The South Asian

Health Needs Assessment Survey

The South Asian Health Needs Assessment Survey

Key Health and Cancer Indicators for the Greater Houston Asian Indian Community, 2013–2014

SECOND EDITION

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Contents

Preface

In November 2004, my colleagues, Jenny Yi, PhD, MPH, TruongSon Hoang, and I published an article in *Texas Medicine* entitled, "What We Know and Don't Know About Asian American Health in Texas." The article pointed out the diversity and rapid growth of the Asian American population in Texas, then the fourth largest Asian American (AA) population in the United States. It brought attention to the fact that in spite of this rapid growth, little was known about the health needs of these communities. Now, more than 10 years later, my colleagues and I are pleased to release the findings of the South Asian Health Needs Assessment (SAHNA) project. The SAHNA project follows similar projects with the Chinese, Vietnamese and Filipino communities that I have had the privilege of coordinating. The completion of this project represents a major milestone in identifying the health disparities that impact members of the local Asian Indian community, the largest of the South Asian populations in the United States. Although we applaud this achievement, we still have a long way to go. Too often viewed as the "model minority," AAs are frequently overlooked and understudied. They are perceived as well educated and in good health, and because AAs have a cultural tendency to be very private about their health concerns, their health needs go unaddressed, when in reality, many suffer in silence or bear unnecessary health care costs or burdens. This can lead to excessive economic costs for all Americans.

It has been an extremely gratifying experience for me, both personally and professionally, to lead this effort to collect much-needed health data for the Asian Indian community. The Indian American Cancer Network (IACAN) is a phenomenal group of caring volunteers who carried this project to completion. We also sincerely appreciate the support of The University of Texas MD Anderson Cancer Center and the faculty members and staff who supported the project and trained the volunteers in qualitative research and the protection of human subjects. The SAHNA project demonstrates that community and academic partnerships can be mutually beneficial in closing the information and health care gaps that many communities face. It is my sincere wish that the SAHNA project will ignite the interest of researchers and public health professionals and inspire academic institutions to develop genuine relationships with community organizations that are ready to be empowered to tackle the health challenges in their community in a culturally relevant and linguistically appropriate manner.

Beverly J. Gor, EdD, RD, LD

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The Indian American Cancer Network also gratefully acknowledges the following organizations for their support of the South Asian Health Needs Assessment survey project:

Abu Bakr Mosque Islamic School
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BAPS
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Clear Lake Islamic Center
Gurudwara Sahib of Southwest Houston
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Hindus of Greater Houston
Immanuel Mar Thoma Church
India Center of Clear Lake
India Culture Center
India House
Indian Muslim Association of Greater Houston
Indian Pentecostal Church
ISKCON Houston
Ismaili Jamatkhana and Center
Konkani Association
Pearland Desi Group
Raj Grocers
Raja Sweets
Rice University Indian Student Association
Shifa Clinic
Shri Sita Ram Foundation
Sri Govindaji Gaudiya Matha
Sri Meenakshi Temple
University of Texas Medical Branch at Galveston School of Medicine
Vedic at Cinco Ranch High School
VPSS Health Fair

About the Indian American Cancer Network

The Indian American Cancer Network (IACAN) is a 501(c)(3) nonprofit organization established to help cancer patients and caregivers of South Asian descent by providing culturally appropriate and relevant information on cancer prevention, treatment, and survivorship. IACAN has a network of volunteers and professionals who collaborate, coordinate, and partner with other organizations to encourage:

1. *Awareness.* IACAN seeks to build awareness to promote lifestyles that reduce the risk of cancer. IACAN promotes awareness of cancer prevention, diagnosis, and treatment options through educational programs and improved access to cancer information for the South Asian community.
2. *Clinical Navigation and Treatment Support.* Services providing clinical navigation and treatment support can guide the patient through diagnosis and treatment by linking with other medical professionals and institutions to help facilitate referrals, clarify decision making, and educate.
3. *Psychosocial Counseling and Intervention.* IACAN seeks to address culture-specific needs, such as communication, cancer information, diet and nutrition, emotional and spiritual concerns, and end-of-life issues and bereavement.
4. *Resource Linkage.* IACAN mobilizes diverse community resources by developing and supporting: partnerships with clinical specialists and other interdisciplinary professionals; a "Buddy System" of survivors, encouraging them to look good and feel better; a network of resources for counseling; medical navigation; psychosocial intervention; collaborations with diverse religious and spiritual organizations; ways to access services and programs from the American Cancer Society and other organizations; and language assistance services. The aim is to connect patients and families to community resources and support services (wigs, transportation, language/translation, dietary advice, language issues), and to reach out and support survivors with other survivors.
5. *Training.* IACAN provides training on cancer support for South Asian caregivers, survivors, and volunteers.
6. *Cultural Awareness.* IACAN provides mainstream organizations with culture-specific information and resources.
7. *End-of-Life Care.* IACAN addresses culture-specific grief and end-of-life and bereavement issues by providing information on hospice care, identifying culturally sensitive funeral homes and crematoriums, and developing a resource list of priests and ministers.

1
INTRODUCTION

Texas has the third largest Asian American (AA) population in the United States, with approximately 969,500 individuals classified as Asian Americans.[1] Asian Indians are the second largest Asian American population in Texas, increasing by 90% from 2000 to 2010 (from 129,365 to 245,981), and the second largest in the Houston area (the three largest Asian groups in the Houston area are Vietnamese, Asian Indian, and Chinese).[2]

Although there have been improvements in many health-related statistics for the general US population, health disparities for the Asian Indian population are often under-reported or poorly understood. For example, although Asian Indian men are reported to have the lowest overall cancer rates among Asian American groups, prostate cancer is still a commonly reported cancer among men in the Asian Indian community and many do not seek screening.[3,4] Also, some studies indicate Asian Indian men have poorer cancer survival rates.[5] Colorectal cancer is among the top three cancers for Asian Indian men,[6] but we found that a low percentage participate in screening for this cancer as well. Little is known about the cancer rates of Asian Indian women in the US; however, data from the Texas Cancer Registry showed that compared with other AA groups in Texas, Asian Indian and Pakistani women (often grouped together because of similar genetic profiles) have higher breast cancer rates than Chinese, Filipino, and Vietnamese women in Texas.[7]

Cardiovascular disease and diabetes have also been reported as disproportionately high in the Asian Indian community.[8,9] A genetic variation has been identified that may place Asian Indians at higher risk than the general population for myocardial infarction and stroke.[10,11] The traditional high-carbohydrate diet of this population in combination with a sedentary lifestyle may place them at high risk for diabetes and obesity.

