Community Health Needs & Resource Assessment:

An Exploratory Study of South Asians in NYC

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Note: To date, CSAAH has completed assessments in the Cambodian, Chinese, Filipino, Korean, Vietnamese, and South Asian communities. The Japanese CHNRA is forthcoming. Bilingual surveys were administered by a trained staff member or volunteer at various community-based sites such as community centers, places of worship, health organizations/agencies, local businesses as well as community events like health fairs and cultural celebrations. Each assessment had a set of advisors to guide the process; which included CSAAH partnering with over 30 concerned individuals, community groups, faith based organizations, and professional associations to design, conduct, analyze, and interpret these assessments.

Background

More than one million documented and undocumented Asian Americans live in New York City (NYC). However, there is scant health research available on NYC Asian Americans. In collaboration with community-based organizations and advocates, the NYU Center for the Study of Asian American Health conducted a series of community health needs and resource assessments (CHNRA) among Cambodians, Chinese, Koreans, Cambodians, Japanese, South Asian, and Vietnamese in NYC from 2004-2007. The studies were exploratory in nature, using qualitative and formative research methods to identify the health concerns and needs of Asian Americans in New York City. The goals of the assessments were to determine (1) the degree to which health issues exist in the Asian American community; (2) the resources available for Asian Americans; and (3) the best approaches to meet the needs of the Asian American community in New York City. The study activities included a review of the current state of health literature on Asian American health and conducting a survey on the community's perceived health status, health seeking behaviors, barriers to care, and available health resources. From this, a set of health priority areas and strategies were

developed that will guide health education material development, community outreach initiatives, and future research projects for the specific Asian American communities.

The following are the preliminary results of the South Asian Community Health Needs and Resource Assessment† of adults 18 years and older (n=143). This fact sheet also represents an extensive effort to capture available published literature. However, published literature on all subgroups represented under the "South Asian" umbrella is sparse; for this reason, the fact sheet focuses on the three largest South Asian subgroups (Indian-, Bangladeshi-, and Pakistani-Americans). Findings of the South Asian CHNRA are compared to national, state, and local data to assess similarities and differences of experiences.

Who are the South Asians in NYC?

HISTORICAL OVERVIEW

The South Asian community represents a vibrant, unique Asian American ethnic group in the United States. Unlike many other ethnic groups, South Asian individuals trace their origins to several countries, including India, Pakistan, Bangladesh, Nepal, Burma, Sri Lanka, Bhutan and the Maldives. In addition to these countries, South Asians are a diasporic community that have migrated to many parts of the world, including Fiji, Kenya, British Guyana, South Africa, and parts of the Caribbean, England, and Australia. Over 300 languages are spoken in South Asian countries. South Asians in the U.S. speak many of these languages, including Bangla, Burmese, Gujurati, Hindi, Marathi, Nepali, Punjabi, Sinhalese, Tamil, and Urdu. There is also tremendous diversity in religious practices, with Buddhism, Hinduism, Islam, Jainism, Sikhism, Zoroastrianism, and Christianity being the most common religions. Despite this diversity, South Asians share many cultural and social characteristics, and immigration from various South Asian regions has cultivated and encouraged the creation of a

† Individual fact sheets on the Indian, Bangladeshi, and Pakistani community will be developed in the future.

"South Asian" identity in the United States (U.S.) (Leonard, 1997; Asian Pacific Islander American Health Forum [APIAHF], 2006).

There have been two major waves of South Asian immigration to the U.S. – the first period was from the late 1800s to the early 1900s, and second period from 1965 to the present. It is estimated that between 6,000 and 7,000 Sikh and Muslim farmers (primarily from the Punjab region of India) migrated to the US in the late 1800s and early 1900s. Many of these farmers settled along the West Coast and intermarried with the Mexican population in California (Leonard, 1997). These early South Asian immigrants faced rampant discrimination from native born US citizens. For example, South Asians, along with other immigrant groups, were barred from leasing and owning agricultural land and were denied licenses to marry white women. Activism among Punjabi immigrants was cultivated in response to the abuses faced, as well as to support the growing anti-British sentiments in India (Prasad, 2000; Zia, 2000; Leonard, 1997). Despite the rise in community mobilization efforts, a series of anti-immigrant policies and court decisions (in years 1910, 1917, 1920, and 1923) were passed that barred South Asian immigration to the U.S (South Asian American Leaders of Tomorrow [SAALT], 2005).

The passage of the 1965 Immigration and Naturalization Act enabled a large number of South Asian immigrants to come to the US. An overwhelmingly majority of these individuals came from urban centers and had high levels of education. At the same time, the US was facing labor shortages in the fields of medicine, engineering, and accounting. This also facilitated many South Asian professionals to immigrate as they helped to fill gaps in these sectors. The Immigration Reform and Control Act of 1986 (IRCA) made it easier for family members and low-skill laborers to enter the country during the 1980s (Midlarsky, 2006; Baluja, 2002). Several additional visa programs were established and expanded in the 1990s (including the Diversity Visa Program and the Immigrant Visa Lottery) that facilitated large increases in the Pakistani, Bangladeshi, Sri Lankan, and Nepali populations. Lottery visas in particular attracted immigrants from across the educational and occupational spectrum because it has no prerequisites other than 12 years of education and experience in a profession that requires two years of training (Baluja, 2002; Najam, 2006). In the late 1990s-2000s, South Asians have entered the US in increasing numbers on work visas related to the technology industry, particularly from India Many of these hi-tech workers hope to eventually be able to adjust their status and remain in the U.S. (APIAHF, 2006).

According to the 2000 US Census, there are 2.5 million South Asians that live in the US; they constitute 21% of the total Asian American community. The overwhelming majority are Asian Indians, who make up nearly 90% of the South Asian population. From 1990 to 2000, Asian Indians experienced a 154% growth rate. Other South Asian ethnic groups also experienced tremendous growth. The Bangladeshi community grew 471% since 1990, representing the largest growth rate of any ethnic group in the country. In addition, the Sri Lankan community grew by 226% and Pakistani community by 154% (US Census Bureau American FactFinder [USCBAFF], 2007).

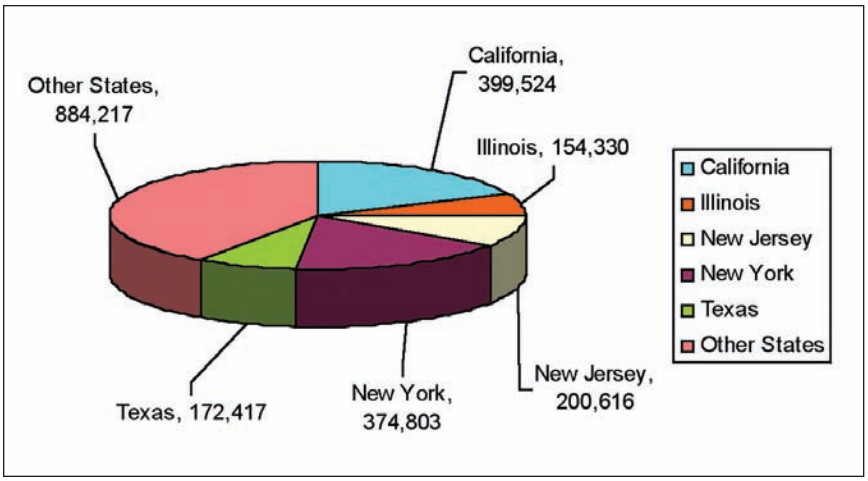


Figure 1. South Asians in the U.S., 2000

*Incl. Indian, Bangladeshi, Pakistani, and Sri Lankan ethnicities alone or in any combination; U.S. Census 2000 Summary File 1

