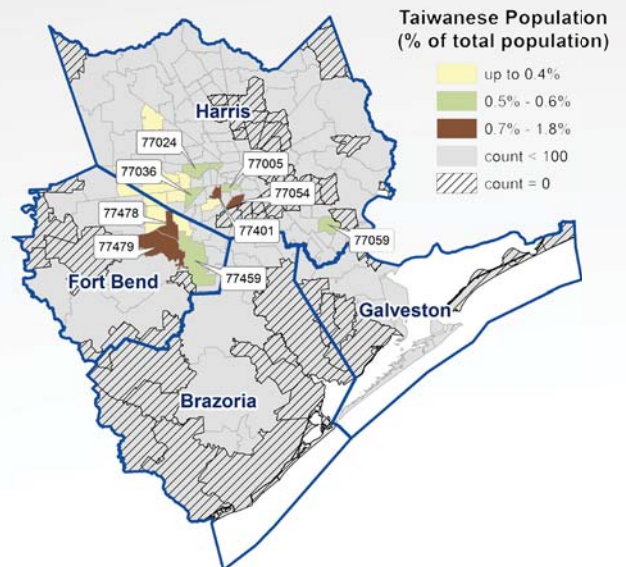
Fort Bend County has ZIP codes with the highest percentages of Asian Indians and Pakistanis in the four county area.



The Filipino population can be seen throughout Harris County, but is most concentrated in northern Fort Bend and Brazoria Counties. Cambodian concentrations are present in Harris and Brazoria counties.

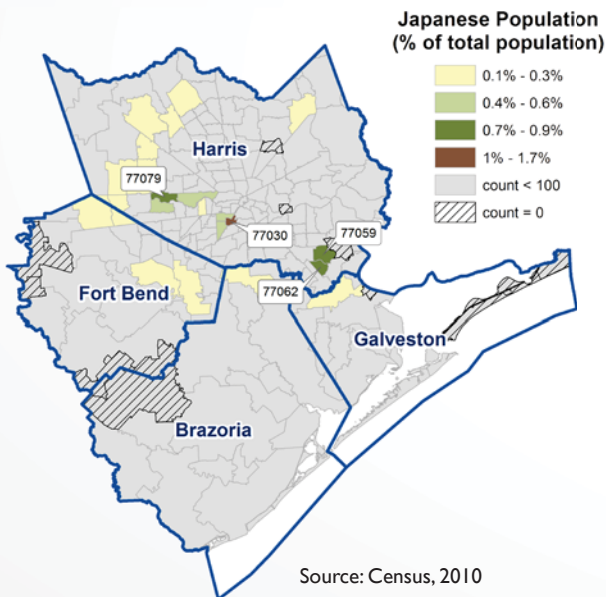


Source: Census, 2010

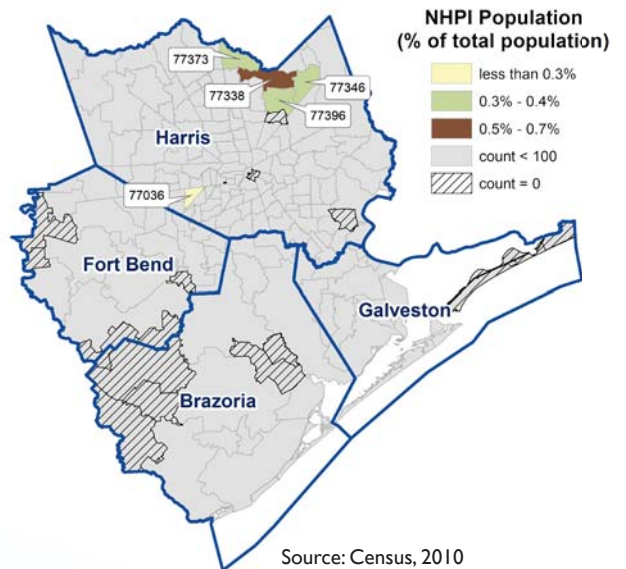


Source: Census, 2010

The highest concentrations of the Korean population are in Harris County ZIP codes, while Taiwanese have settled in both Harris and Fort Bend Counties.

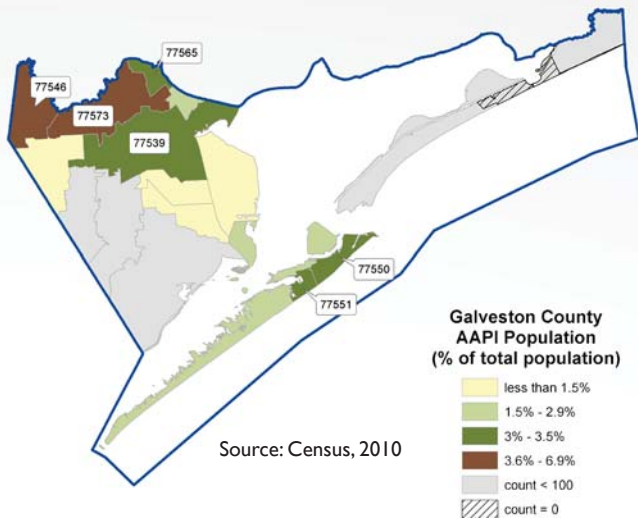


Source: Census, 2010

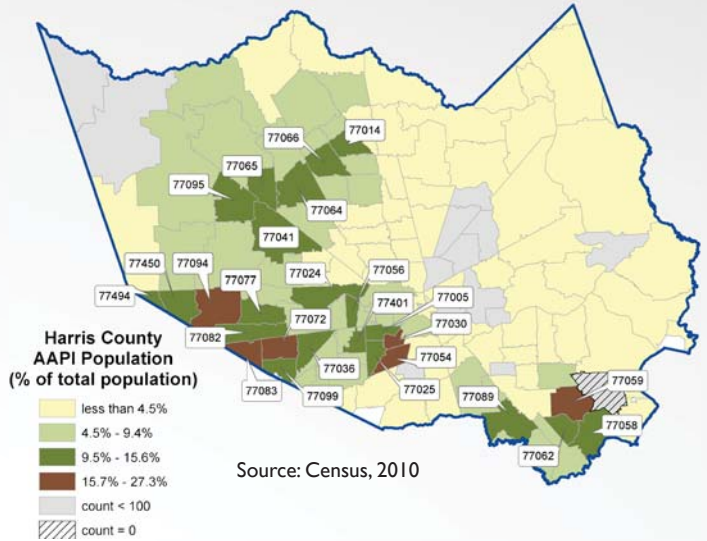


Source: Census, 2010

ZIP codes with higher percentages of Japanese, and those who are Native Hawaiian and Pacific Islanders (NHPI) are most prevalent in Harris County. Only one zip code (77030), which includes the Texas Medical Center area includes the highest concentration of the Japanese population in Harris County, where as relatively large number of NHPIs are settled in and around zip code 77338.

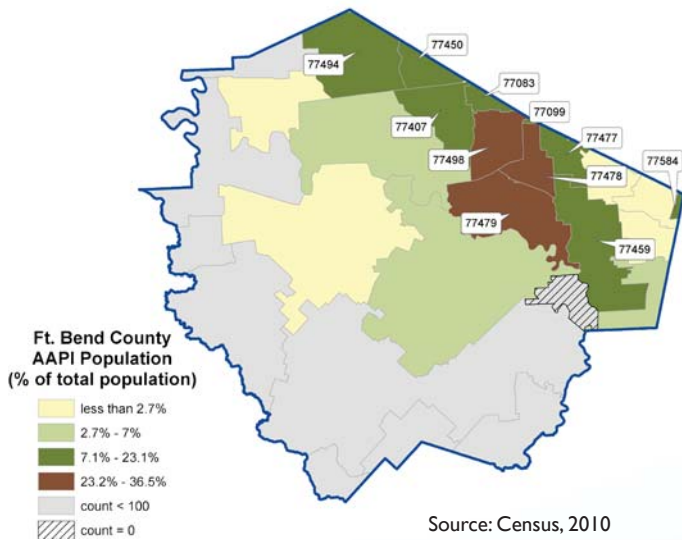


Source: Census, 2010

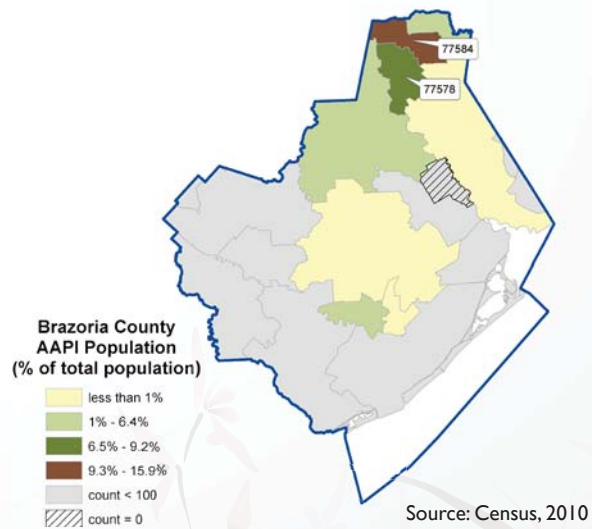


Source: Census, 2010

Zip Codes 77546 and 77573 (which border with the southeast side of Harris County) represent the largest proportions of AAPI in Galveston County. The majority of AAPI live on the west side of Harris County. There is also a small cluster of AAPI in the southeast side of the county.



Source: Census, 2010



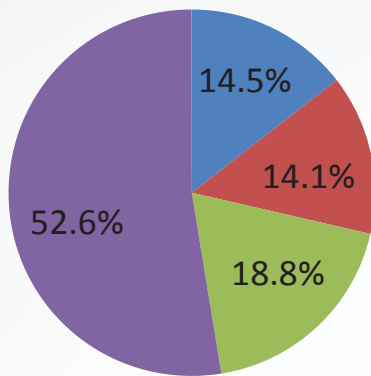
Source: Census, 2010

The areas of Fort Bend County bordering Harris County have the largest number of AAPI in Fort Bend County. Zip codes 77584 and 77578 of Brazoria County, which border Harris and Fort Bend counties represent the largest proportions of AAPI in Brazoria County.