Tobacco use is commonly accepted among Asian Indians, especially among males.[12] In this community, the use of tobacco often is under-reported because it is not in the form of cigarettes or cigars, but rather used with betel nut or other non-Western means.[13]

Many Asian Indians use complementary and alternative medicine, particularly Ayurvedic medications and therapies.[14] In some cases, this has led to delayed diagnosis and treatment of serious medical conditions.

To address the increasing need to understand the health behaviors and cancer risk factors of the rapidly growing Asian Indian community, leaders from the Indian American Cancer Network (IACAN) partnered with researchers at The University of Texas MD Anderson Cancer Center to conduct the South Asian Health Needs Assessment (SAHNA) project. The project's goal was to collect self-reported health data from at least 1500 Asian Indians living in Harris, Fort Bend, Brazoria, and Galveston counties using a survey that had been tailored to the local Asian Indian community and was provided in English and Hindi.

Volunteers from IACAN participated in all phases of the survey's development, pilot testing, and recruitment. Starting August 25, 2013, at the India Independence Day Celebration at the Stafford Civic Center, IACAN and MD Anderson staff and volunteers administered the survey at more than 33 locations, including cultural events, temples, churches, businesses, organizations, universities, and other venues where Asian Indian community members

could be found. The SAHNA survey included more than 100 questions on health problems, such as heart disease, diabetes, and cancer; health behaviors, such as smoking, alcohol use, nutrition, and physical activity; and health practices, including physical exams, cancer screenings, immunization, health knowledge, and use of alternative therapies; and acculturation.

The findings of the SAHNA study may be used by researchers to design studies relevant to Asian Indians, by health educators to develop culturally appropriate educational and intervention programs to reduce the risk of cancer and chronic disease, and by organizations to apply for funding to support programs that address the health issues in this community. Highlights of the data are presented in this report.

2
METHODOLOGY

The primary objective of the SAHNA study was to assess the unmet health and cancer-related needs of Asian Indians in Houston and the surrounding areas and to determine barriers and other factors that affect health in this population. The study built upon a similar health survey conducted in 2004-2005 in the Chinese and Vietnamese communities in Houston, called the Asian American Health Needs Assessment (AsANA). Like the AsANA study, the SAHNA study focused on Harris, Fort Bend, Brazoria, and Galveston counties because of their proximity to MD Anderson and their significant Asian population. The SAHNA study, protocol 2013-0128, was reviewed and approved by MD Anderson's Institutional Review Board.

Before the survey instrument was developed, four focus groups were conducted with Asian Indian individuals to gather information about the health priorities of this community and their perceptions about barriers to health care and cancer care. The focus groups were composed of:

- Non-US-born Asian Indian men 55 years and older,
- Non-US-born Asian Indian women 55 years and older,
- Non–US-born Asian Indians less than 55 years old and
- US-born Asian Indians less than 55 years old.

The focus group sessions were audiotaped and transcribed. An analysis of the transcripts indicated that distinct differences exist in the health perspectives of Asian Indians based on nativity, gender, and age. To clarify and validate the focus group results, 10 key informant interviews were conducted with a diverse group of Asian Indians representing different religious, occupational, political, and socioeconomic backgrounds. Informants and focus group participants also provided input about the content of the proposed survey and the method of administration.

The SAHNA survey instrument was based on the Behavioral Risk Factors Surveillance System questionnaire of the Centers for Disease Control and Prevention[15] so that we could compare results with those of the Texas Behavioral Risk Factors Surveillance System.[16] However, to make the survey instrument more culturally relevant, the research team reviewed the literature for existing health surveys conducted in Asian Indian/South Asian communities and selected questions from those surveys for inclusion in the SAHNA survey instrument. A panel of IACAN volunteers and MD Anderson researchers then reviewed all of the proposed questions and condensed the instrument to 126 questions covering the topics of demographics, occupational health risks, environmental exposures, health status, health care access, alternative therapy use, immunizations, oral health, tobacco use, alcohol use, physical activity and nutrition, medical conditions, cancer screening, cancer knowledge, cancer incidence, and cancer support. The survey was pilot tested with 20 individuals of varying ages and demographics, and further revisions were made based on the testing. Finally, the research team determined that the survey had sufficient face validity for use in the community. As a final step, the

instrument was translated into Hindi for individuals with limited English proficiency.

Prior to the launch of the survey, a media campaign consisting of public service announcements was conducted through Asian Indian and mainstream newspapers, radio and television stations, and community groups. The SAHNA study was also promoted through flyers, posters, and electronic mail. The survey was administered by MD Anderson staff and by volunteers trained by MD Anderson staff. The volunteers completed training in the protection of human subjects, using the Collaborative Institutional Training Initiative and reviewing materials on HIPAA from the MD Anderson Compliance Office.

Based on 2010 census data, a sample size of 1500 individuals was calculated to reach a representative sample of the Asian Indian population of 88,689 in the four counties. According to the census, this population comprised 50,045 in Harris County, 32,530 in Fort Bend County, 2113 in Galveston County, and 4001 in Brazoria County.

Participants were recruited from community sites such as cultural festivals, faith-based organizations, and cultural organizations that attract many local Asian Indians. To assist with recruitment and to add recruitment sites, IACAN collaborated with other Asian Indian organizations that provide health education, health care, and screenings to the Asian Indian community.

The SAHNA study's eligibility criteria included being a self-identified Asian Indian, being 18 years of age or older, and living in Harris, Fort Bend, Galveston, or Brazoria county. To reduce bias in the results, only one individual per household was allowed to complete the survey. Therefore, participants were asked to provide their address. Eligible individuals who agreed to participate in the study were asked to read an informed consent statement and were provided an opportunity to ask questions prior to completing the survey. The majority of surveys were distributed and completed in face-to-face encounters. The protocol also permitted the return of the survey forms via postage-paid envelopes, and approximately 50 such forms were returned by mail.

3
RESULTS

Demographic Profile

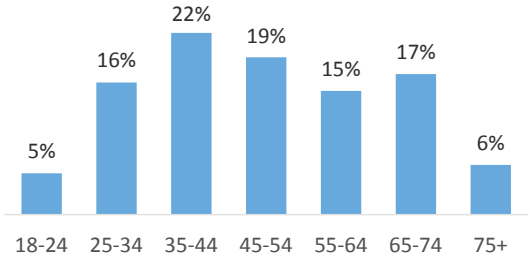
An almost equal proportion of men and women were surveyed. The average age was 47 and the range was 18-87 years old.