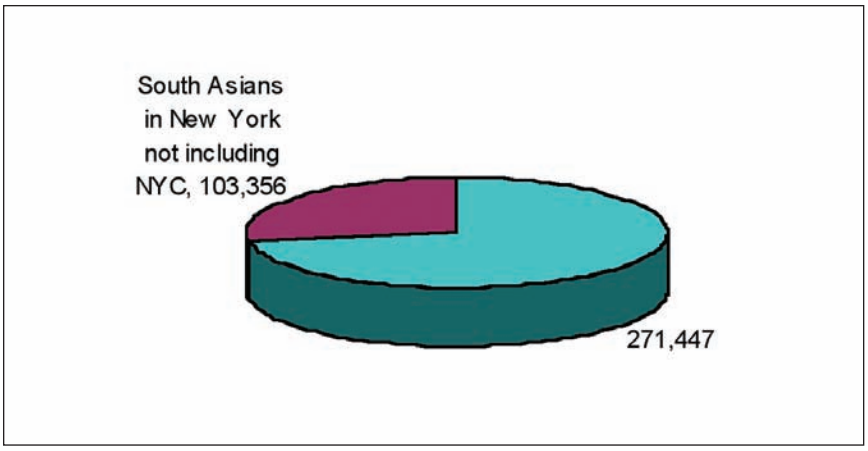


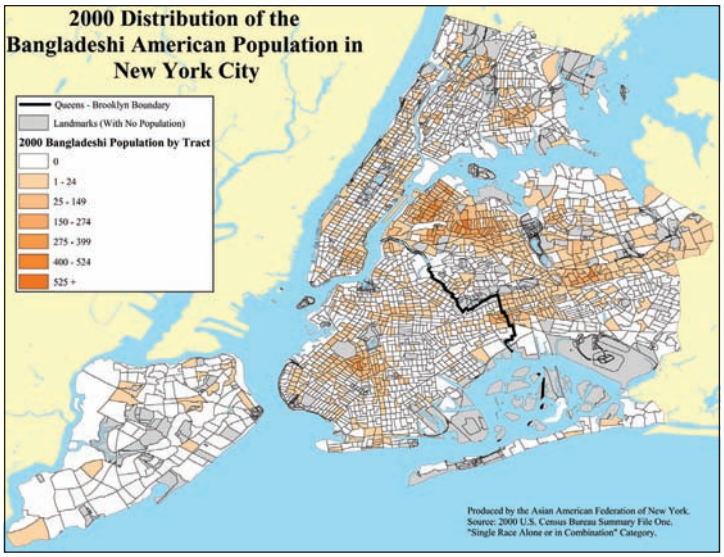
Figure 2*: South Asians in New York, 2000

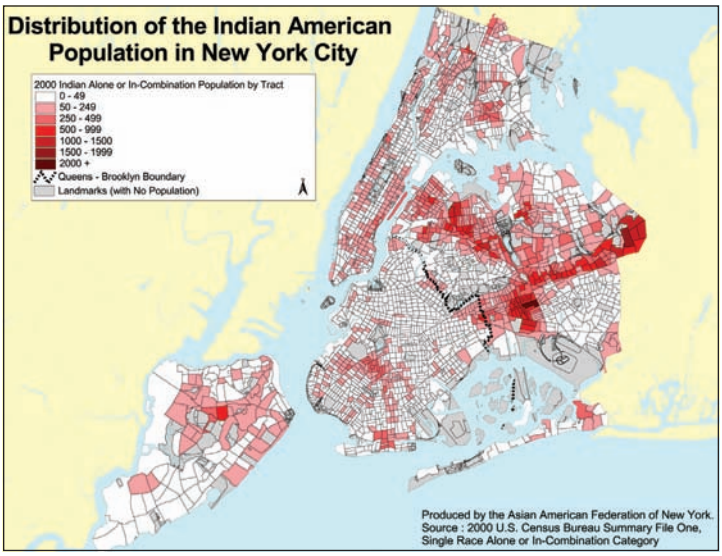
* Incl. Indian, Bangladeshi, Pakistani, and Sri Lankan ethnicities alone or in any combination; U.S. Census 2000 Summary File 1

IMMIGRATION AND SETTLEMENT IN NYC

In 2000, New York had the second largest concentration of South Asians, the first being California [Figure 1]. In New York State, the overwhelming majority (72.4%) of South Asians[†] resided in New York City [Figure 2]. Queens County has the largest South Asian population in the city: 164,636, or 60.7%. Following Queens, Brooklyn (Kings County, 20,555 or 19.6%), the Bronx (23,622 or 8.7%), and Manhattan (New York County, 20,555 or 7.6%) have the next highest South Asian populations. Staten Island (Richmond County) has the least with 9,488 or 3.5% of the population (Census 2000). Although there are no real South Asian enclaves, there are particular neighborhoods within each of these boroughs where groups tend to cluster. For example, the neighborhoods of Richmond Hill, South Ozone Park, and Woodhaven-Ozone Park are home to large numbers of Guyanese and Trinidadians primarily of Asian Indian descent. Indian immigrants to the City populate Flushing, Elmhurst, and Woodside, while there is a concentration of Bangladeshi immigrants in Astoria and Jackson Heights. There are also large and growing pockets of Bangladeshi immigrants in the Lower East Side of Manhattan and the Sterling Avenue section of the Bronx. A large Pakistani community resides in the

[†] incl. Asian Indian, Bangladeshi, Pakistani, Sri Lankan





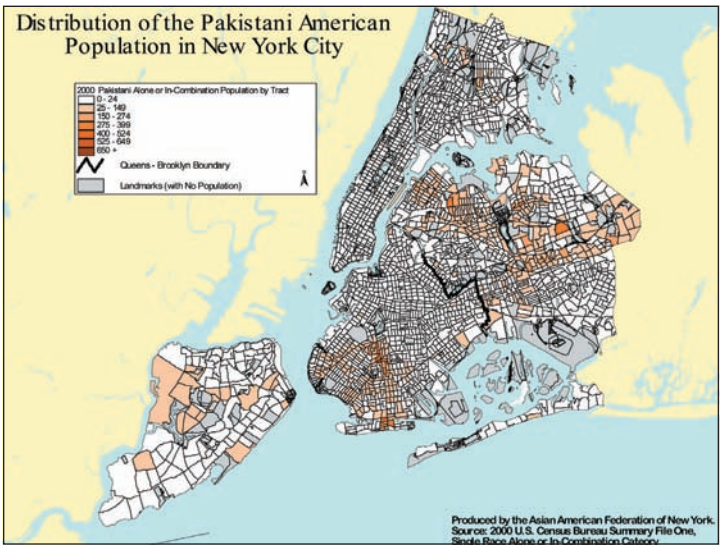


Figure 3: Geographic Distribution of South Asians in New York City

Source: Asian American Federation of New York Census Information Center.