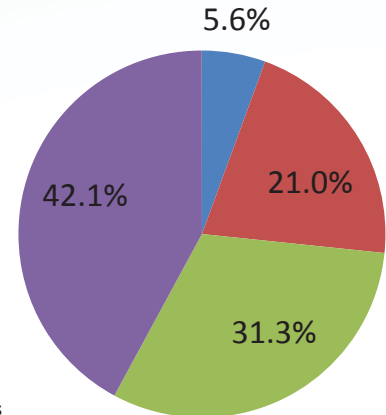
Greater Houston Area Population & Education

Educational Attainment

AAPI*



WHITE*

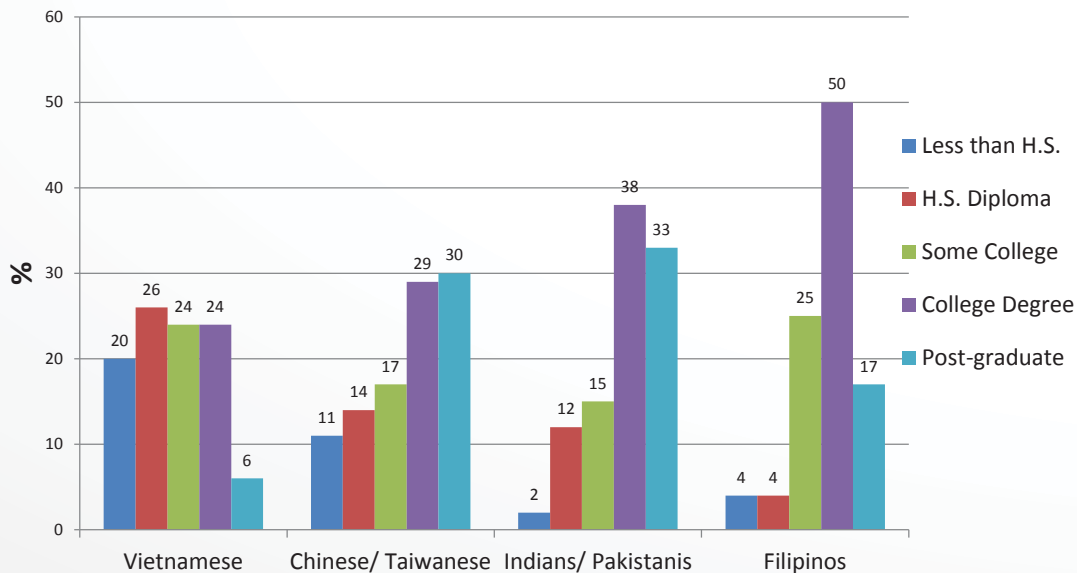


- Less Than High School
- High School Only
- Some College or Associate's Degree
- Bachelor's Degree or Higher

*Source: 2009-2013, American Community Survey 5-Year Estimates

More than half of AAPI adults (25 years and over) have a bachelor's degree or higher, which is higher than the average (28.4%) for all races/ethnicities in Harris County and higher than that of Whites (42.1%). A higher percentage of AAPI (14.5%) have less than a high school education compared to Whites (5.6%). Slightly higher proportions of AAPI (54.4%) have a bachelor's degree or higher in Texas than that in the four county area.

Educational Attainment of the Four Largest Asian Groups in Harris County*



*Source: 2009-2013, American Community Survey 5-Year Estimates

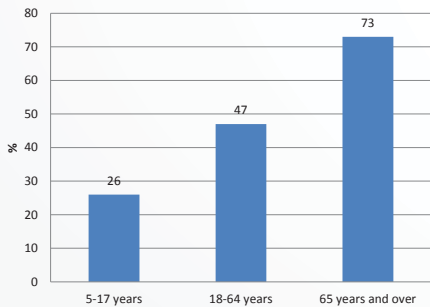
Although Asians are considered to have relatively high levels of education, there are differences in educational attainment when groups are assessed based on country of origin. For example 30% of Vietnamese have a college degree or higher compared to 71% of the Indian/Pakistani group.





Language Proficiency

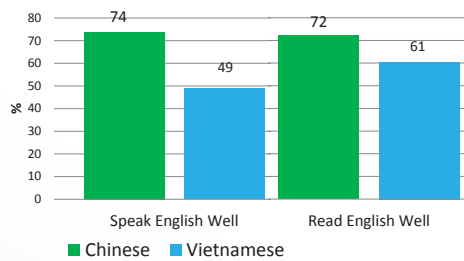
Harris County Residents Who Speak English less Than “Very Well”



Source: 2009-2013 American Community Survey 5-Year Estimates

In the four county area, AAPI languages are spoken in 5.2% of all households. Of these households, nearly one quarter (24.4%) are limited English speaking (LEP) households. Higher proportions of older AAPI groups speak English less than “very well” as compared to younger ones.

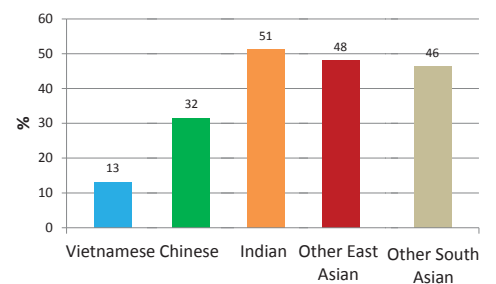
English Language Proficiency in Harris County



Source: AsANA, 2006

According to the Asian American Health Needs Assessment (AsANA) study (2006), more than half of the Vietnamese in Houston were unable to speak English well (Hoang et al, 2006). Language barriers are one of the key obstacles many Asians face in accessing needed resources including healthcare related services.

Harris County Residents Who Speak English “Very Well”



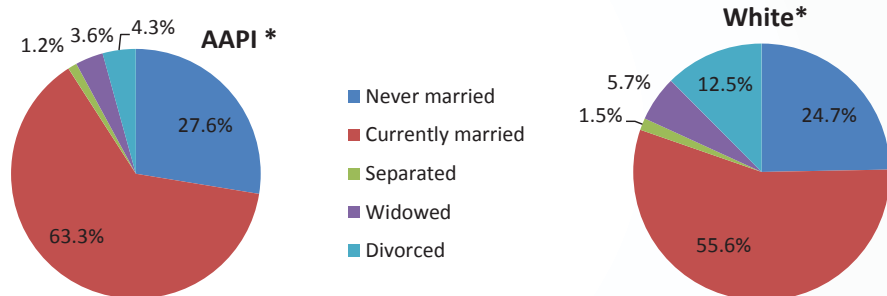
Source: Health of Houston Survey, 2010

According to the Health of Houston Survey (2010) conducted by the University of Texas School of Public Health, the percentage of Asian Non-Hispanics who reported speaking English very well was 30%. Only 13% of the Vietnamese and 31% of the Chinese adults reported that they could speak English very well.



Higher proportions of AAPI are currently married than Whites in the four county area. The percentage of divorced or never married is lower among AAPI than that of Whites. Among AAPI, the percentage of never married adults is higher (31.2%) among males than that of females (24.1%). However, the percentage of divorced is higher among females than males. Literature on health and mortality by marital status has consistently identified that unmarried individuals generally report poorer health and have a higher mortality risk than their married counterparts, with men being particularly affected in this respect (Robards, Evandrou, Falkingham and Viachantoni, 2012).

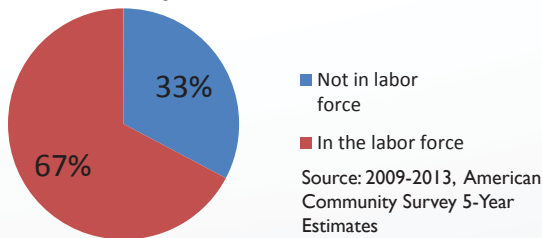
Marital Status For the Population 15 Years and Over in Four County Area



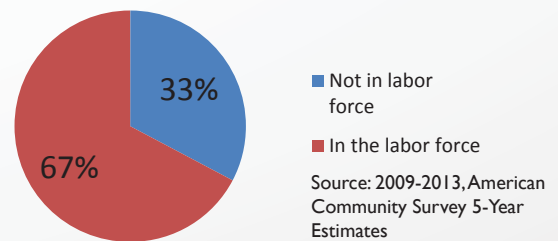
*Source: 2009-2013, American Community Survey 5-Year Estimates

Employment

AAPI Groups in the Four County Area



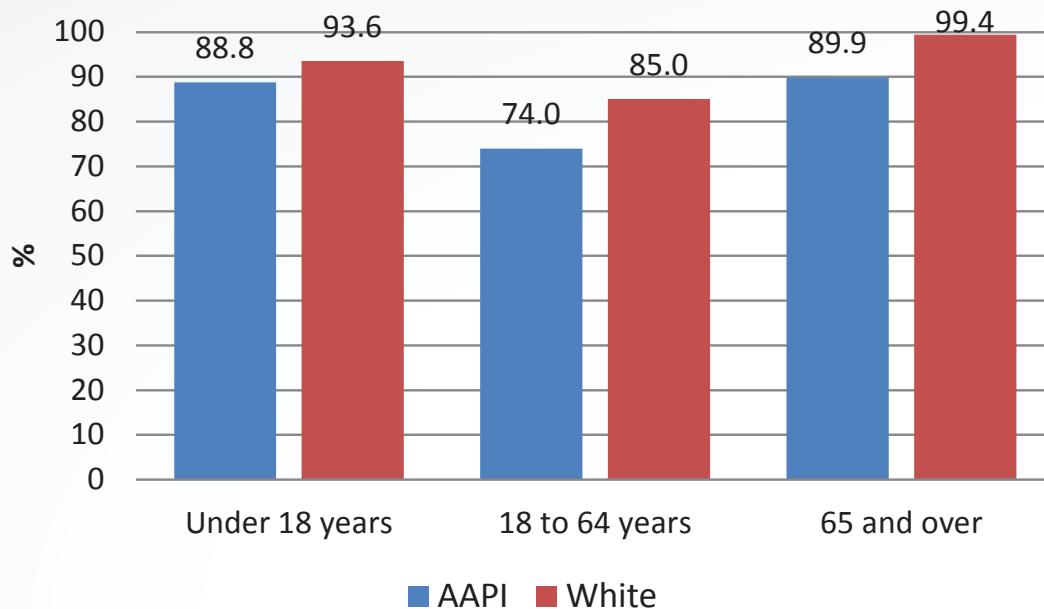
Whites in the Four County Area



Equal proportions of Whites and AAPI are in the labor force and the percentage of employed among those who are in the labor force is also similar in the four county area.