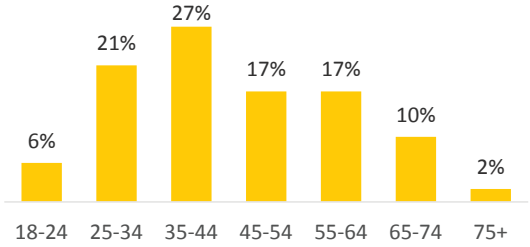
Gender

Male 52%

Female 48%

Age Breakdown by Gender

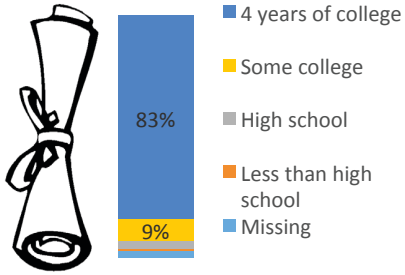




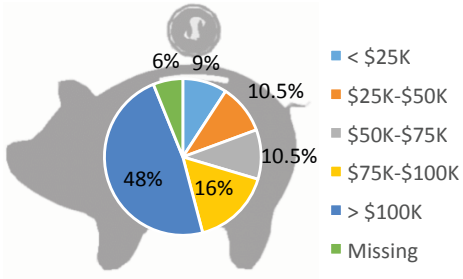
The majority of participants were married and had a college education. Almost half reported a household income of greater than $100,000

Marital Status

Education



Household Income



Types of Employment

Most frequently reported types of employment:

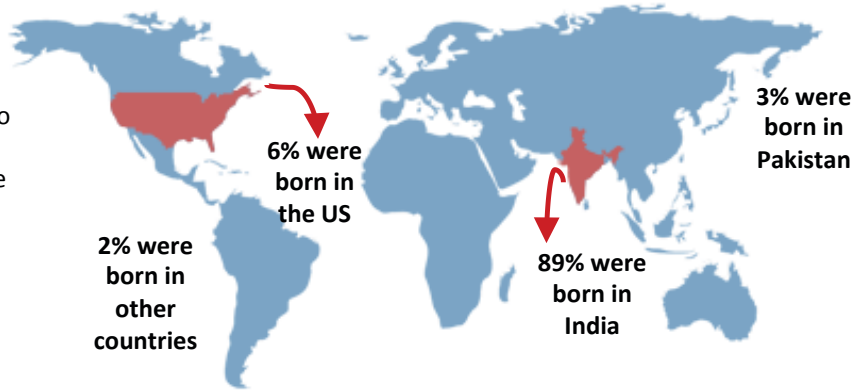
- Management 14%
- Healthcare 14%
- Computer & Math 13%
- Architecture & Engineering 9%
- Business & Financial Operations 7%

NOTE: All percentages presented in this report are calculated based on the number of participants responding to each specific question. Respondents who skipped a question were not counted in the denominator for the calculations on that question. Therefore, because of the variable degree of missing data for individual questions, the denominator varied across the different questions, depending on the number of responders.

Cultural Characteristics

The majority of SAHNA participants were immigrants, most originating from India. Indian immigrants tend to have socioeconomic advantages which enable them to come to the US for greater educational and economic opportunities.

Birthplaces of Participants



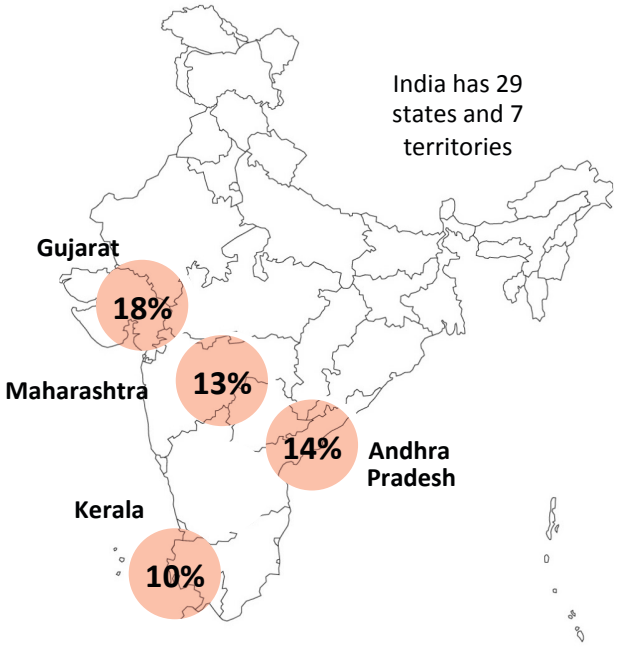
Religions

Hinduism	70%
Christian/ Protestant	9%
Sikh	7%
Muslim	4%
Other	10%

Main Language Spoken at Home

24%	English
12%	Gujarati
8%	Hindi
8%	Telugu
6%	Tamil
5%	Malayalam
4%	Marathi
4%	Punjabi
4%	Kannada
2%	Konkani
1%	Urdu
22%	Combinations

Indian States of Origin

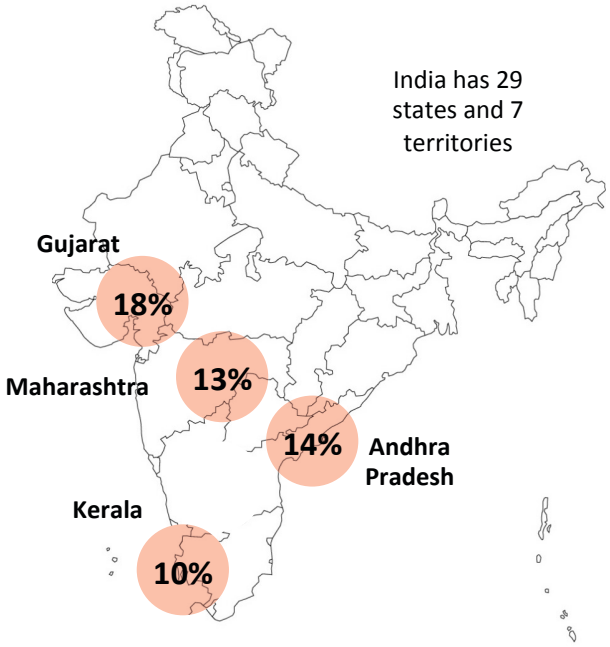


SAHNA participants represented 20 of the 29 states and 2 of the territories. The largest percentages were from these 4 areas.