Midwood, Kensington, and Flatbush areas of Brooklyn, where there are also a growing number of Bangaldeshis (Burden, 2004).

South Asians began settling in New York City in the years following 1965. This wave of South Asians included large numbers of medical professionals, engineers, students, and academics. During this time, a small number of South Asian, in particular Indian immigrants began setting up businesses in fields such as diamond trade, garment business, newsstands, retail discount stores, restaurants and taxicabs. Recent waves of immigrants from South Asia have also engaged in many service-sector and lower-wage occupations, including restaurant work, taxi driving, street vendors, construction, and domestic work. The taxicab business was a large employment opportunity for the South Asian immigrants. An estimated amount of 43-60% New York City cabdrivers are Indian, Pakistani and Bangladeshi (Khandewal, 2002).

The East Coast region has also been the predominant area for the Pakistani immigrants; the second most concentrated region is New York (Najam, 2006). During the 1980's favorable immigration laws and educational opportunities all increased the growth of the Pakistani immigration population. Although there was a small Bangladeshi migration to New York during the 1970s and 80s, a sharp increase in this population was experiences after 1991. Diversity visas helped Bangaldeshis become a major source of immigrants in New York City between 1990 and 2000 and onwards. Other forms of Bangladeshi population increase are due to student visas, tourist visas and also temporary or nonimmigrant visas (Baluja, 2002). Muslims segments of the South Asian community (particularly the Pakistani community) experienced a decline in the progression of the population post September 11th due to deportation and a decreasing number of visas granted to individuals from Muslim countries. It is unclear if this population decline is a lasting trend; collecting more recent data will provide a more reasonable understanding to the trend (Najam, 2006).

Demographically, South Asian immigrants in New York display some unique characteristics when compared to other immigrant groups. For example, India was the fourth largest source country of foreign-born persons in New York City in 2000. Among South Asian families, males first establish themselves in New York before being joined by their spouses and children. Correspondingly, groups such as Pakistani Americans have the highest sex-ratio among any immigrant group at 161 (161 males for every 100 females). On the other hand, close to 80 percent of Bangladeshi households were married-couple families, as were over six-in-ten Indian and Pakistani households. Although Asian Indians in New York have a relatively high median household of $50,000, poverty levels are substantially higher for Bangladeshi and Pakistani immigrants (Burden, 2004).

Figure 4: The South Asian American† Demographic Profile At-A-Glance

	United States	New York State	New York City	South Asian CHNRA
Source	U.S. Census 2000 Summary File 4.	U.S. Census 2000 Summary File 4.	U.S. Census 2000 Summary File 4. (Unless otherwise noted)	CSAAH 2007. South Asian†† Community Health Needs & Resource Assessment
Total Population	2,185,907	329,683†††	271,447†††	N=143
Gender	47% Female 53% Male	46% Female 54% Male	45% Female 55% Male	45% Female 55% Male
Residence	See Figure 1. South Asians in the U.S., 2000	15%Outside of NYC 12%NYC	61% Queens 31% Bronx, Brooklyn, Staten Island 8%Manhattan	43% Queens 37% Brooklyn 13% Bronx 1% Staten Island 4% Manhattan 4% Outside of NYC
Place of Birth	73% Foreign born 27% U.S. born	76% Foreign born 24% U.S. born	78% Foreign born 22% U.S. born	97% Foreign Born 3% U.S. Born Place of Birth 34%Pakistan 36%Indian 21%Bangladesh 6%Other
Length of stay in U.S.	55% Entered 1990 to 2000 28% Entered 1980 to 1989	53% Entered 1990 to 2000 32% Entered 1980 to 1989	56% Entered 1990 to 2000 32% Entered 1980 to 1989	47% Less than 10 years 35% 10 to 20 years 18% 20 years or more Average Length of Stay in the U.S: 12 years
Citizenship	56% U.S. Citizens 48% Native Born 52% Naturalized 44% Not U.S. Citizens	76% U.S. Citizens 43% Native Born 57% Naturalized 45%Not US Citizens	53% U.S. Citizens 41% Native Born 59% Naturalized 47%Not U.S. Citizens	---
Average age	Asian Indian 30 Years Old Bangladeshi 29 Years Old Pakistani 28 Years Old Sri Lankan 34 Years Old	Asian Indian 31 Years Old Bangladeshi 29 Years Old Pakistani 28 Years Old Sri Lankan 34 Years Old	Asian Indian 31 Years Old Bangladeshi 29 Years Old Pakistani 29 Years Old Sri Lankan 34 Years Old	43 years Old
Educational attainment	6% Less than high school 12% High school graduate 9% Some college 28% Bachelor's degree 31% Graduate or professional degree • Population 25 years or older	10% Less than high school 19% High school graduate 10% Some college 22% Bachelor's degree 20% Graduate or professional degree • Population 25 years or older	11% Less than high school 21% High school graduate 10% Some college 20% Bachelor's degree 15% Graduate or professional degree • Population 25 years or older	13% Less than high School 21% High School (some or graduate) 37% College (some or graduate) 29% Graduate or professional degree • Population 18 years or older
Language	25% speak English less than "very well"	54% speak English less than "very well"	33% speak English less than "very well"	70% speak English less than "fluently like a native"

Employment status		66% In labor force 34% Not in labor force	62% In labor force 38% Not in labor force	61% In labor force 39% Not in labor force	56% in labor force 44% Not in labor force
Income	Median household income	Asian Indian $61,322 Bangladeshi $37,074 Pakistani $45,576 Sri Lankan $52,392	Asian Indian $51,774 Bangladeshi $32,346 Pakistani $39,884 Sri Lankan $14,507	Asian Indian $45,155 Bangladeshi $31,537 Pakistani $34,835 Sri Lankan $43,603	
	Per capita income	Asian Indian $26,415 Bangladeshi $13,532 Pakistani $17,685 Sri Lankan $26,530	Asian Indian $23,389 Bangladeshi $10,889 Pakistani $14,507 Sri Lankan $24,437	Asian Indian $18,473 Bangladeshi $10,479 Pakistani $11,992 Sri Lankan $20,865	
Average number of people in household		Asian Indian 3.1 Persons Bangladeshi 3.7 Persons Pakistani 3.7 Persons Sri Lankan 2.8 Persons	Asian Indian 3.4 Persons Bangladeshi 4.2 Persons Pakistani 4.0 Persons Sri Lankan 3.1 Persons	Asian Indian 3.4 Persons Bangladeshi 4.2 Persons Pakistani 4.0 Persons Sri Lankan 3.3 Persons	3.5

* † Includes Asian Indian, Bangladeshi, Pakistani, and Sri Lankan ethnicities alone or in any combination. Data is aggregated where possible.

* †† Includes Indian, Bangladeshi, Pakistani, and other South Asian populations

* ††† Numbers differ from Figures 1 and 2 because they are drawn from two different U.S. Census Summary Files

* *U.S. Census 2000 Summary File 1.