Greater Houston Area Health Insurance

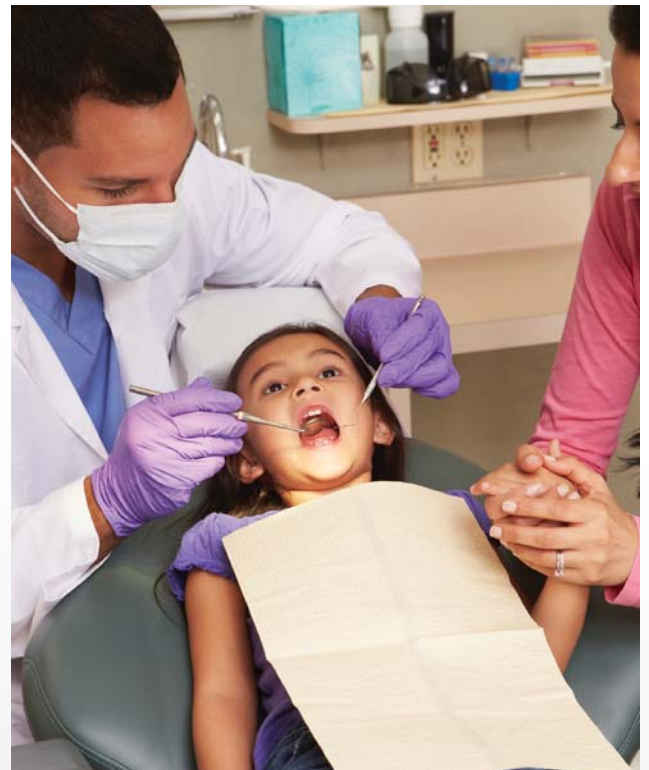
Health Insurance Coverage by Age (AAPI vs White)



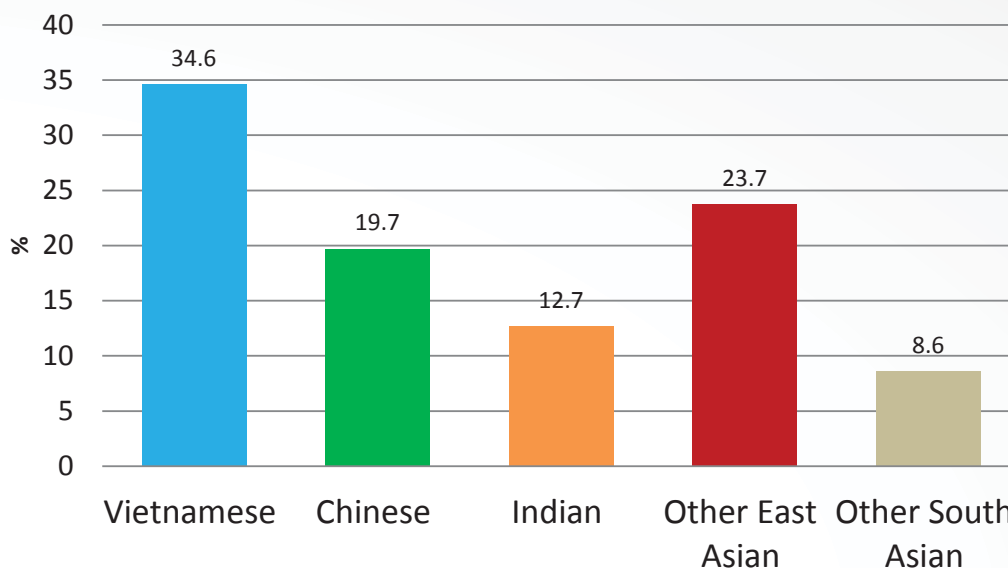
Source: 2009-2013 American Community Survey 5-Year Estimates

According to Behavioral Risk Factor Surveillance System (BRFSS) data (2011-2013), nearly 30% of AAPI groups in the four county area do not have a primary care physician or a medical home as compared to Whites (20%).

The rate of health insurance coverage among AAPI is lower in all age groups than that of Whites in the four county area. Nearly 87,000 AAPI adults (21% of all AAPI) were uninsured in the four county area during 2011-2013 as compared to nearly 2.5 million Asians and 162,000 Native Hawaiian and Pacific Islanders uninsured nationally (APIAHF, 2011).



Percentage of Uninsured By Asian Ancestry



Source: Health of Houston Survey, 2010

According to the Health of Houston Survey (2010), higher portions of Vietnamese than any other groups of AAPI were uninsured in Harris County during 2010. Another study indicated that 88% of Asian Indians living in Harris County had health insurance during 2013-2014 (Gor et al, 2014).

Among the AAPI, nationally, higher proportions of Bangladeshis (23%), Pakistanis (23%), Korean (22%) and Cambodians (21%) were uninsured during 2009. (APIAHF, 2011). Lack of insurance is associated with higher incidence of morbidity and mortality. Those who are uninsured are less likely to access healthcare on a regular basis for preventive health than those who are insured. Also, many uninsured and underinsured do not get the full benefit of treatment and care that is needed to address existing health conditions. Poor health literacy as well as other cultural factors may cause underutilization of health care services even among the insured AAPI.





Income and Poverty

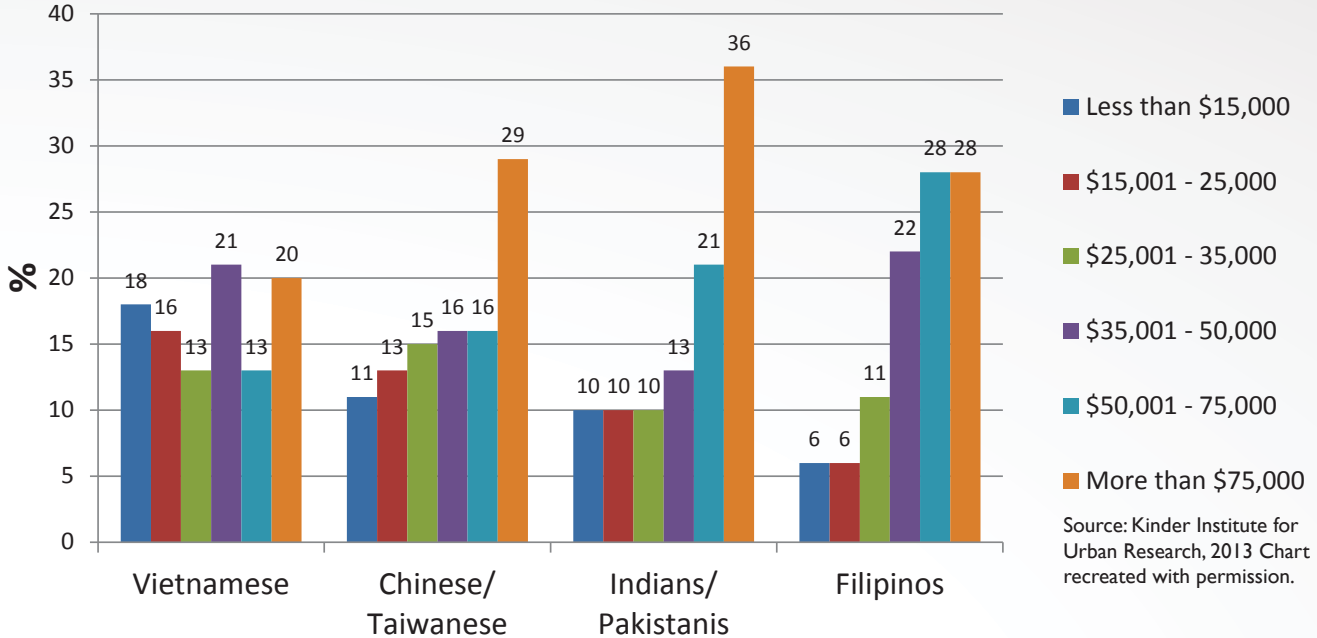
Household Income in the Past 12 Months (2013 Inflation Adjusted)



Source: 2009-2013 American Community Survey 5-Year Estimates

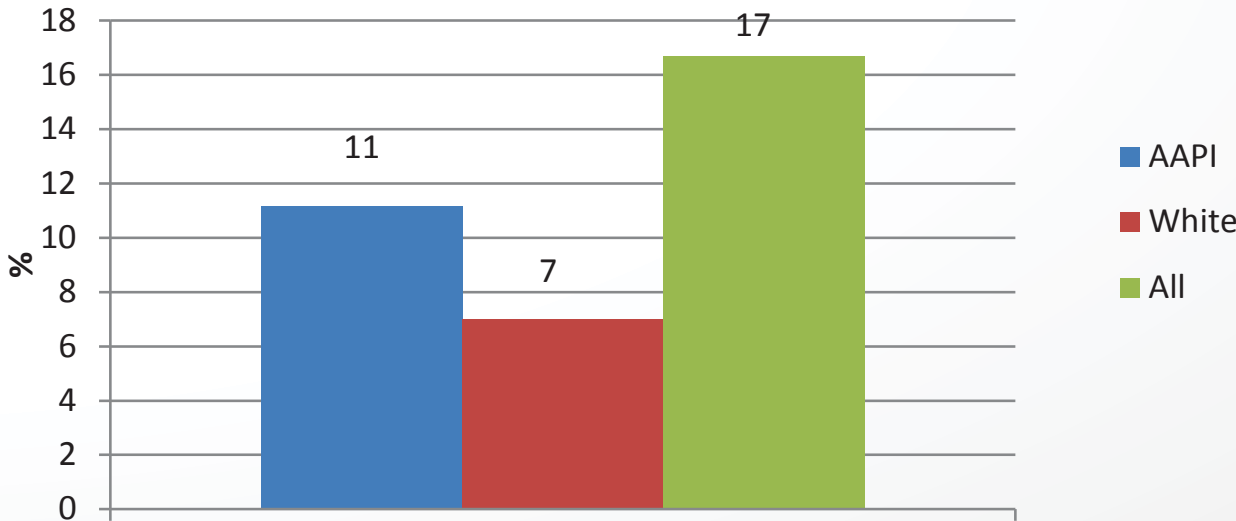
The proportion of households with income less than \$35,000 are higher among AAPI as compared to Whites.