Cultural Characteristics

Indian States/ Territories of Origin	N	%	Indian States/ Territories of Origin	N	%
States			States—*Continued*		
Andhra Pradesh	220	14%	Punjab	118	8%
Bihar	8	0.5%	Rajasthan	14	0.9%
Chhattisgarh	4	0.3%	Tamil Nadu	134	9%
Goa	3	0.2%	Telangana	2	0.1%
Gujarat	271	18%	Uttar Pradesh	61	4%
Haryana	9	0.6%	Uttarakhand	2	0.1%
Himachal Pradesh	5	0.3%	West Bengal	23	1.5%
Jammu & Kashmir	4	0.3%	Territories		
Karnataka	132	9%	Delhi (New Delhi)	41	3%
Kerala	157	10%	Puducherry	1	.07%
Madhya Pradesh	12	0.8%	Other (non-India)	13	0.9%
Maharashtra	203	13%	Missing	82	5%
Odisha	6	0.4%			

Indian States of Origin

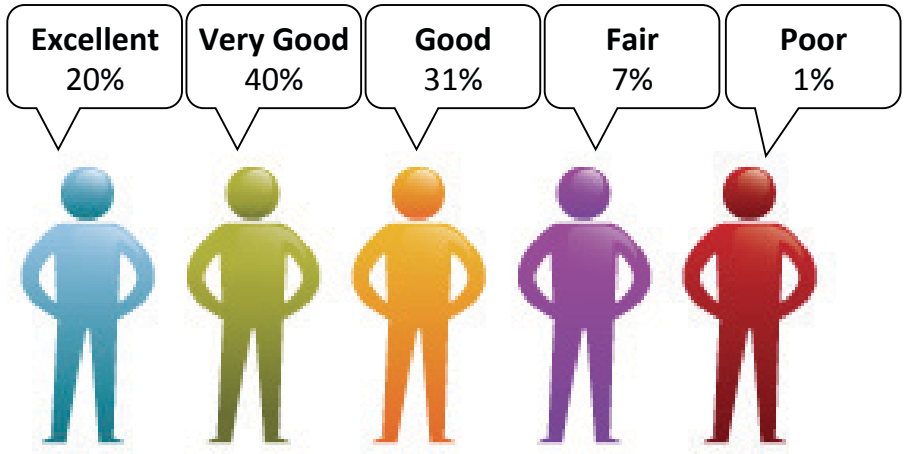


SAHNA participants represented 20 of the 29 states and 2 of the territories. The largest percentages were from these 4 areas.

Self-Rated Health

Many SAHNA participants felt quite positive about their health

"I would say that, in general, my health is…



But let's take a closer look at the SAHNA participants' health in the following areas…

Health Services Used	What types of health services and therapies do SAHNA participants use?
Lifestyle Choices	Did SAHNA participants practice healthy lifestyle choices in regards to nutrition, physical activity, alcohol and tobacco use?
Medical Conditions	What medical conditions did participants report? How do those percentages compare to other populations?
Cancer Statistics	How much do participants know about cancer to prevent it? How many were impacted by cancer?

Health Services Used

Participants were asked:

Do you have any form of health insurance?

SAHNA participants: YES 88%

Compared to other populations…

White (TX)	85% [17]
Black (TX)	71% [17]
Hispanic (TX)	45% [17]
Chinese (Houston)	80% [19]
Vietnamese (Houston)	70% [19]

When you get sick and need to see a doctor, what type of treatment do you prefer to go for first?

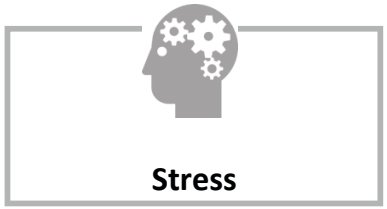
Western Medicine
70% of participants

Compared to Alternative Therapies such as…

Ayurveda	Herbal Therapy	Homeopathy	Meditation/ Yoga	Other
5%	6%	3%	3%	4%

Lifestyle Choices

During the past 30 days, did emotional problems, stress, sadness or anxiety keep you from doing your usual activities, such as taking care of yourself, work, sleep or recreation?



Yes 12% **Yes 18%**

Very few of the SAHNA respondents reported that mental health issues kept them from doing their usual activities. However, it should be noted that there is a stigma associated with mental disorders, which may be even stronger in the Asian community than in the general population.[20] Thus, mental conditions may have been underreported.

Have you smoked at least 100 cigarettes in your entire life?

Yes 12% **Yes 0.6%**

By 2020, 1.5 million people in India will die from tobacco use. [21] Our results indicated that tobacco use is generally low, but 14% of males in the 18-24 age category smoked. This behavior should be monitored since the tobacco industry often targets Asian Americans in its marketing campaigns.[22]

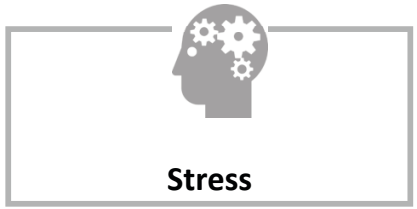
During the past month, have you had at least one drink of any alcoholic beverages such as beer, wine, wine coolers, or liquor?

Yes 49% **Yes 29%**

As with tobacco use, little is known about alcohol use among Asian Indians in the US. A lower percentage of female respondents admitted to drinking alcohol; however, alcohol use tended to be higher among younger respondents of both genders.

Lifestyle Choices by Gender and Age Group

During the past 30 days, did emotional problems, stress, sadness or anxiety keep you from doing your usual activities, such as taking care of yourself, work, sleep or recreation?



Stress

Yes 12% **Yes 18%**

Those Who Responded "Yes"

Age	Males (n=92)	Females (n=123)
18-24	5%	6%
25-34	16%	21%
35-44	22%	27%
45-54	19%	17%
55-64	15%	17%
65-74	17%	10%
75+	6%	2%

Have you smoked at least 100 cigarettes in your entire life?

Tobacco Use

Yes 12% **Yes 0.6%**

Those Who Responded "Yes"

Age	Males (n=96)	Females (n=4)
18-24	3%	0%
25-34	19%	50%
35-44	18%	0%
45-54	22%	50%
55-64	17%	0%
65-74	15%	0%
75+	7%	0%

During the past month, have you had at least one drink of any alcoholic beverages such as beer, wine, wine coolers, or liquor?