Figure 5. Community Health Profile

Population	**All NYC Residents**	**All NYC Asian Population**	**South Asian CHNRA Sample**
Source	NYC Department of Health & Mental Hygiene (2005). Community Health Survey.	NYC Department of Health & Mental Hygiene (2005). Community Health Survey.	CSAAH (2007). South Asian Community Health Needs & Resource Assessment.
Health Status	19% Excellent 25% Very Good 34% Good 23% Fair or Poor	13% Excellent 26% Very Good 32% Good 30% Fair or Poor	21% Excellent 49% Good 26% Fair 3% Poor
Health Insurance	18% Medicaid 12% Medicare 4% Others 59% Private 17% Uninsured	22% Medicaid 11% Medicare 5% Others 41% Private 21% Uninsured	11% Medicaid 11% Medicare 18% Other Public Insurance 29% Private/ through work 31% Uninsured
Blood Pressure Screening	96% Yes* 4% No*	91% Yes* 9% No*	82% Yes 18% No
Cholesterol Screening	80% Yes 20% No	75% Yes 25% No	69% Yes 31% No
HIV Test	58% Yes 42% No	40% Yes 61% No	30% Yes 70% No
Colonoscopy (50 years or older)	55% Yes 45% No	50% Yes 50% No	32% Yes 68% No
Mammogram (40 years or older)	73% Yes 28% No	65% Yes 35% No	78% Yes 18% No
Pap Test	80% Yes 20% No	64% Yes 36% No	59% Yes 41% No
Current Smoker	19%	13%	12%
Heavy Smoker (more than 10 cigarettes a day)	Among current smokers, 44% Yes 56% No	Among current smokers, 41% Yes 59% No	Among current smokers, 47% Yes 53% No

*Data drawn from 2002 New York City Community Health Survey

Health Status

National studies report that approximately 25% of Asian Indians experience a chronic health condition (Hughes, 2002). Islam and colleagues found that among a community sample of South Asians living in New York City, 18% of the sample reported fair or poor health (Islam et al 2002).

When asked to describe their general health, 20% of South Asian CHNRA respondents indicated their health was excellent, 49% was good, 25% was fair, and 3% was poor.

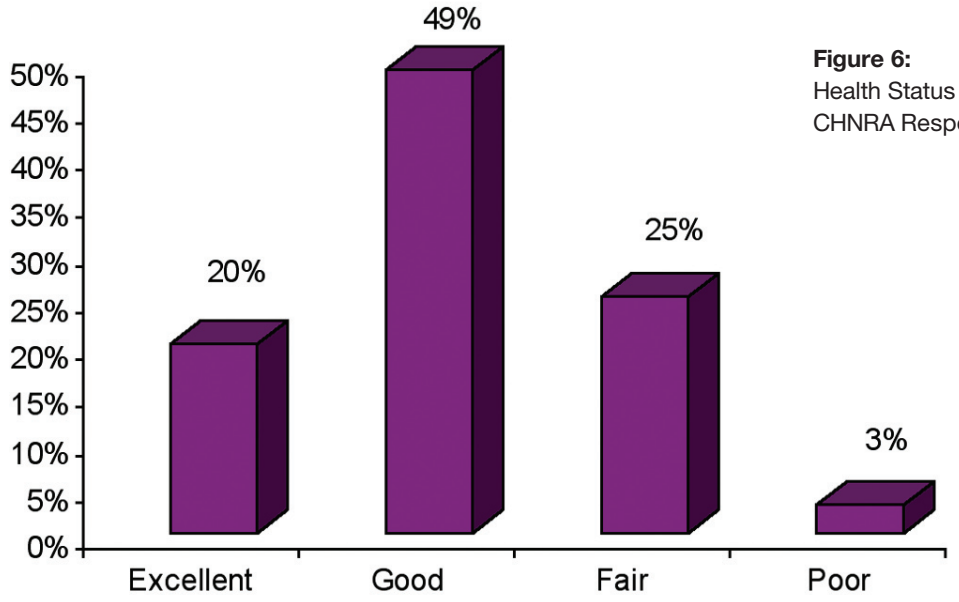
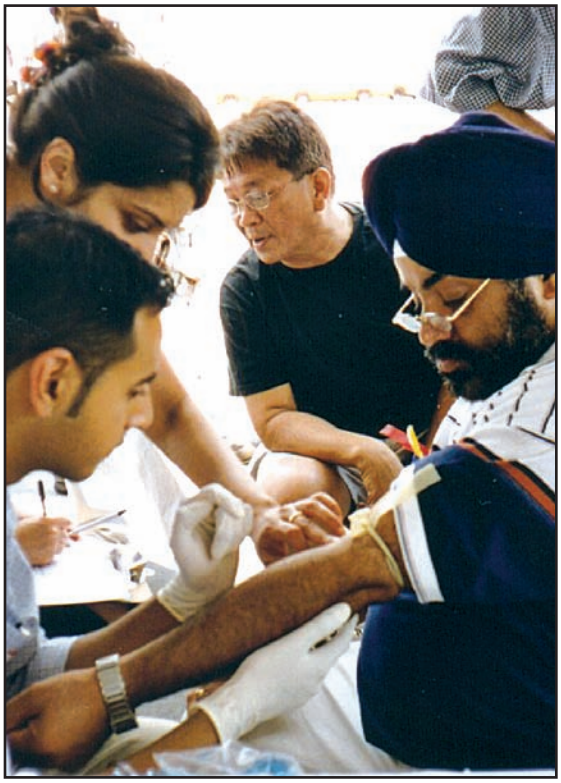


Figure 6:
Health Status of
CHNRA Respondents

Access to Healthcare



ROUTINE CHECKUPS

Studies highlight the importance of receiving regular health screenings or examinations in reducing the likelihood of developing many diseases and conditions, including certain types of cancers, cardiovascular problems, asthma, diabetes, and infectious diseases (Cornelius et al., 2002).

The CHNRA found that 77% percent of respondents saw their doctor for a routine checkup within the past year, 11% between 1 and 2 years ago, 6% between 2 and 5 years ago, and 1% more than 5 years ago. Additionally, 5% do not have a regular doctor.

When CHNRA respondents become sick or injured, the majority (59%) reported seeing a private physician. However, many South Asians in our sample also reported taking medicine at home (19%), going to the emergency room (17%), or going to the pharmacy (12%).

† Includes Asian Indian, Bangladeshi, Pakistani, and Sri Lankan ethnicities alone or in any combination. Data is aggregated where possible.

BARRIERS TO CARE

National studies report that South Asian Americans face various barriers in accessing care. For example, Hughes found that 28% of Asian Indians have difficulty in communicating with their doctor, and 43% of Asian Indians feel their doctor does not understand their background or values (Hughes, 2002). The top difficulties that CHNRA respondents face when seeking health care services included language, communication, and cultural barriers (as reported by 22% of the sample). These challenges may be due to limited English language proficiency among South Asians. For example, while 30% of our sample reported speaking English "Fluently like a native", 24% reported speaking English "well", 36% reported speaking English "so-so", 5% reported speaking English "poorly", and 4% did not speak any English at all. Interestingly, 74% of South Asian CHNRA respondents had a provider who speaks a language in which they can comfortably communicate. It may be inferred that many South Asian respondents are seeking health care services from providers that speak South Asian languages. Participants also reported other barriers such as high costs of health care (19%) and a lack of time to access services (11%).