Household Income among the Four Largest Asian Communities



The Kinder Institute reported that among Asians in the Houston area, a greater proportion of Indian/Pakistani Americans report the highest income, with 36% living in households making \$75,000 or more per year compared to one in five Vietnamese households (20%).

Income In the past 12 months below poverty level



Source: 2009-2013 American Community Survey 5-Year Estimates

The proportion of AAPI with income in the past 12 months below the poverty level in the four county area was higher than that of Whites but lower than that of all race/ethnicities combined.

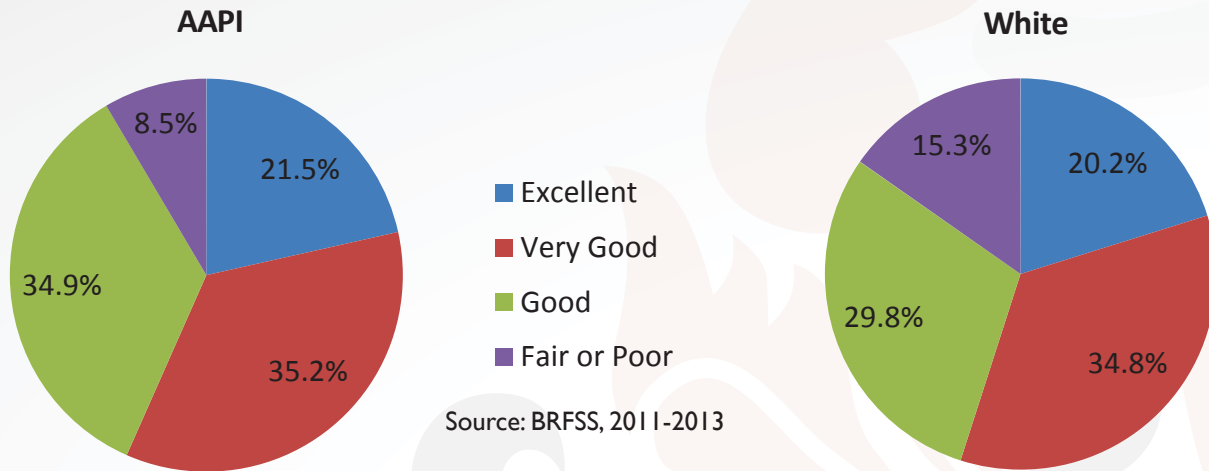
Health Conditions & Health Behaviors

Overall, the Asian American & Pacific Islander population living in the Houston area appear to be healthy in many health indicators. However, there are certain health conditions such as cancer of the stomach and liver that are more burdensome for AAPI populations.

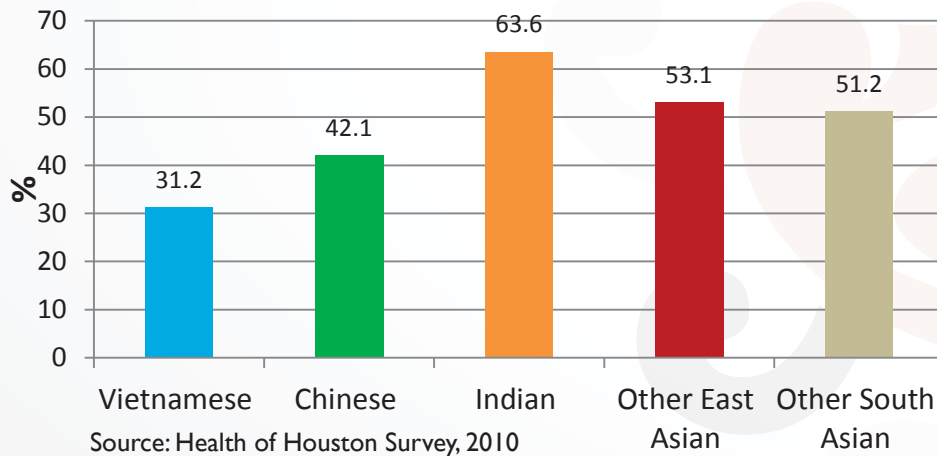




Overall Health Status Reported by AAPI Compared to Whites



Percentage of AAPI Reporting Excellent / Very Good Health Status



Self-reported current health status is a good predictor of future disability, hospitalization and mortality (Idler and Benyamini, 1997). In general, overall health status of AAPI is comparable with that of Whites.

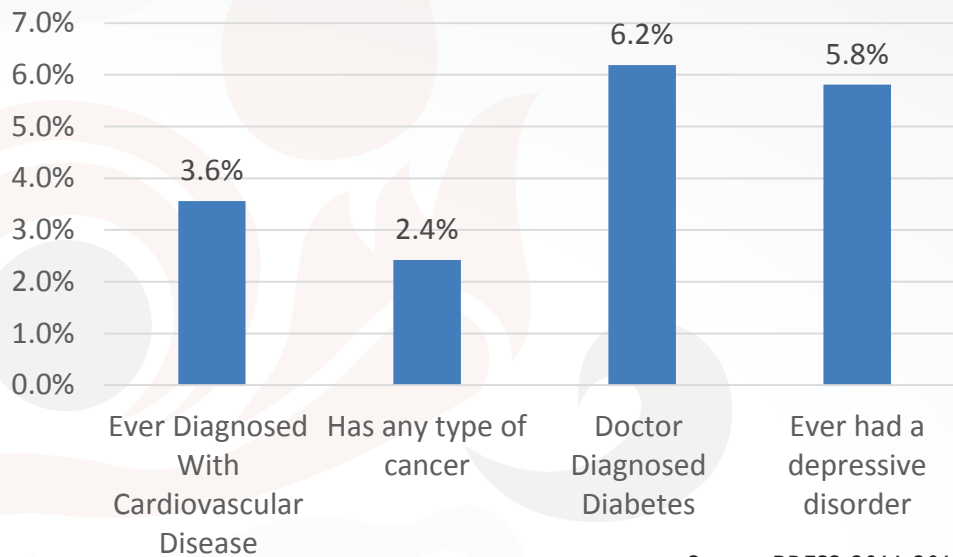
The proportion reporting “Fair or Poor” health status was lower (8.5%) among AAPI than that of Whites (15.3%).

Health of Houston (2010) data show that a higher proportion of Asian Indians reported excellent or very good health status among Asians. Consistent with their lower educational attainment, fewer Vietnamese reported excellent or very good health status compared to other AAPI groups. Another survey conducted among Asian Indians in Harris County also found a similar (60%) rate of self-reported excellent/very good health status by Asian Indians (Gor et al, 2014).

There is no local level data that exists for the health conditions of Native Hawaiian and Pacific Islanders (NHPs). Even the multiple year aggregated data from the Behavioral Risk Factor Surveillance System (BRFSS) does not provide enough samples to make inferences about the health status of NHPs.

Health Conditions

AAPI Health Conditions



Note: While AAPI report fewer instances of diagnoses of the diseases listed in the chart above compared to Whites, this does not mean that fewer cases of these conditions (prevalence) actually exist among AAPI. Access to care and other numerous factors may play a role in actual estimates of the prevalence of chronic conditions. The information above reflects self-reports of those conditions.

According to a recent study, more than half (51%) of Asian Americans with diabetes are undiagnosed as compared to 32% among Whites. The large proportion of people with undiagnosed diabetes points to both a greater need to test for type 2 diabetes in this group, and a need for more education on when to test for type 2 diabetes, especially since populations such as Asian Americans may develop type 2 diabetes at a lower body mass than other groups (Menke et al, 2015).

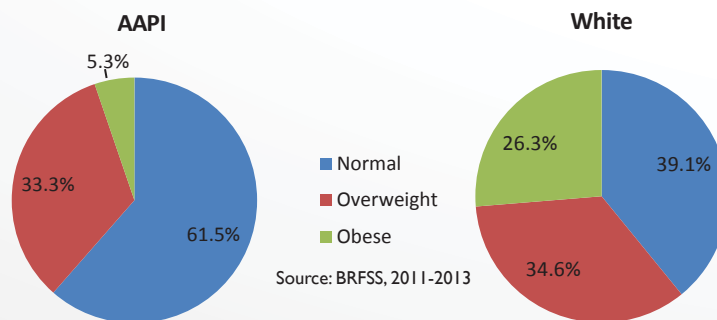
In the Houston area, a recent survey conducted among Asian Indians showed that 14% of respondents were diagnosed with diabetes (Gor et al, 2014). The Health of Houston Survey indicated that there are variations in diabetes diagnosis among the Asian American population, with East Asians living in the Houston area having higher proportions of diabetes diagnoses. Since the diagnosis of diabetes and other health conditions can vary based on access to care, education, income and other factors, an accurate assessment of the rate of prevalence of diabetes is difficult to obtain. Local level surveillance programs and educational campaigns for screening of diabetes could provide some additional data.

Another national study indicated that AAPI with diagnosed diabetes, compared to non-Hispanic Whites, are less likely to check their blood sugar at least once a day. (Guo, Cui and Yan, 2015).



Overweight/Obesity

In general, lower proportions of AAPI report a body mass index (BMI) greater than 30, and higher proportions of AAPI report normal BMI as compared to Whites. From the limited research, it is known that Asian Americans are associated with a lower waist circumference (WC) and BMI while Hawaiian/Pacific Islanders are associated with a higher WC and BMI. AAPI who were born in the U.S. tend to be more obese than those born in foreign countries (Nam, 2013). Among Asian American children, Vietnamese-American children are at elevated risk of obesity and overweight as compared to Chinese and Asian Indian children (Jain. et al, 2012). Using self-reported height and weight, more than half of the Asian Indian males (52%) and less than half of females (44%) in the Houston area were overweight or obese.