Alcohol Use

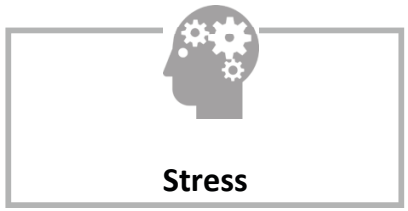
Yes 49% **Yes 29%**

Those Who Responded "Yes"

Age	Males (n=384)	Females (n=201)
18-24	5%	11%
25-34	19%	28%
35-44	23%	23%
45-54	18%	12%
55-64	14%	12%
65-74	17%	10%
75+	4%	2%

Lifestyle Choices by Gender and Years in the United States

During the past 30 days, did emotional problems, stress, sadness or anxiety keep you from doing your usual activities, such as taking care of yourself, work, sleep or recreation?



Stress

Yes 12% **Yes 18%**

Those Who Responded "Yes"

Years in US	Males (n=92)	Females (n=123)
0-9	32%	28%
10-19	24%	24%
20-29	13%	10%
30-39	13%	10%
40-49	8%	9%
50+	11%	20%

Have you smoked at least 100 cigarettes in your entire life?

Tobacco Use

Yes 12% **Yes 0.6%**

Those Who Responded "Yes"

Years in US	Males (n=96)	Females (n=4)
0-9	24%	50%
10-19	22%	50%
20-29	9%	0%
30-39	16%	0%
40-49	17%	0%
50+	13%	0%

During the past month, have you had at least one drink of any alcoholic beverages such as beer, wine, wine coolers, or liquor?

Alcohol Use

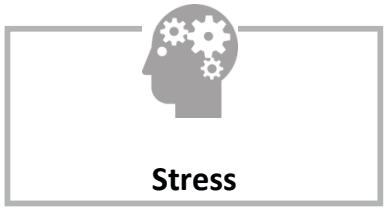
Yes 49% **Yes 29%**

Those Who Responded "Yes"

Years in US	Males (n=384)	Females (n=201)
0-9	22%	14%
10-19	21%	22%
20-29	13%	14%
30-39	14%	13%
40-49	16%	12%
50+	14%	24%

Lifestyle Choices in Comparison to Other Racial/Ethnic Groups in Texas

During the past 30 days, did emotional problems, stress, sadness or anxiety keep you from doing your usual activities, such as taking care of yourself, work, sleep or recreation?



Yes 12% **Yes 18%**

Days Mental Health Not Good	Five or more days	
	Male	Female
White	**13.0%**	**20.5%**
Black	**18.4%**	**28.1%**
Hispanic	**13.2%**	**19.0%**
TX BRFSS 2013	**13.8%**	**21.1%**

Have you smoked at least 100 cigarettes in your entire life?

Yes 12% **Yes 0.6%**

Have you smoked at least 100 cigarettes in your entire life?	Yes	
	Male	Female
White	**47.9%**	**40.4%**
Black	**39.2%**	**30.8%**
Hispanic	**45.2%**	**17.4%**
TX BRFSS 2013	**44.9%**	**31.2%**
Chinese	**33.8%**	**4.4%**
Vietnamese	**43.9%**	**0.2%**

During the past month, have you had at least one drink of any alcoholic beverages such as beer, wine, wine coolers, or liquor?

Yes 49% **Yes 29%**

Alcoholic Beverages Consumed in the past 30 days	Yes	
	Male	Female
White	**61.1%**	**49.4%**
Black	**54.2%**	**38.0%**
Hispanic	**53.7%**	**29.8%**
TX BRFSS 2013	**57.7%**	**41.3%**
Chinese	**49.7%**	**27.7%**
Vietnamese	**54.9%**	**12.2%**

Nutrition and Dietary Patterns

Perception vs. Reality about Weight

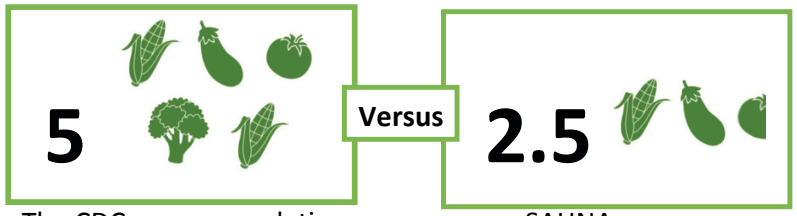
India is now experiencing a nutrition crisis—**obesity among the wealthy**.[23] This may be due to the increase in availability of fast food and an obsession with Western culture.

Based on self-reported height and weight and calculated BMI	Men	Women
Underweight	1%	4%
Normal weight	47%	53%
Overweight/Obese	52%	44%
% who reported that overweight/obesity was a problem	**10%**	**12%**

Eating Habits

Many affected by weight issues may not be concerned about the health implications as they may perceive a robust weight as a sign of a family's wealth and ability to provide for their children.[24] Culturally relevant nutrition and physical activity programs are needed to address this issue.

Number of Servings of Fruits and Vegetables Eaten Per Day



The CDC recommendation — SAHNA average

Vegetarian vs Non-vegetarian

	Males n=776	Females n=691
Vegan/ vegetarian	41%	49%
Vegetarian/ Non-veg	31 %	21%
Non-vegetarian	29%	29%

How many servings of fruits or vegetables did you eat yesterday?	Fewer than five servings /day	
	Males	Females
White	89%	83%
Black	87%	86%
Hispanic	88%	84%
Chinese	57%	59%
Vietnamese	95%	90%
SAHNA	88%	88%

Physical Activity

Last week, how many days did you do activities that caused some increase in breathing or heart rate such as vacuuming, gardening, other yard work, or any work-related activities?