HEALTH INSURANCE RATES

National studies of South Asians report that approximately 10-21% of this population is uninsured, compared to 14% of the non-Latino White population (Chaudhry, 2003; Ponce et al., 2003; Mohanty, 2004). However, such studies often mask the large number of recent South Asian immigrants who may experience higher rates of un-insurance. Smaller, community based studies of South Asian Americans have reported high rates of being uninsured among this population, particularly in New York City. For example, a study on the South Asian community conducted by the South Asian Council on Social Services (SACSS) found that 66% of the population was uninsured. This rate varied among South Asian subgroups – for example, 40% of the Indian population was uninsured; 44% of the Bangaldeshi population was uninsured, and 18% of the Pakistani population was uninsured (Mukherji-Ratnam, 2004). Other studies in New York City have found similarly high rates. For example, Islam and colleagues found that 50% of a community-based sample of South Asians was uninsured (2006). Many South Asians in urban areas work in service or independent contractor industries that do not offer health benefits. For example, a study of South Asian taxi drivers in New York City found that 80% of the sample was uninsured (Islam et al., 2005).

The CHNRA found that 31% of respondents were uninsured. Additionally, 40% of respondents had some type of public insurance (11% of respondents had Medicaid, 11% had Medicare, 18% had other types of public or government insurance) and 29% had private or employer-based coverage.

COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) USE

In South Asian communities, use of complementary and alternative medicines (CAM) is widespread. Ayurvedic, Sidha, and Homeopathic medications are common (Barnes 2004; Gogtay, 2002). Hsiao and colleagues report that among a representative sample of South Asians in California, 67% reported using any type of CAM modalities; 19% reported going to a CAM provider, and 58% reported

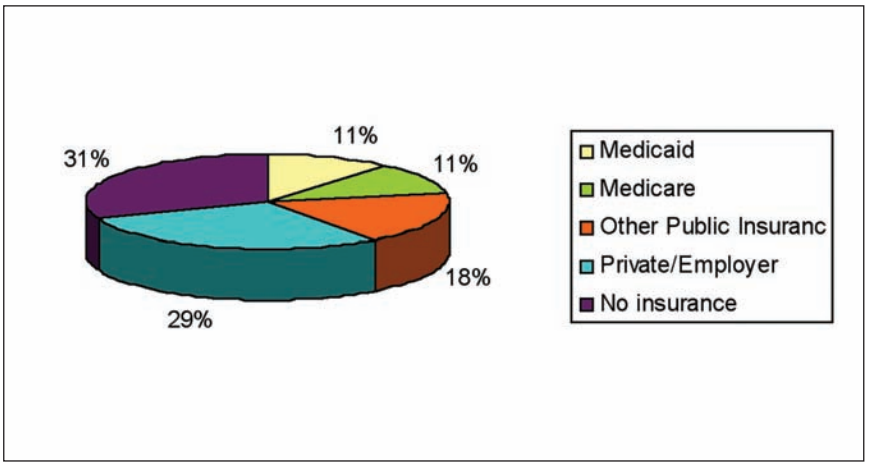


Figure 7: Insurance Status of CHNRA Respondents

using a biologically-based CAM treatment (Hsiao et al., 2006).

Many CAM traditions rely on the use of treated metals as medicines, including mercury, cadmium, lead and arsenic. Several studies have documented the presence of heavy metals such as lead, mercury, or arsenic. Saper and colleagues conducted a systematic search of Ayurvedic medicine products in the Boston area, and found that 20% of the Ayurvedic products tested contained heavy metals, all of which could result in heavy metal intakes above those that cause health effects (Saper 2004). Recently, in the US, there have been 12 reported adult cases of lead poisoning in five states which were associated with Ayurvedic medicines or remedies (CDC 2004). The New York City Department of Health and Mental Hygiene reports that high levels of lead poisoning among South Asian children and mothers may be attributed to use of traditional medicines (New York City Department of Health and Mental Hygiene Lead Poisoning Prevention Program internal data).

Health Conditions

Figure 8: Major Health Concerns of CHNRA Respondents

Health Concerns	% of Respondents Reporting Health Concern
1. Cardiovascular Disease	55%
2. Cancer	51%
3. Mental Health	37%
4. Diet and Nutrition	36%
5. Orthopedic Problems*	35%
6. Respiratory Problems*	35%
7. Pain	33%
8. Headache	32%
9. Sleeplessness	29%
10. Fatigue	27%

* Respondents ranked "Orthopedic Problems" and "Respiratory Problem" as equally important

CANCER

Breast Cancer

U.S. South Asians have been found to show higher rates of cancer after migration to the U.S. as compared with rates in their native countries. Currently, there is no published data on cancer screening rates among South Asians in New York City. Recent studies from California have

suggested that rates of breast cancer among South Asian women have increased; the five-year average annual rate of invasive breast cancer in this population was reported at 78.5 per 100,000 (Keegan et al., 2007). Despite this fact, South Asian immigrants have indicated low rates of breast and cervical cancer screening. Data from the National Health Review Survey (NHIS) in the U.S. indicate that rates of never having a mammogram (68%) or a Pap smear (26%) among Asian Indian women are higher than overall Asian American Pacific Islander (AAPI) rates, 30% and 21% respectively (Kagawa-Singer et al., 2000). Studies of specific subgroups, such as Asian Islamic women, have revealed lower rates of mammography and clinical breast exams (Rashidi et al., 2000). A study among a community sample of South Asian women living in the New York City metropolitan area showed 70% of women over the age of forty had ever had a mammogram; 56% had one in the last 2 years and 66% of women had knowledge of a breast self-exam; 34% had ever practiced a BSE. Using multiple logistic regression analysis, the study concluded that increased educational efforts targeted at South Asian women of lower socioeconomic status must be developed (Islam, et al., 2006).

Cervical Cancer

The only national study of Pap test screening rates of South Asian women in the U.S. revealed that despite the high socioeconomic status of the sample, 73% of this population had ever received a pap smear compared to the national average of 83% (Chaudhry et al., 2003). Islam and colleagues found that 67% of a community-based sample of South Asian women in New York City had ever had a Pap test; 54% had one in the last 3 years (Islam et al., 2006).

Among CHNRA respondents, 58% of women had ever received a clinical breast exam, 59% of women had ever received a pap smear, and 78% of women over the age of 40 had ever had a mammogram. CHNRA findings support cited studies which suggest that access to pap screening services is low for South Asian women as compared to other Asian American and minority groups.

Oral Cancer

Tobacco and associated smokeless tobacco products and accompaniments are integral to the religious and cultural practices of many South Asians. This coupled with limited access to dental care makes oral cancers (including tongue, mouth, gyms, larynx, esophagus, and other squamous cell oral cancers) the most common among this population. In the U.S., the rate of oral cancer is 5-6 times higher than for the general population, constituting 30% of all South Asian cancers (Mukherjea, 2005; Ahluwalia, 2005; Changrani, 2005 and 2006)

Given the burden of oral cancer in this community, access to dental services is particularly important for South Asians. However, among CHNRA respondents, 71% had ever been to a dentist, and 29% had never seen a dentist.