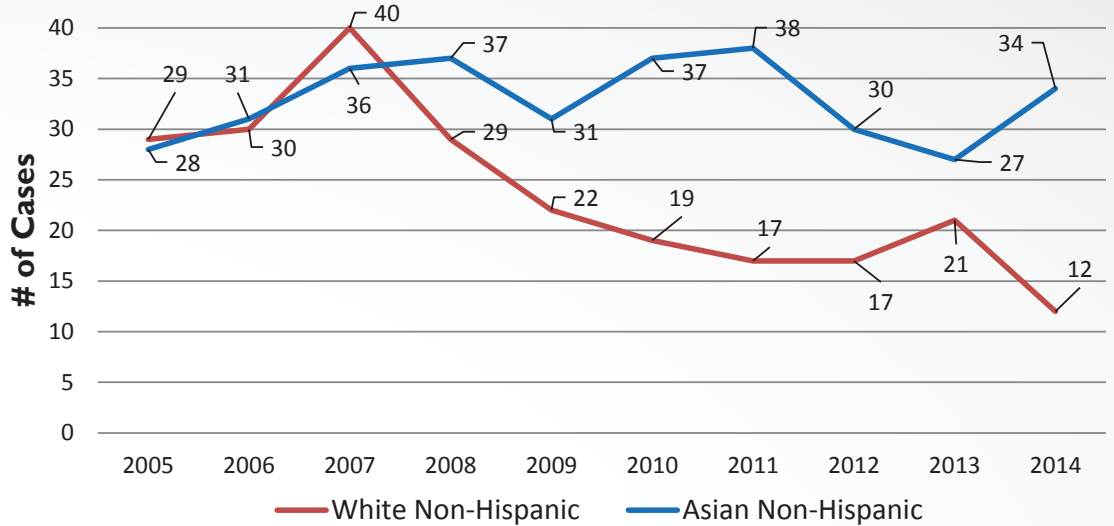


The World Health Organization recommends that the body mass index cut-points for AAPI population should be lower than that for other racial and ethnic groups (WHO, 2004). The suggested BMI level for overweight is 23 for AAPI as compared to cut-point of 25 for the general U.S. population (Hsu et al, 2015).

Tuberculosis in City of Houston



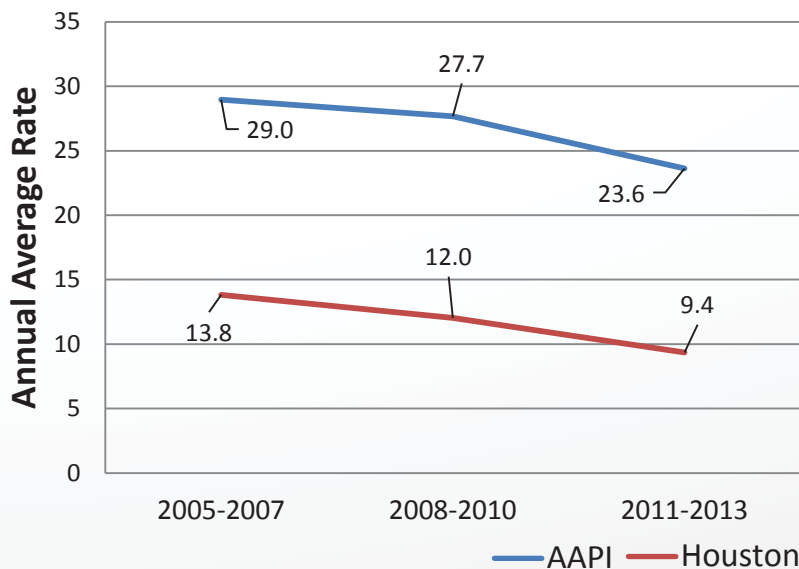
TB Cases by Race/Ethnicity by Year: City of Houston



Source: Bureau of TB, Houston Health Department (2015)

Overall, 11,182 TB cases were reported to CDC from the 50 states and the District of Columbia in 2010. In 2010, Asians accounted for 28% of the total number of reported TB cases in the United States. Asians born outside the United States represented 44% of the TB cases among foreign-born persons in 2010 (CDC, 2015).

Annual Average TB Case Rate per 100,000 Population

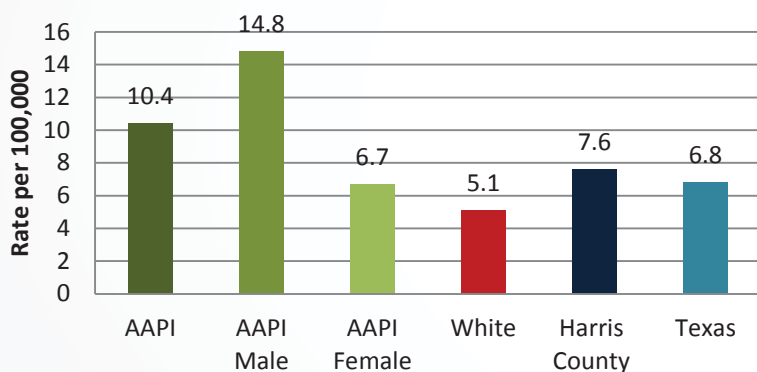


Source: Bureau of TB, Houston Health Department (2015)

Tuberculosis is a significant health concern for AAPI. Although the population of AAPI in the City of Houston is smaller than that of Whites, the number of TB cases is higher among AAPI. The annual average TB case rate per 100,000 population is also higher among AAPI compared to the average rate in Houston.

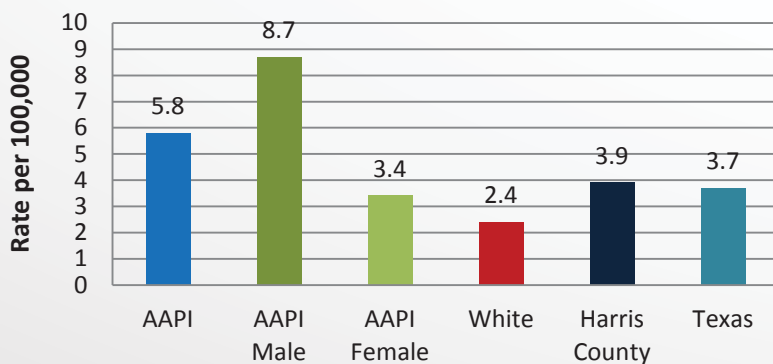


Age Adjusted Stomach Cancer Incidence Rate (2008-2012)*



Stomach cancer rates are higher among AAPI. One risk factor for stomach cancer is infection with a bacterium called *Helicobacter pylori*, or *H. pylori*. AAPI have higher rates of *H. pylori* stomach infections, and this is considered to be the reason that AAPI have higher rates of stomach cancer (National Cancer Institute, 2015).

Age Adjusted Stomach Cancer Mortality Rate (2008-2012)*

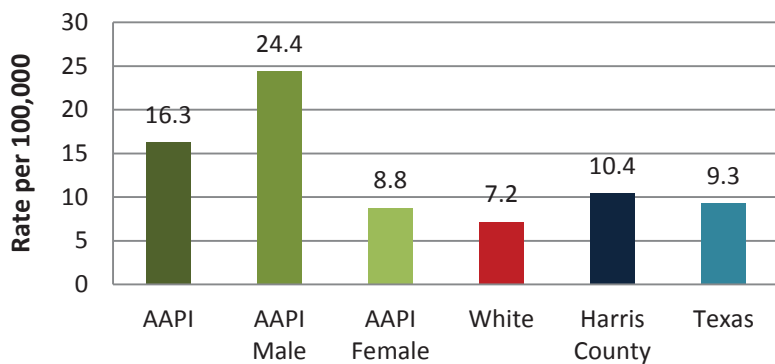


As shown here, male AAPI have higher rates of stomach cancer than female AAPI in terms of both incidence and mortality. This pattern is comparable to national statistics for AAPI.

* Harris County, Texas
Data Source: Texas Cancer Registry

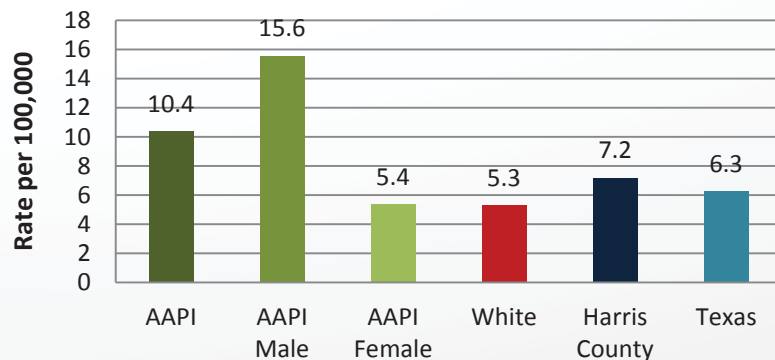


Age Adjusted Liver Cancer Incidence Rate (2008-2012)*



According to estimates from CDC (2010), about 150,000 people in the U.S. will die from liver cancer and end-stage liver disease associated with chronic Hepatitis B and Hepatitis C. Liver cancer affects more AAPI compared to the White population.

Age Adjusted Liver Cancer Mortality Rate (2008-2012)*



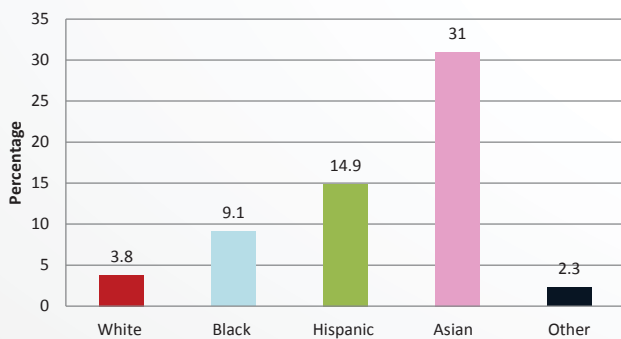
As shown here, male AAPI in Harris County have a higher burden of liver cancer than females in terms of both incidence and mortality. This pattern is comparable to national statistics.