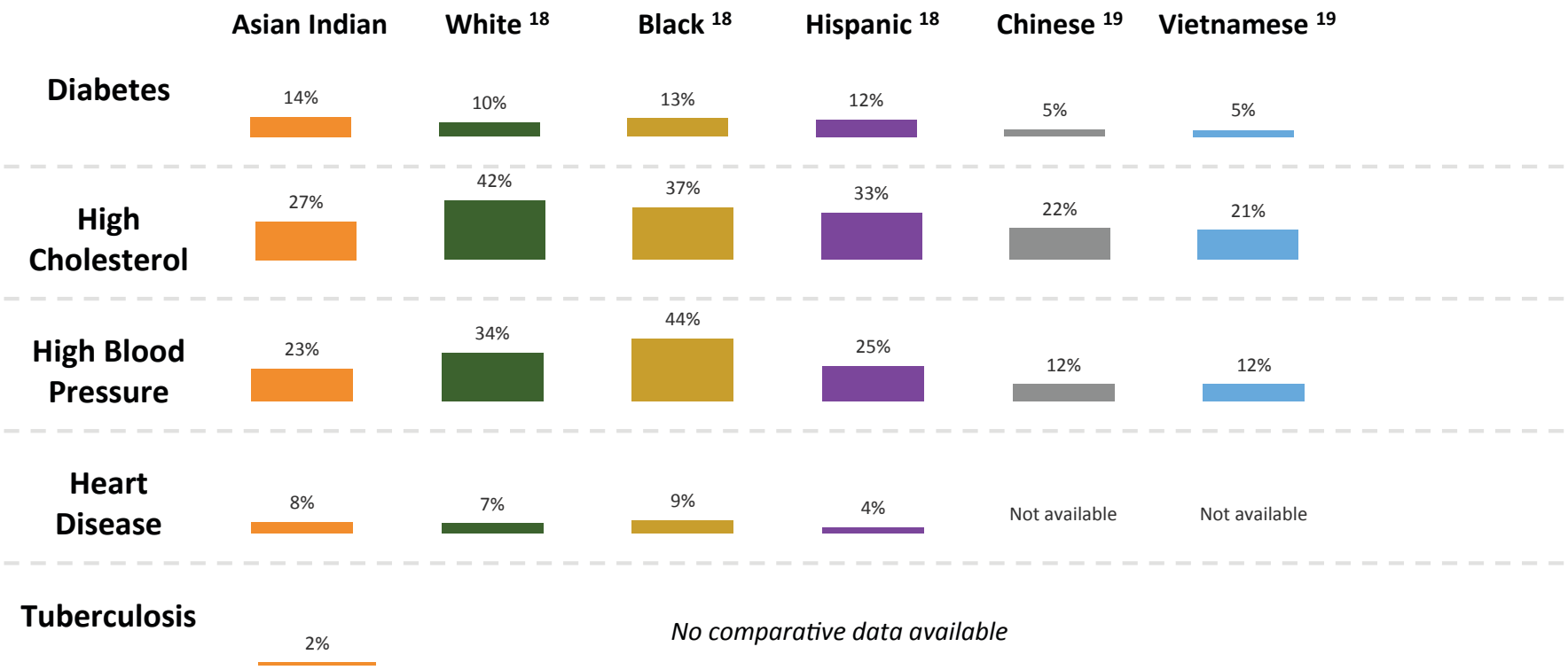
Those Who Responded "None"
Males 38.6% Females 38.1%

Years in US	Males N=310	Females N=275
0-9	27%	24%
10-19	23%	27%
20-29	11%	13%
30-39	12%	13%
40-49	11%	7%
50+	15%	17%

Question	Population	No	
		Male	Female
During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?	White	25.0%	30.7%
	Black	21.8%	35.6%
	Hispanic	33.5%	37.8%
	TX BRFSS 2013	26.4%	33.5%
Question	Population	None	
In your leisure time, how many days last week did you do the following activities: bicycling, play tennis, dance, aerobic exercise, brisk walking, jogging, running, martial arts, Tai Chi, yoga, or any other vigorous exercise or activities?	Chinese	57.6%	65.8%
	Vietnamese	33.8%	33.1%
	SAHNA	21.9%	25.6%

Medical Conditions

% of SAHNA participants who had or have the following medical conditions and comparison to other populations in Texas



Medical Conditions by Gender and Dietary Pattern

% of SAHNA participants who had or have the following medical conditions by gender and vegetarian status

Condition	Males	Females	Vegetarian	Non-Vegetarian
Diabetes	21%	11%	17%	15%
High Cholesterol	40%	22%	31%	32%
High Blood Pressure	34%	18%	27%	25%
Heart Disease	12%	4%	8%	9%

Males had higher percentages of diabetes, high cholesterol, high blood pressure and heart disease (by self-report). The percentages of these conditions were similar for vegetarians and non-vegetarians.

Cancer Knowledge and Beliefs

SAHNA participants were asked about their knowledge and beliefs concerning cancer. Significant percentages were unsure about cancer risks and sources of information.

	Question	% who said Yes	% who said No	% who were Unsure
1.	Do you think alcohol increases your risk of developing cancer?	29%	17%	36%
2.	Do you think cancer can be cured if detected early?	79%	8%	13%
3.	Do you know where you can get information on cancer or cancer services?	43%	26%	31%
4.	Do you think having a family member who has had cancer increases the risk of developing cancer?	41%	26%	33%
5.	Do you think that you can have cancer but not have symptoms?	43%	18%	39%
6.	Do you think cancer is caused by fate or higher power?	7%	50%	43%

Circled answer indicates correct answer

Most frequently reported sources of cancer information:
- Internet
- Physicians
- M.D. Anderson Cancer Center

Cancer Knowledge and Beliefs

Cancer knowledge question	Answer	Years in the United States													
		0-9		10-19		20-29		30-39		40-49		50+		Subset total	
		M (%)	F (%)	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)	M (%)	F (%)
Do you think cancer in general can be cured if detected early?(N=1330)	Yes	23%	18%	22%	26%	14%	16%	13%	13%	14%	10%	15%	17%	668 (56%)	532 (44%)
Do you know where you can get information on cancer or cancer services? (N=1058)	Yes	16%	20%	27%	20%	15%	15%	13%	12%	12%	16%	18%	17%	316 (48%)	341 (52%)
What do you think your risks are for developing cancer? (N=1261)	Not at risk	23%	23%	24%	31%	15%	12%	13%	9%	12%	8%	14%	17%	197 (56%)	156 (44%)
	Low risk	22%	20%	22%	23%	14%	15%	13%	11%	17%	11%	13%	20%	344 (58%)	246 (42%)
	Average risk	22%	10%	18%	26%	13%	16%	16%	17%	13%	11%	17%	20%	142 (54%)	123 (46%)
	High risk	20%	18%	24%	18%	12%	18%	4%	14%	2%	14%	24%	18%	25 (47%)	28 (53%)

Note: Ns in first column indicate the number of people responding to the question. They do not include nonresponders or missing data.