Other Cancers

There is limited data on the rates of other cancers among South Asian in the U.S.. Data from California indicates the following 5-year cancer incidence rates per 100,000 among South Asians: Prostate (87.1), Lung (22.5 males; 12.5 females), Colorectal (24 males; 18.3 females), and Liver (5.7 males, 3.1 females). Studies have also found that compared to other AAPI groups in California, South Asians experience more

oesophagus, gall bladder, prostate, breast, ovary and uterus, as well as lymphomas, leukemias and multiple myelomas. Additionally, compared to the non-hispanic white population of California, South Asians experience more cancers of the stomach, liver and bile duct, gall bladder, cervix and multiple myelomas. South Asians have also demonstrated significantly increasing time trends in colon cancer incidence (Jain et al., 2005). Despite this, Ponce and colleagues report that among South Asians in California over 50 years of age, only 46% have been screened for colorectal cancer.

Approximately one-third (32%) of South Asian CHNRA respondents over the age of 50 reported ever receiving a colonoscopy. As displayed in Figure 5, this rate is much lower than the city-wide rate of colonoscopy screening among Asian Americans (50%). Among men over the age of 50, 38% had ever received a screening for prostate cancer.

CARDIOVASCULAR DISEASE

More Asian Indians die of heart disease than all other causes of death when compared to all other Asian ethnic groups. Compared to the general US population, the prevalence of coronary heart disease among Asian Indians is 4 times higher (Enas, 2002). Asian Indian men in California have the highest proportional mortality rate for coronary heart disease compared to other Asian ethnic groups, minority communities, and the White population (Palaniappan, 2004). Another study of Asian Americans in Northern California found that South Asians were 3.7 times more likely to have ischemic heart disease compared to other Asian groups (Klatsky, 1994). Ivey and colleagues report that 35% of South Asians in California have at least one risk factor for cardiovascular disease (Ivey et al., 2006).

South Asians have also exhibited high levels of stroke (NHLBI 2000) and a heart attack rate that is almost 3 times greater than the general population (APIAHF, 2006). In New York City, Indian immigrants are at a greater risk of hospitalization for heart disease and stroke than other immigrant groups (Muennig, 2005). In addition, rates of hypertension (high blood pressure), a leading factor for heart attacks and stroke, are high in this community. A community sample of Asian Indian men in New York City showed a 17% rate of hypertension (Bhalodkar et al., 2005).

South Asians also suffer from high rates of cholesterol, compounding their risk for cardiovascular disease. For example a study conducted in New York City found that 25% of Asian Indian men demonstrated high cholesterol (Bhalodkar et al., 2005).

Among South Asian CHNRA respondents, 69% had ever been screened for cholesterol and 82% had ever received a blood pressure screening. These rates of screening are lower than both the citywide rate among all New York City residents and among the Asian American population (see Figure 4). Among those screened, 19% of South Asian had been told by health professional that they high cholesterol.

DIABETES

In the U.S., South Asian immigrants are 7 times more likely to have type 2 diabetes than the general population (APIAHF, 2006). A survey-based study of South Asians living in Atlanta, Georgia reported a diabetes prevalence rate of 18.3%, almost four times the general population (APIAHF, 2006).

Genetic factors may play a part in the high rate of diabetes in the South Asian community. A gene variant (ENPP1) known to contribute to diabetes development has been found in higher rates in people with diabetes, and South Asians in particular (Abate et al., 2005). Lifestyle factors such as lack of physical activity, smoking, and low daily intake of fruits and vegetables also play a role (Misra et al., 2004). One study reported that Asian Indian men were are a greater risk for type 2 diabetes and cardiovascular diseases because their metabolic processes mimic those of obese individuals, despite the participants not being overweight (UT Southwestern, 2004).

In New York City, Indian immigrants are at a greater risk of hospitalization for diabetes than other immigrants (Muennig, 2005). A community sample of Asian Indian men found that 11% were diabetic (Bhalodkar et al., 2005). In an analysis of 1.5 million New York City birth records registered between 1990 and 2001, South and Central Asian women experienced the highest prevalence rate (11.1%) and the highest increase for gestational diabetes (95% increase since 1990). In contrast, 3.8% of the general population has gestational diabetes (Thorpe, et al., NYCDHMH, 2005). Gestational diabetes is linked to the later development of type 2 diabetes and childhood obesity.

Approximately two-thirds (67%) of South Asian CHNRA respondents had ever been screened for diabetes, and 17% of those screened had been told by a health professional that they had diabetes. This rate of diabetes is almost 3 times higher than the rate reported for Asian Americans living in New York City (6%), according to the New York City Community Health Survey findings (New York City Department of Health & Mental Hygiene 2004)

INFECTIOUS DISEASES

Hepatitis B and Tuberculosis

The prevalence rate of tuberculosis among South Asians is more than twice the rate for the general U.S. population (10% versus 4% respectively) (APIAHF, 2006). A community based study of immigrant taxi drivers in New York City found that a large majority of South Asian drivers were at high risk for tuberculosis (Gany et al., 2005). Although there are no published studies of hepatitis B rates among South Asians in the US, local studies have found that one in twenty South Asians are infected with hepatitis B, a rate much higher than that of the general population (where the prevalence rate is less than 1%) (Islam et al., 2004; AAHBP, 2007). Despite these rates, studies have documented that South Asian physicians are less likely to recommend hepatitis B screening and vaccination for their South Asian patients (as compared to Chinese or Korean American physicians) (Bodle et al., 2007).

Given the documented high rates of tuberculosis and hepatitis B among South Asians, the rates of screening among CHNRA respondents were very low. For example, 42% of respondents had ever been screened for tuberculosis; 35% had ever been screened for hepatitis B; and only 24% had ever been screened for hepatitis C.

Sexually Transmitted Diseases

Rates of sexually transmitted infections are on the rise within Asian communities. For example, between December 2003 and February 2006, approximately 7,166 cases of HIV/AIDS were diagnosed in the Asian Pacific Islander (API) community. Underreporting is considered to be particularly high for APIs. In data through the

end of 2002, 15% of the total U.S. API diagnosed cases were from New York. In New York City cases reported through January 9, 2002, about 132, or 25.6%, of AIDS cases were in the South Asian community[†] (Chin, 2006). In a 4 month exploratory study on South Asian immigrant women in New York City, researchers tested the attitudes, perceptions and knowledge of South Asians related to HIV/AIDS. They found that participants held an average knowledge base of HIV/AIDS. They identified several barriers to accessing information and using services, including cultural barriers (stigma and shame from having the disease); mistrust of public institutions; and language and cultural competency issues (Abraham et al., 2004).

Given that Chin et al's study shows that a substantial proportion of the AIDS burden within the API community is among South Asians, rates of screening for HIV are low in this community. For example, only 30% of South Asian CHNRA respondents have ever received a test for HIV. This rate is also much lower that city-wide rates of HIV screening among all New York City residents and Asian American residents of New York City (See Figure 5).

SUBSTANCE USE

Tobacco Use

Tobacco, particularly smokeless forms, is widely used in the South Asian community. Cigarette smoking rates are comparatively low- social custom prohibits Indian children from smoking cigarettes (APIAHF, 2006; Changrani and Gany, 2005). Ivey and colleagues found varying rates of smoking among South Asians in California, ranging from 12 to 21% (Ivey et al., 2006). Hhowever, the use of areca nut products, bidis, chewing tobacco, and their various combinations with spices is common and culturally accepted (Changrani, et al., 2006). Tobacco products are used as digestive aids, for recreation, and at times for believed health benefits (Mukherjea, 2005).