* Harris County, Texas
Data Source: Texas Cancer Registry



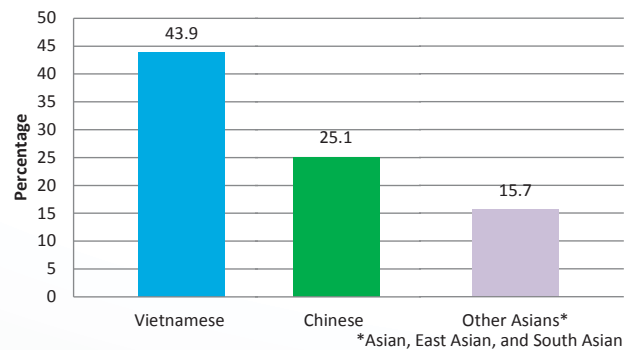
Cervical Cancer Screening

No Pap Test (Harris County)



Source: Health of Houston Survey, 2010

No Pap Test (Harris County) by Asian Ancestry



Source: Health of Houston Survey, 2010

Cervical cancer is a major health concern for Asian Americans. The Health of Houston Survey (2010) indicated that the proportion of Non-Hispanic Asian women that have not had a Pap smear (Pap Test) was much higher than that of other racial/ethnic groups. Among Asians, a higher percentage of Vietnamese women reported that they have not had the recommended Pap Tests. Educational campaigns and interventions to ensure access to care among AAPI, and targeting Vietnamese women living in the Houston area may be useful for this group.

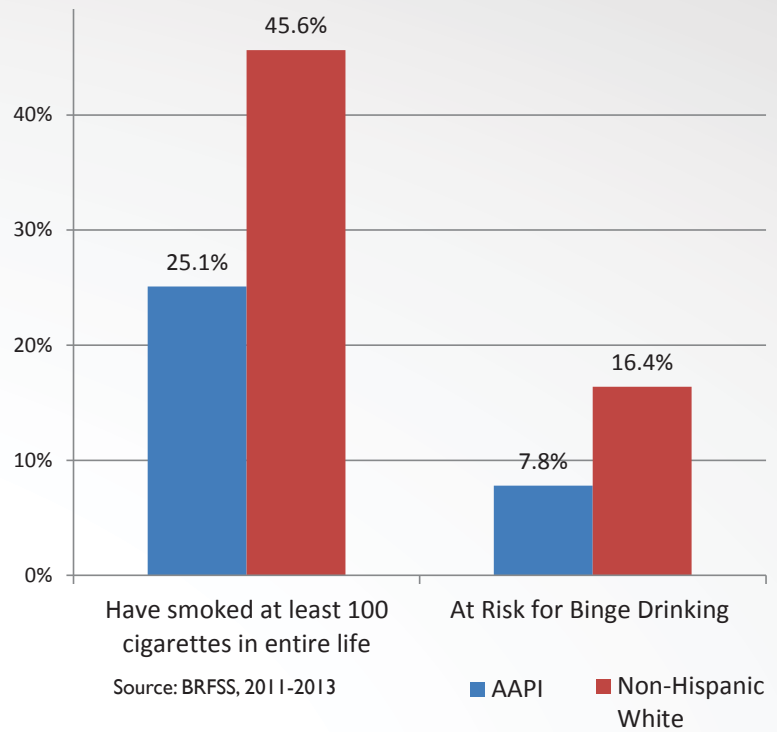
Smoking and Alcohol Consumption

In general, lower proportions of AAPI groups in the four county area reported never smoking and being at risk for binge drinking than Whites. Nationally, AAPI groups have the lowest smoking rates among adults of all racial/ethnic groups; however, there are significant differences in smoking prevalence among subgroups in this population.

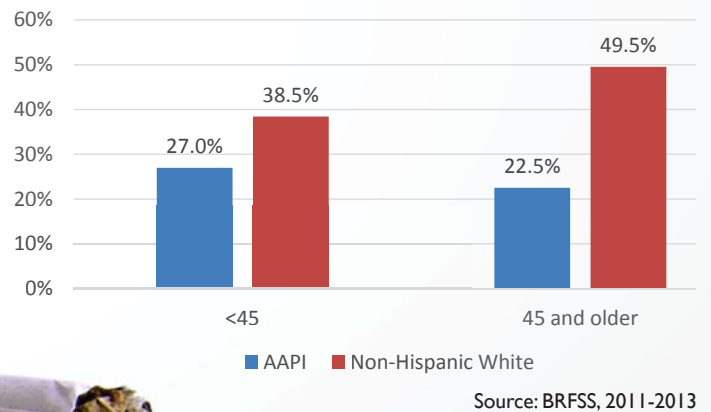
According to the National Survey on Drug Use and Health (2008), the percentage of respondents who reported smoking within the past 30 days were:

- Chinese - 8.8%
- Asian Indian - 11.9%
- Japanese - 12.1%
- Filipino - 16.7%
- Vietnamese - 21.5%
- Korean - 26.6%

In the four county area, higher proportions of young adults (18 to 45 years) reported smoking at least 100 cigarettes in their entire lives than those ages 45 years and older. This indicates an increasing trend of smoking among younger AAPI.

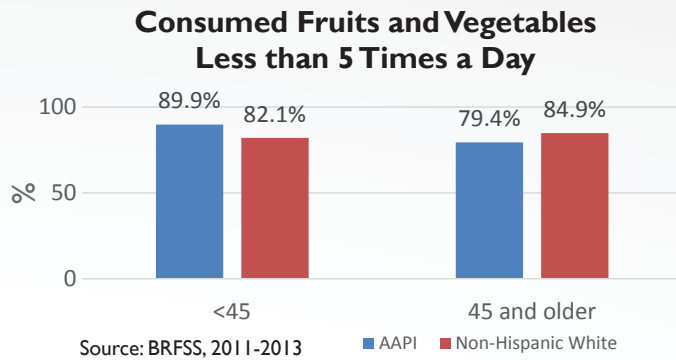


Have Smoked at Least 100 cigarettes in Entire Life





Fruit and Vegetable Consumption

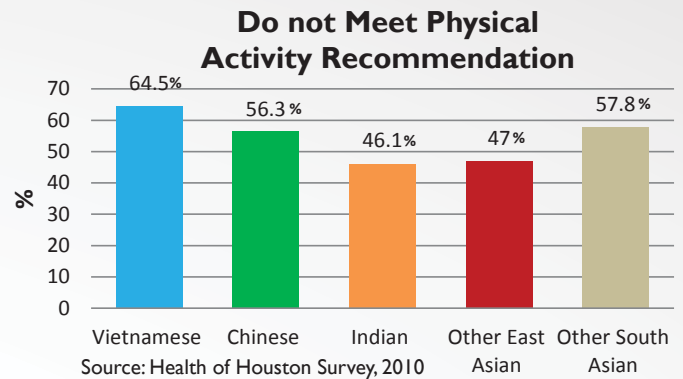


According to a recent report from CDC, less than 15% of U.S. adults met their recommended fruit intake and 8.9% met vegetable intake recommendations in 2013.

In the four county area, the consumption of fruits and vegetables was lower among AAPI than Whites. Younger AAPI groups (less than 45 years) were less likely to report consuming five servings of fruits and vegetables than their White counterparts. Nationally, adults in southern states consume less than 5 servings a day fruits and vegetables. Convenience, affordability, and palatability are the key concerns that determine the consumption of fruits and vegetables (MMWR, 2015).

Higher proportions of younger AAPI groups (less than 45 years) do not meet physical activity recommendations of (150 minutes per week) compared to their White counterparts (BRFSS, 2011-2013). Recent studies have indicated that racial-ethnic minorities are less likely than Whites to meet leisure time physical activity recommendations (Li & Wen, 2013; and Yi. et al. 2015).

Physical Activity



In Harris County, higher proportions of Vietnamese reported that they did not meet the physical activity recommendations as compared to other Asian groups.



Mental Health

Overall, the mental health needs of the AAPI population living in the Houston area are poorly understood. National studies indicate that second generation of Asian Americans are more likely than their immigrant parents to have emotional disorders. National Latino and Asian American Study (NLAAS) indicated that Asian Americans are less likely to seek help for their emotional or mental health problems than whites.

National data indicate that Asian American females 15-24 years old and those over 65 years, have the highest rate of suicide compared to other racial/ethnic groups. Factors contributing to mental health disorders include acculturative stress, unrealistically high expectations for academic and career success, intergenerational conflict and the cultural value of self-control. Asian Americans underutilize mental health services because of stigma associated with mental illness and seeking treatment for it, lack of culturally and linguistically appropriate services, and economic barriers.

This section examines local data pertaining to mental health needs of AAPI Groups.





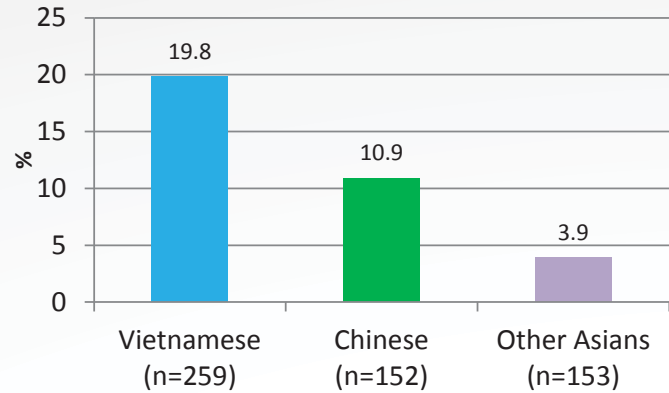
AAPI Reported Need to see Doctor for Mental Health Concerns

Mental Health Needs by Educational Attainment, Insurance Status and Gender

	Vietnamese	Chinese	Other Asians
Education	%	%	%
Less than College	31.7	26.3	2.8
College or More	8.3	7.5	4.2
Insurance Status			
Not Insured	39.5	33	36.6
Private Insurance	6.1	6.3	2.2
Public Insurance	21.1	6.1	14.6
Gender			
Male	10.1	12.4	1.5
Female	33.3	7.6	9.7

Source: Health of Houston Survey, 2010

Mental Health Needs



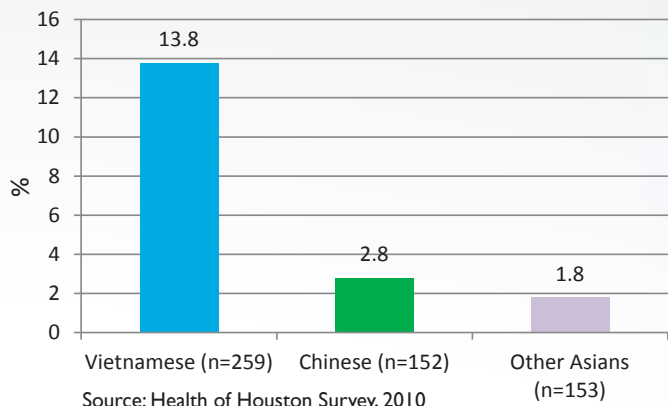
Source: Health of Houston Survey, 2010

The Health of Houston Survey asked respondents if they had seen a doctor for mental health concerns. Higher proportions of Vietnamese living in Houston/Harris County reported that they had seen a doctor for mental health issues than other AAPI groups.