Cancer Knowledge and Beliefs

Cancer knowledge question	Answer	Years in the United States												Subset total	
		0-9		10-19		20-29		30-39		40-49		50+			
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
Do you think having a family member who has had cancer increases your risk of developing cancer? (N=1415)	Yes	11%	15%	23%	23%	13%	15%	13%	17%	19%	12%	22%	17%	208 (45%}	252 (55%)
Do you think cancer is caused by fate or a higher power? (N=1321)	Yes	15%	16%	15%	27%	15%	8%	20%	13%	15%	14%	22%	23%	41 (39%)	64 (61%)
Do you think you can have cancer but not have symptoms? (N=1317)	Yes	21%	16%	19%	24%	15%	17%	13%	13%	17%	12%	15%	18%	324 (50%)	326 (50%)

Note: Ns in first column indicate total responding to the question. They do not include nonresponders or missing data.

Cancer Screening

The majority of SAHNA participants believed they had low or no risk for cancer. This may impact their participation in some cancer screenings.

What do you think your risks are for developing cancer?

HIGH = 4%

AVERAGE = 21%

LOW = 47%

NONE = 28%

% of Participants Who Had Had Cancer Screenings…

Prostate Cancer

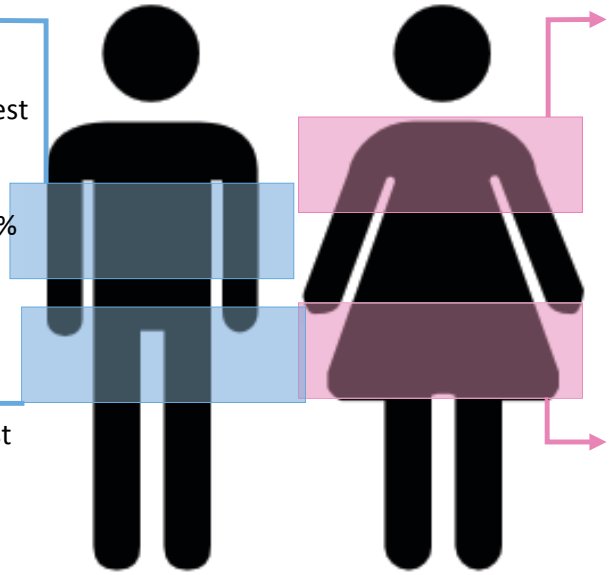
For men 40 and over

- Prostate Specific Antigen (PSA) Blood Test = 31%
- Digital Rectal Examination (DRE) = 7%
- Both Tests = 25%

Colorectal Cancer

For those 50 and over

- Fecal Occult Blood Test (Stool Test) = 22%
- Colonoscopy or Sigmoidoscopy = 42%
- Neither = 30%



Breast Cancer

- Mammograms (for women 40 and over) = 85%
- Clinical Breast Exam (all women) = 75%
- Mammogram in the last year = 70%
- Clinical Breast Exam in the last year = 73%

Cervical Cancer

For all women

- Pap Smear = 80%

Percent with Pap Smear in last 3 years = 85%

Perceived Cancer Risk

What do you think your risks are for developing cancer?

HIGH = 4%

AVERAGE = 21%

LOW = 47%

NONE = 28%

Is perceived cancer risk influenced by vegetarian status?

	Vegetarian	Non-Vegetarian
High Risk	2%	7%
Average Risk	18%	26%
Low Risk	46%	42%
Not at Risk	30%	22%

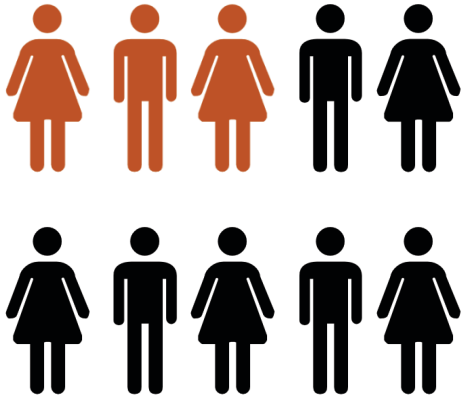
More non-vegetarians believed they were at high or average risk for developing cancer.

Globally, 31% of Indians are vegetarians. Because 41% of males and 49% of females in the SAHNA study were vegetarians, the IACAN/SAHNA team wanted to see if this dietary pattern had an influence on perceived cancer risk. Vegetarians reported lower perceived cancer risk than non-vegetarians.

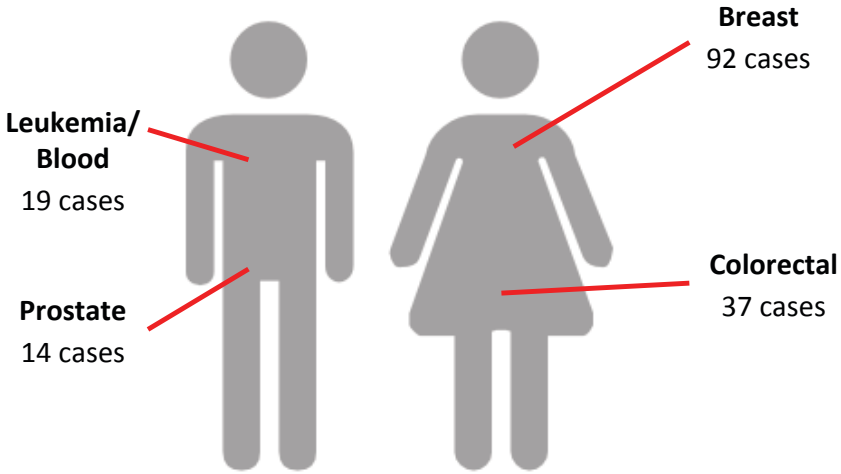
Cancer Impact

Has anyone in your family, including you, ever had cancer?

30% of SAHNA participants reported that they or a family member had had cancer.



Of those affected (either personally or a family member), the most frequently reported types of cancer were:



4
CONCLUSIONS AND RECOMMENDATIONS

The SAHNA project represents a major landmark in understanding the health and cancer needs of a large and rapidly growing population. To our knowledge, this is the first time that a health survey of this proportion has been conducted in the greater Houston area's Asian Indian community. The results indicate that despite a very favorable socioeconomic profile, Asian Indians in this area still display a number of serious health disparities. These include a large percentage of people who are sedentary and have high body mass indexes. This disturbing trend is further demonstrated in the lack of fruit and vegetable consumption in this population. Because lack of physical activity and obesity/overweight are major risk factors for diabetes, high blood pressure, and several forms of cancer, culturally relevant nutrition and physical activity programs should be developed to address this disparity.