Smokeless forms constitute more than one-third of all tobacco consumed globally (BMA, 2004). Tobacco consumption also varies among South Asian subgroups as a result of religious and cultural differences (Ahluwalia, 2005). A study examining paan and gutka use among Bangladeshi and Indian-Gujarati adults in the metropolitan area found that 35% of Bangladeshis have used paan regularly in the past, of which 70% are current users; 9% have regularly used gutka, 67% of which are current users. For Indian-Gujarati immigrants, 45% have used paan previously, of which 5% are current users; 31% have regularly used gutka, of which 70% are current users. Regular is defined as at least once a week. For both groups, 100% of paan use was initiated before migration to the US, compared to 78% for Bangladeshis and 46% for Indian-Gujaratis of gutka use initiation prior to immigration (Changrani, et al., 2006).

[†] incl. Bangladesh, India, Pakistan

12% of CNHRA respondents are current smokers, similar to city-wide rates reported among Asian Americans (See Figure 5). Among these, 12% reported smoking 1-5 cigarettes per day, 41% reported smoking 6-10 cigarettes per day, and 47% reported smoking more than 10 cigarettes per day.

MATERNAL AND CHILD HEALTH

Studies from California have found that babies born to Asian Indian and Pakistani immigrant women were more likely to have low birth weight, despite mothers having received good prenatal care and high levels of both maternal and paternal education (Rao et al., 2006; Gould, et al., 2003). Fisher and colleagues report that common cultural beliefs and behaviors regarding sexuality (including the role of the individual patient's duty to society, lack of formal sexual and contraceptive education, importance of the birth of the first child, and dominance of the husband in contraceptive decisions) may impact access to sexual health and childbirth services for South Asian women (Fisher et al., 2003). Thorpe et al's study on gestational diabetes among New York City women argued that South Asian women who are at a higher risk of gestational diabetes should get screened before pregnancy so that their blood sugar control can be optimized before becoming pregnant (Thorpe et al., 2005).

HEALTH OF THE ELDERLY

Many of the South Asian immigrants that migrated to the US in the 1960s and 1970s are now reaching retirement age. In addition, there are an increasing number of South Asian immigrants over the age of 60 who have immigrated to the US in recent years due to the Family Reunification Act (Nandan 2007). Due to the aging of the South Asian population, understanding the health and social service needs of these individuals is particularly important. Studies report that principal concerns for the South Asian elderly include lack of mobility, physical disability, dependence on children, lack of information on eligibility for Medicare benefits, language issues, loneliness, and the lack of social support systems (Ghosh et al 2002; Mukherji-Ratnam, 2004; Razdan 2004; Kalavar et al., 2005). In Gupta's study on elderly South Asian immigrants living in Dallas, she found that there is often conflict between family caregivers and the elderly, and that such conflict prompts the consideration of nursing home services (Gupta, 2000 and 2002). The SACSS study reports that among New York City's elderly South Asian population, 25% of seniors are uninsured and many are not eligible for Medicare because they are non-citizens (Mukherji-Ratnam, 2004).

MENTAL HEALTH

Minority groups are less likely than members of the White middle class to seek help for mental problems. Little data, however, has been collected on this topic, or on the various mental health issues that affect South Asian populations. Mehta and colleagues found that among a community-based sample of South Asians, individuals who felt accepted by the host society and were involved with Americans and U.S. culture reported better mental health (Mehta 1998). Research comparing South Asian immigrants and European Americans in New York City found that South Asians were more likely to focus on ongoing problems than individual life events as depression triggers than their counterparts. Problems with the husband (31%) and family issues (12%) were

also mentioned. South Asians also reported 'thinking too much'. When discussing treatment options, both psychotherapy and psychotropic medication was a possibility for 70% of European Americans but only 5% of South Asians (Karasz, 2005). Subgroups within the South Asian community may also have unique mental health needs. For example, Ali and colleagues report since September 11th, 2001, Muslim imams (priests) have counseled an increasing number of persons for discrimination (Ali et al., 2005). Similarly, Mukherji-Ratnam reports that over a quarter of South Asians living in New York City experienced depression and/or anxiety after September 11th; more than 27% reported fearing for their safety (Mukherji-Ratnam, 2004).

CHNRA respondents reported high levels of stress. Thirteen respondents reported feeling stress all of most of the time, while 41% reported feeling stressed some or a little of the time, and 43% reported feeling stressed none of the time.

DOMESTIC VIOLENCE

In a survey conducted in 1998, 25% of South Asian immigrant women in the US reported occurrences of domestic violence (Midlarsky, et al., 2006). Researchers have found that among a community sample of South Asian women in Boston, 40% of the sample reported physical intimate partner violence (IPV), sexual IPV, or injury/need for medical services due to IPV from current male partners (Raj, 2002). Raj and colleagues have also found that South Asian victims of IPV are more likely than non-victims to experience abuse from in-laws, sexual health concerns, and poor health status (Hurwitz, 2006; Raj 2005 and 2006). In 2006, Sakhi, a community-based organization addressing domestic violence needs for South Asian women in New York City, recorded 623 domestic violence-related calls and emails; the previous year in 2005, there were 636 such requests for assistance (www.sakhi.org).

It is believed that social and cultural conditions contribute to an underreporting of this type of violence. For example, South Asian women are taught to be submissive to her husband and to put the family ahead of oneself. After marriage, a wife is often incorporated into her husband's family, who may be primary abusers or may support the abuser. In addition, competing definitions of what constitutes domestic violence and an association with the model minority myth prevents South Asians from identifying themselves as domestic violence victims. Finally, South Asian women in the U.S. may find themselves legally, financially, and emotionally dependent on the men who helped them immigrate to this county; forced to conform to Western ideals of beauty; and hindered by lack of familiarity with the cultural, linguistic, and legal environment of the U.S.; all of which raise the susceptibility to domestic violence this group has over others. (Midlarsky, et al., 2006)

Literature Gaps and Recommendations

Although there is a growing amount of literature regarding health disparities in the South Asian community, their remains a paucity of studies reflecting the geographic, cultural, and social diversity of this large and expanding community. In particular, studies on the health conditions of South Asians in the U.S. and in New York City are very limited, despite the large population that resides here. Existing studies originating from the United Kingdom or Canada may not appropriately capture the experiences of South Asians in the U.S. Furthermore, much of the available literature on South Asians in the U.S. has been collected at the national level or in California. Studies conducted at the national level, in particular, have many methodological limitations. For example, most national studies are conducted only in English, thus over-representing the more socioeconomically advantaged segments of the South Asian population. Efforts must be made to support community-based studies in various areas of the country where the South Asian community is experiencing rapid growth. In particular, studies on major health disparity areas affecting South Asians, including cardiovascular disease, diabetes, cancer, mental health and infectious diseases such as hepatitis B or tuberculosis,

should be encouraged. It is important for both aggregated South Asian data and disaggregated South Asian subgroup data to be collected in order to ensure research is capturing the breadth of the South Asian experience.

Findings from the CHNRA point to several areas where further programmatic and policy work can benefit the South Asian community. First, barriers to accessing healthcare are pervasive among South Asians. For this reason, efforts to increase access to health insurance as well as culturally and linguistically appropriate services (such as healthcare interpreter services) are crucial. CHNRA findings and other studies have also highlighted that South Asian women have poor access to pap screenings and other sexual and maternal health services. Thus, programs that focus on the health needs of South Asian women will make an important impact. Mental health programs that focus on the unique experiences of South Asian in the United States should be developed. Finally, given the burden of cardiovascular disease, diabetes, and associated risk factors among South Asians, there is a need for targeted, community-based interventions to address this disparity.