A summary of mental health needs in Houston/Harris County from the Health of Houston Survey (2010), shown in the chart above, indicates that self-reported mental health needs may be greater among those who lack insurance or have public insurance, among Asian Americans with less education, and among females as compared to males.



Had Seen a Doctor for Mental Health Concerns



Additional mental health services are recommended to meet the unique cultural and linguistic needs of the rapidly growing Asian American community. Such services should be targeted at those with less education and who are uninsured, where the need is greater. Asian American females may require special attention when it comes to mental health needs.





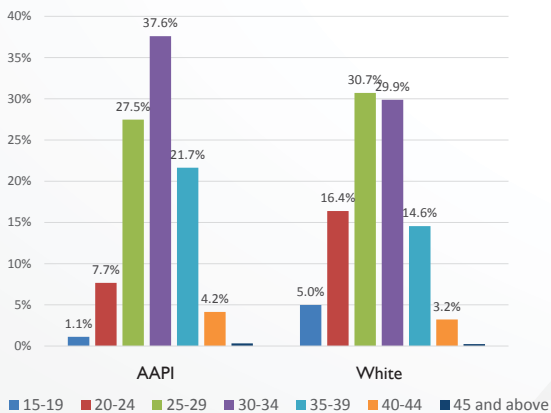
A photograph of two young children, a boy and a girl, smiling outdoors in a wooded area. The boy is on the left, partially visible, wearing a green shirt and a necklace. The girl is in the center, wearing a light-colored tank top. The background is a soft-focus green forest.

Maternal and Child Health

This section examines the maternal and child health issues of AAPI using Vital Statistics (2008-2011) in Brazoria, Fort Bend, Galveston, and Harris Counties.



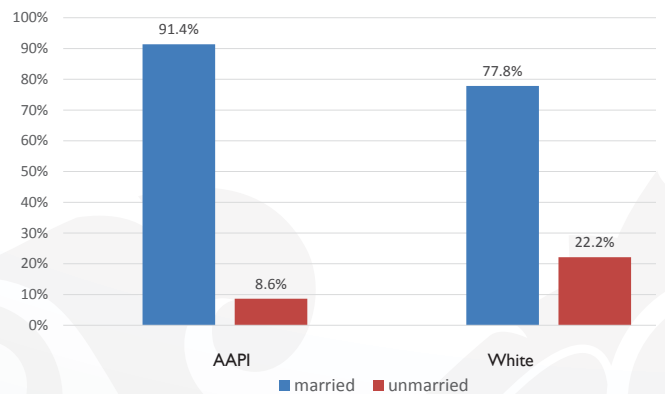
Live Births by Mother's Age*



*Source: Texas Department of State Health Services, Vital Statistics

During 2008 to 2011 in the four county area two-thirds of the births were to mothers ages 25 to 34. Nationally, teen birth is lower among AAPI groups as compared to other racial/ethnic groups (Kids Count, 2015).

Mother's Marital Status*

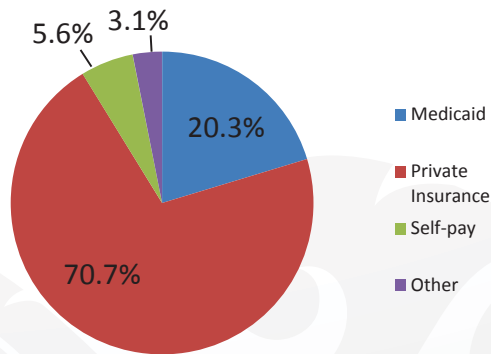


*Source: Texas Department of State Health Services, Vital Statistics

In the four county area, higher proportions of AAPI mothers who gave births during 2008-2011 were married than their White counterparts.



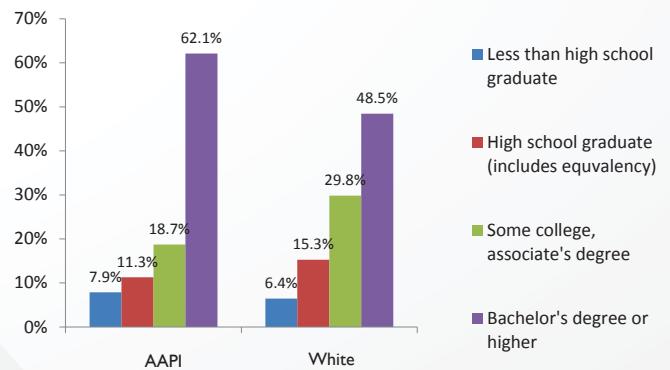
Principal Source of Payment for Delivery*



*Source: Texas Department of State Health Services, Vital Statistics

During 2008 to 2011 in the four-county area, higher proportions of AAPI self-paid for labor and delivery services compared to Whites.

Educational Attainment of Mothers*

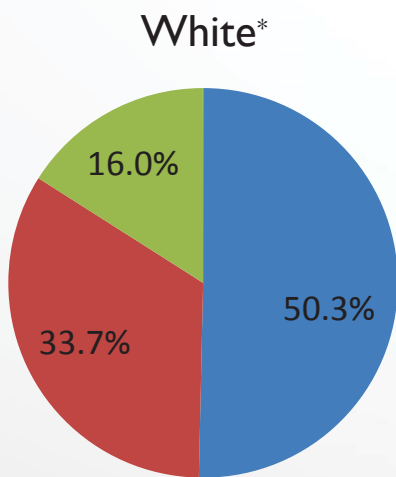
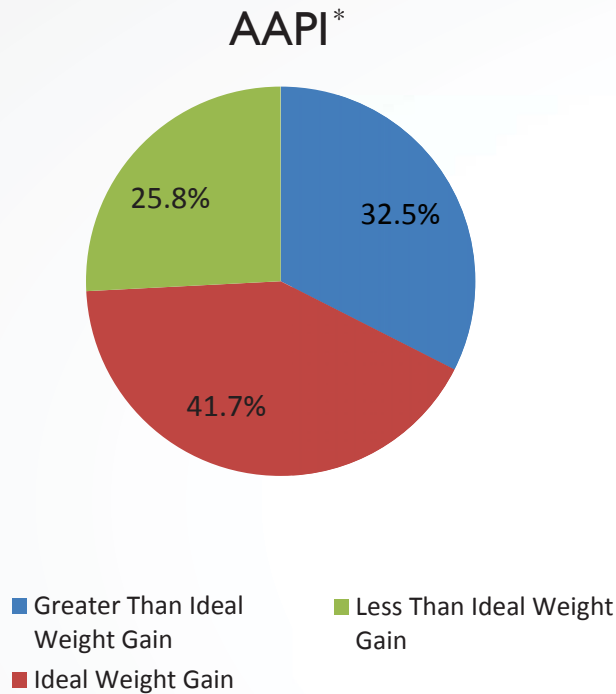


*Source: Texas Department of State Health Services, Vital Statistics

During 2008 to 2011 in the four county area, of the total births among AAPI, more than three-fifths of the births were to mothers who had bachelor's degrees or higher. The proportions of those who had less than high school was also higher among AAPI mothers than that of White mothers.

Pregnancy Weight Gain

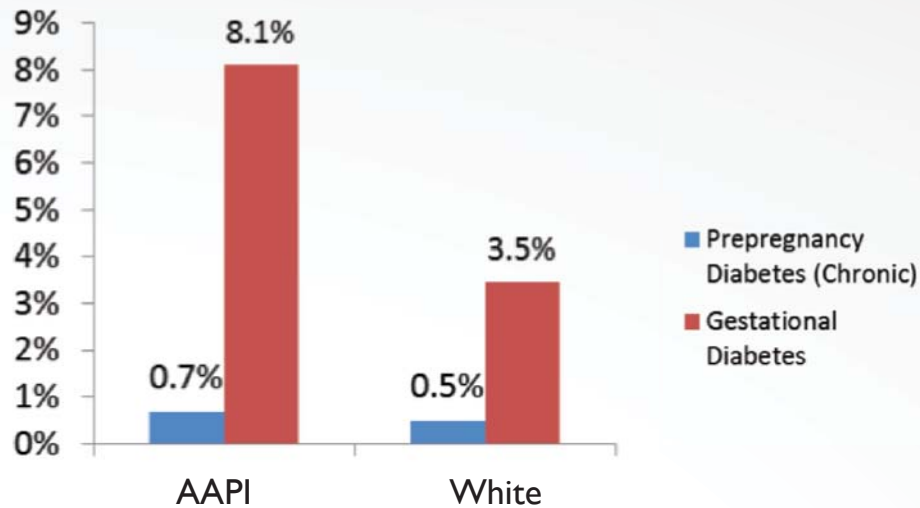
Proportions of pregnant mothers who gained less than ideal weight was higher among AAPI groups than Whites. According to Mayo Clinic, there's no one-size-fits-all approach to pregnancy weight gain. How much weight one needs to gain depends on various factors, including one's pre-pregnancy weight and body mass index (BMI). Individual's health and her baby's health also play a role. In general, greater than ideal weight gain is indicative of some health consequences.



*Source: Texas Department of State Health Services, Vital Statistics



Gestational Diabetes



Source: Texas Department of State Health Services, Vital Statistics

Higher proportions of AAPI mothers get diagnosed with gestational diabetes compared to their White counterparts; this is also true for pre-pregnancy diabetes. Gestational diabetes is associated with significant complications during pregnancy, including an increased need for Caesarean sections; higher risks of preeclampsia, and urinary tract infection in both mothers and infants; increased perinatal morbidity (e.g., macrosomia, neonatal hypoglycemia, and neonatal jaundice); and possibly mortality. A recent analysis indicated that women with less than ideal weight gain during pregnancy were more likely to report gestational diabetes for both AAPI and White women (Cai and Nepal, 2015).





A person with dark hair tied back, wearing a white lab coat, is seen from the side, looking towards a large, vibrant green garden. The garden is filled with various leafy plants, and the background shows a blurred structure, possibly a greenhouse or a covered walkway. The overall scene is bright and natural.

Local Health Studies

This section highlights health research conducted with the local AAPI population. This listing, although not comprehensive, is intended for reference purposes and to serve as a starting point for developing a database of local AAPI health studies. Included are references of peer reviewed manuscripts as well as poster abstracts and unpublished theses and dissertations using AAPI data from one or more parts of the four county area. A few state and national level studies are also included that use AAPI data from the Houston/Harris county area or provide descriptions of the area.

One of the purposes of this profile is to show where additional research is still needed in order to increase our understanding of the complex and diverse health needs of the AAPI community.

	Title	Author(s)	Year	Type of Publication	Populations
1	Health Care Utilization and Insurance Coverage Among Asian Indians	Dongardive, R.	2014	Doctoral dissertation	Asian Indians
2	Acculturation, Smoking and Physical Activity Among Vietnamese Americans from the Health of Houston Survey 2010	Truong, V.	2014	Doctoral dissertation	Vietnamese
3	An Intervention Mapping Approach: Development of a Nutrition and Physical Activity Program for Chinese Americans (MT)	Chang, J.	2013	Master's thesis	Chinese
4	Health of the Filipino Community: What do Filipino Doctors and Nurses Think are the Issues and Challenges (PP)	Cuasay, L.C.	2013	Poster presentation	Filipinos
5	Cancer Screening Behaviors Among Asian Americans in Houston, Texas (DD)	Carvalho, A.F.	2013	Doctoral dissertation	HHS 2010 data
6	Physical Activity in a Culturally and Linguistically Diverse Population of South Asian Women (DD)	Siddiqui, A.	2013	Doctoral dissertation	South Asian
7	Factors Associated with the Process of Adaptation Among Pakistani Adolescent Females Living in the United States (PRM)	Khuwaja, S.; Selwyn, B.J.; Mgbere, O.; Khuwaja, A.; Kapadia, A.; McCurdy, S.; Hsu, C.E.	2013	Peer reviewed manuscript	Pakistani female adolescents in Houston, TX
8	Diabetes Management Among Chinese (MT)	Le, S.Y.	2012	Master's thesis	Chinese
9	Bhutanese Refugees and Their Health Status in Houston, Texas (RPT)	Houston Health Department	2012	Survey Report	Bhutanese
10	Japanese Americans' Health Concerns and Depressive Symptoms: Implications for Disaster Counseling	Cheung, M.; Leung, P.; Tsui, V.	2012	Convenience sample	Japanese
11	Association Between Length of Stay in the U.S. and Diabetes Risk Factors Among Chinese Americans in Houston, Texas in 2004-2005	Yuen Lee, S.	2012	Master's thesis	Chinese

	Title	Author(s)	Year	Type of Publication	Populations
12	Acculturation, Body Perception, and Weight Status Among Vietnamese American Students	Choi, J.; Hwang, J.; Yi, J.	2011	Student random survey	Vietnamese
13	English Proficiency, Symptoms, and Quality of Life in Vietnamese-American and Chinese-American Breast Cancer Survivors	Yi, J.K.; Swartz, M.D.; Reyes-Gibby, C.C.	2011	Face-to-face interviews	Vietnamese, Chinese
14	Assessing the Relationship Between Obesity and Type II Diabetes Among South Asian Indians in Houston A Population Based Study (DD)	Anabor, O.L.	2011	Doctoral dissertation	Asian Indian
15	Young Asian Americans' Knowledge and Perceptions of Cervical Cancer and Human Papillomavirus (PRM)	Gor, B.J.; Chilton, J.A.; Camingue, P.T.; Hajek, R.A.	2010	Peer reviewed manuscript	Filipino, Vietnamese, Korean
16	Hepatitis B and Hepatitis C: Prevalence and Treatment Referral Among Asian Americans Undergoing Community-Based Hepatitis Screening (PRM)	Hwang, J.P.; Mohseni, M.; Gor, B.J.; Wen, S.; Guerrero, H.; Vierling, J.	2010	Peer reviewed manuscript	Chinese, Vietnamese
17	Metabolic Syndrome and its Risk Factors in Bangladeshi Immigrant Men in the USA	Rianon, N.J.; Rasu, R.S.	2010	Subset of a larger study	Bangladeshi
18	Internet use Among Chinese-American Breast Cancer Survivors	Yi, J.; Zahn, M.P.	2010	Face-to-face interviews	Chinese American
19	Pain Management Strategies for Asian Americans: Implications for Clinical Practice (PP)	Gor, B.J.	2009	Poster presentation	Chinese, Vietnamese
20	Factors Influencing the use of Mammography Among Chinese Women in the Houston Area (PP)	Gor, B.J.; Zhao, H.; Hoang, T.V.; Jones, L.A.	2009	Poster presentation	Chinese
21	Asian Youth and Tobacco Control in Houston, TX (PP)	Lui, N.; Gor, B.J.; Prokhorov, A.	2009	Powerpoint	Chinese/ Vietnamese
22	Survival and Hepatitis Status among Asian Americans with Hepatocellular Carcinoma Treated Without Liver Transplantation	Hwang, J.; Hassan, M.M.	2009	Comparative study	Asian
23	Refugees From Myanmar and Their Health Care Needs in the US: A Qualitative Study at a Refugee-Resettlement Agency (MT)	Swe, H.M.	2009	Master's thesis	Burmese refugees

	Title	Author(s)	Year	Type of Publication	Populations
24	Development of a Health risk Factors Questionnaire for Chinese and Vietnamese Residents of the Houston, Texas Area (PRM)	Gor, B.J.; Shelton, A.J.; Esparza, A.; Yi, J.K.; Hoang, T.V.; Liang, J.C.; Jones, L.A.	2008	Peer reviewed manuscript	Chinese, Vietnamese
25	Differences in Small-for-Gestational-Age and Preterm Birth Among Asian Subgroups in Relation to Nativity Status (MT)	Kan, J.	2008	Master's thesis	Asians in Texas
26	Pain Management Among Chinese (MT)	Hsish, H.H.	2007	Master's thesis	Chinese
27	The Mark of a Good Healer: Examining Health Care Behaviors in the Vietnamese Community (DD)	MacGregor, C.	2007	Doctoral dissertation	Vietnamese
28	Diabetes Education Among Chinese/Vietnamese (MT)	Guinara, A.	2006	Master's thesis	Chinese, Vietnamese
29	Diet and Breast Cancer Among Asian Migrants (MT)	Jhangiani, S.	2006	Master's thesis	Asian women
30	South Asian Immigrant Cardiovascular Risk Assessment in Houston, Texas 2005 (DD)	Khowaja, A.A.	2005	Doctoral dissertation	South Asian
31	Cervical Cancer Among Vietnamese Women: Efforts to Define the Problem among Houston's Population (PRM)	Chilton, J.A.; Gor, B.J.; Hajek, R.A.; Jones, L.A.	2005	Peer reviewed manuscript	Vietnamese
32	Predictors of Breast and Cervical Screening in Vietnamese Women in Harris County, Houston, Texas	Ho, V.; Yamal, J.M.; Atkinson, E.N.; Basen-Engquist, K.; Tortolero-Luna, G.; Follen, M.	2005	Mail-survey	Vietnamese
33	Successful Promotion of Hepatitis B Vaccinations Among Vietnamese-American Children Ages 3 to 18: Results of a Controlled Trial	McPhee, S.J.; Nguyen, T.; Euler, G.L.; Mock, J.; Wong, C.; Lam, T.; Nguyen, W.; Nguyen, S.; Ha, M.Q.; Do, S.T.; Buu, C.	2003	Intervention trial	Vietnamese, parents

	Title	Author(s)	Year	Type of Publication	Populations
34	Psychometric Properties of the DSM Scale for Depression (DSD) with Korean-American Youths	Choi, H.; Stafford, L. Meininger JC Roberts RE Smith DP	2002	Research study	Korean
35	Prevalence and Determinants of Type 2 Diabetes Among Filipino-Americans in the Houston, Texas Metropolitan Statistical Area (PRM)	Cuasay, L.C.; Lee, E.S.; Orlander, P.P.; Steffen-Batey, L.; Hanis, C.L.	2001	Peer reviewed manuscript	Filipinos
36	Liver Carcinoma Prevention Among Asian Pacific Islanders. Getting Hepatitis B Shots into Arms	Jenkins, C.N.; 'Suc Khoe, L.V.	2001	Research study	Children
37	Vietnamese American College Students' Knowledge and Attitudes Toward HIV/AIDS	Yi, J.K.	1998	Survey Report	Vietnamese Students
38	Process and Outcome Evaluation of the Hepatitis B Perinatal Vaccination Program in Houston, Texas, 1991-1993 (DD)	de los Angeles Hernandez-Valero, M.	1995	Doctoral dissertation	Pregnant Asian, African American, Caucasian, Hispanic women
39	Health Perspectives of Asian Indians May Differ by Age, Gender and Nativity (PP)	Dhar, S.; Gor, B.J.; Pande, M.; Krishnan, S.; Dorai, V.K.; Jones, L.A.	2014	Poster presentation	Asian Indians

LEGEND:

PRM: Peer Reviewed Manuscript PP: Poster Presentation
 MT: Master's Thesis RPT: Report
 DD: Doctoral Dissertation





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