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Appendix

RESOURCES FOR THE SOUTH ASIAN COMMUNITY IN NYC

Health resources

ASIAN & PACIFIC ISLANDER COALITION ON HIV/AIDS, INC. (APICHA, INC.)

400 Broadway
New York, NY 10013
Phone: (212) 334-7940
Fax: (212) 334-7956
Website: http://www.apicha.org/

THE CHILD CENTER OF NY: ASIAN OUTREACH PROGRAM

60-02 Queens Boulevard, Lower Level
Woodside, New York 11377
Phone: (718) 651-7770
Fax: (718) 651-5029
Website: http://www.childcenterny.org/

COUNSELORS HELPING (SOUTH) ASIAN/INDIANS, INC. (CHAI)

Phone: (410) 461-1634
Website: http://www.chaicounselors.org

JOSEPH P. ADDABBO FAMILY HEALTH CENTER

67-10 Rockaway Beach Boulevard
Arverne, NY 11692
Phone: (718) 945-7150; (718) 634-1255
Fax: (718) 945-2596
Website: http://www.addabbo.org

MANAVI

PO Box 3103
New Brunswick, NJ 08901
Phone: (732) 435-1414
Fax: (732) 435-1411
Website: www.manavi.org

MIC-WOMEN'S HEALTH SERVICES, A SERVICE DIVISION OF MHRA

220 Church Street, 5th Floor
New York, NY 10013
Phone: (646) 619-6692
Fax: (646) 619-6782
Website: http://www.mhra.org/s1c2.cfm?about=155

SAKHI FOR SOUTH ASIAN WOMEN

Helpline: (212) 868-6741
Office: (212) 714-9153
Website: http://www.sakhi.org/

SOUTH ASIAN HEALTH PROJECT*

Phone: (800) 530-9821
Fax: (208) 279-7301
Website: http://southasianhealth.org/

SOUTH ASIAN MARROW ASSOCIATION OF RECRUITERS (SAMAR)

55-13 96th Street
Rego Park, NY 11368
Phone: (718) 592-0821
Fax: (718) 592-5848
Website: http://www.samarinfo.org/

SOUTH ASIAN MENTAL HEALTH AWARENESS IN JERSEY (SAMHAJ)

NAMI New Jersey
1562 Route 130
North Brunswick, New Jersey 08902
Phone: (732) 940-0991
Fax: (732) 940-0355
Website: http://www.naminj.org/programs/samhaj/samhaj.html

SOUTH ASIAN PUBLIC HEALTH ASSOCIATION

4243 TAMU, Rm # 158V Read Building
Texas A&M University
College Station, TX 77843
Website: www.sapha.net

Other Resources**

ADHIKAAR FOR HUMAN RIGHTS AND SOCIAL JUSTICE

26 Thistle Court
Staten Island, NY 10304
Phone: (718) 876 5545
Website: http://www.adhikaar.org

ANDOLAN-ORGANIZING SOUTH ASIAN WORKERS

P.O. Box 720364, 2nd Floor
Jackson Heights, NY 11372
Phone: (718) 426-2774
Fax: (718) 426-2991
Website: http://andolan.net/

ASIAN AMERICAN FEDERATION OF NEW YORK*

120 Wall Street, 3rd Floor
New York, NY 10005
Phone: (212) 344-5878
Fax: (212) 344-5636
Website: http://www.aafny.org/

CHHAYA COMMUNITY DEVELOPMENT CORPORATION

c/o NICE
37-41 77th Street, 2nd floor
Jackson Heights, NY 11372
Phone: (718) 478-3848
Fax: (718) 478-3849
Website: http://www.chhayacdc.org/

COALITION FOR ASIAN AMERICAN CHILDREN AND FAMILIES

50 Broad St., Suite 1701
New York, NY 10004
Phone: (212) 809-4675
Fax: (212) 785-4601
Website: http://www.cacf.org/

CONEY ISLAND AVENUE PROJECT

1117 Coney Island Avenue, Suite 1R
Brooklyn, NY 11230
Phone: (718) 859-0238
Website: http://ciapnyc.org/

COUNCIL OF PEOPLES ORGANIZATION (COPO)

1081 Coney Island Avenue
Brooklyn, NY 11230
Phone: (718) 434-3266
Fax: (718) 859-2266
Website: http://www.copousa.org

DESIS RISING UP AND MOVING (DRUM)

72-26 Broadway, 4th Floor
Jackson Heights, NY 11372
Phone: (718) 205-3036
Fax: (718) 205-3037
Website: http://www.drumnation.org

THE HINDU TEMPLE SOCIETY OF NORTH AMERICA

Sri Maha Vallabha Ganapati Deevasthanam
45-57 Bowne Street
Flushing, NY 11355
Phone: (718) 460-8484
Fax: (718) 461-8055
Website: http://www.nyganeshtemple.org

MAKKI MASJID OF BROOKLYN, NY

1089 Coney Island Avenue
Brooklyn, NY 11230
Phone: (718) 859-4485
Website: http://www.makkimasjidny.com/

NEW YORK TAXI WORKERS ALLIANCE

37 E. 28th Street, #302
New York, NY 10016
Phone: (212) 627-5248
Fax: (646) 638-4446
Website: http://www.nytwa.org/

PRAGATI, INC.

119-45 Union Turnpike
Lower Level
Forest Hills, NY 11375
Phone: (718) 459-0914
Fax: (718) 459-2971

SAFE HORIZON'S ANTI-TRAFFICKING PROGRAM

74-09 37th Avenue, Room 416
Jackson Heights, NY 11372
Hotline: (800) 621-4673
Phone: (718) 899-1233
Fax: (718) 457-6071
Website: http://www.safehorizon.org

THE SIKH COALITION

40 Exchange Place, Suite 728
New York, NY 10005
Phone: (212) 655-3095
Website: http://www.sikhcoalition.org/

SOUTH ASIAN AMERICAN LEADERS OF TOMORROW (SAALT)*

6930 Carroll Avenue, Suite 400 L
Takoma Park, MD 20912
Phone: (301) 270-1855
Fax: (301) 270-4000
Website: http://www.saalt.org/

SOUTH ASIAN COUNCIL FOR SOCIAL SERVICES (SACSS)

140-15 Holly Avenue
Flushing, New York 11355
Phone: (718) 321-7929
Fax: (718) 321-0628
Website: http://www.sacssny.org/

SOUTH ASIAN YOUTH ACTION (SAYA!)

54-05 Seabury Street
Elmhurst, NY 11373
Phone: (718) 651-3484
Website: http://www.saya.org/

UNITED SIKHS

28 Vasey Street, #2133
New York, NY 10040
Mailing Address:
JAF
POB 7203
New York, NY 10116
Phone: (347) 561-3348
(Toll-free: (888) 243-1690)
Fax: (810) 885-4264
Website: http://www.unitedsikhs.org/

*Organization has released South Asian community resource guide – see organizational website

**Organizations may address health as one component of their work