In addition, SAHNA participants appeared to lack knowledge of cancer and sources for cancer information. IACAN and other organizations should continue to provide educational forums for disseminating reliable and scientifically sound information about cancer and other chronic diseases. Efforts should be made to reach out to this population to ensure that they participate in recommended cancer and preventive health screenings.

On a positive note, SAHNA participants reported lower rates of tobacco and alcohol use than some other communities in Texas. These practices should continue to be monitored, especially as young US Asian Indians adopt Westernized lifestyle habits.

While we are very pleased with the completion of this project, we acknowledge the limitations of the data. Because the participants were a convenience sample, there may be an over-representation of more highly educated Asian Indians, who would be more motivated to participate in the study. We employed purposive sampling techniques to reach out to a wide diversity of participants and made efforts to recruit participants from lower socioeconomic strata, but barriers to participation included low literacy and inability to take time from work to complete the survey. Recruitment activities occurred at cultural events that would draw Asian Indians from every sector, and participants were recruited from Hindu temples, Muslim mosques, Sikh temples, Christian churches, and other religious and affinity groups. We also acknowledge the limitations associated with self-reported data, especially the influence of social desirability. In reviewing the results, members of the research team and IACAN noted anecdotally that they observed participants responding as they thought the researchers wanted them to respond, i.e., because they knew the study sponsors were associated with cancer research and screening, they may have reported participating in cancer screening when in fact they had not.

Despite these limitations, we believe that this study contributes significantly to the body of literature on the health of the Asian Indian community in the US. We hope that it will inspire other researchers to continue this work and explore additional ways of improving the health of this community.

5
RESOURCES

American Association of Physicians of Indian Origin, www.aapiusa.org. Under Resources, has several publications relevant to the Asian Indian community regarding nutrition, diabetes management, heart health, atherosclerosis, lung health, and kidney disease.

American Cancer Society, www.cancer.org. Has cancer education materials in Hindi and other Asian languages. Provides links to resources and support.

American Diabetes Association, www.diabetes.org. Offers information for managing type 1 and type 2 diabetes, including recipes for healthy meals and signs and symptoms of diabetes.

American Heart Association, www.heart.org. Provides information about several heart conditions. Several are interactive, and some are aimed at children.

Asian Pacific Islander American Health Forum, www.apiahf.org. Has health briefs and fact sheets on several chronic health conditions among Asian Americans and Pacific Islanders.

Asian Pacific Partners for Empowerment, Advocacy and Leadership, www.appealforcommunities.org. Has information about tobacco use among Asian Americans and Pacific Islanders. Also, the organization recently began a campaign to address healthy eating, active living, and optimal weight for AAPI populations.

Centers for Disease Control and Prevention, www.cdc.gov. Search for "Minority Health." There are several reports on cancer and health disparities in racial/ethnic groups.

Indian American Cancer Network, www.iacannetwork.org. See the Introduction section of this report.

Intercultural Cancer Council, www.iccnetwork.org. Offers several resources concerning cancer in minority and special populations. Also includes a downloadable publication: Cultural Competence in Cancer Care.

National Cancer Institute, Center to Reduce Cancer Health Disparities, www.crchd.cancer.gov. Includes reports and fact sheets about cancer and health disparities.

South Asian Public Health Association, www.sapha.org. This website has information on health issues impacting South Asians in the US, including cancer, cardiovascular disease, diabetes, obesity and nutrition, oral health, vaccines and immunizations, emergency preparedness, eating disorders, HIV/AIDS, and viral hepatitis.

The University of Texas MD Anderson Cancer Center, www.mdanderson.org. Has information on cancer prevention and screening, symptoms and diagnosis, treatment, and survivorship.

US Department of Health and Human Services, Office of Minority Health, www.minorityhealth.hhs.gov. Includes the HHS Disparities Action Plan, which outlines goals and actions for reducing health disparities among racial/ethnic minorities.

APPENDICES

APPENDIX A

Supplementary Detailed Tables on Vegetarian Status

Supplementary Detailed Tables on Vegetarian Status

The IACAN/SAHNA team thought that the SAHNA participants would probably not distinguish between vegan and vegetarian, so it was decided to collapse the food preferences into three categories: (1) vegan/ vegetarian, (2) vegetarian/non-vegetarian (those individuals who are vegetarian only during certain seasons), and (3) non-vegetarian.

Table A1. SAHNA participants by vegetarian status

Food Preference	Subtotal		Total	
	N	%	N	%
Vegan/Vegetarian			694	47.2
Vegan	29	2.0		
Vegetarian	665	45.2		
Vegetarian/Non-vegetarian			386	26.2
Non-vegetarian			387	26.2
Decline to answer			4	0.3
Total			1471	100.0

Table A2. SAHNA participants' fruit and vegetable intake and physical activity by vegetarian status and gender

	Gender				Average Number of Fruits and Vegetables/Day		No Physical Activity			
	Male (N = 776)		Female (N = 691)		Male (N = 628)	Female (N = 559)	Male (N = 304)		Female (N = 271)	
Food Preference	N	%	N	%	N	N	N	%	N	%
Vegan/Vegetarian	321	41.4	344	49.8	2.5	2.7	121	39.8	140	51.7
Vegetarian/Non-vegetarian	241	31.1	145	21.0	2.6	2.7	91	29.9	55	20.3
Non-vegetarian	214	27.6	202	29.2	2.8	2.5	92	30.3	76	28.0

Table A3. SAHNA participants' perceived cancer risk by vegetarian status and gender

	High Risk				Moderate/Average Risk				Low Risk				Not at Risk				Decline to Answer			
	Males		Females		Males		Females		Males		Females		Males		Females		Males		Females	
Food Preference	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Vegetarian	4	1	7	3	52	18	53	20	139	48	113	42	91	32	79	29	2	1	17	6
Vegetarian/Non-vegetarian	9	4	7	6	38	17	26	21	120	54	50	40	55	25	36	29	2	1	7	6
Non-vegetarian	12	6	12	7	47	25	42	23	79	42	79	44	46	24	34	19	4	2	13	7

Table A4. SAHNA participants' diagnoses—Heart disease, high cholesterol, diabetes, and high blood pressure

	Heart Disease (N = 96)				High Cholesterol (N = 401)				Diabetes (N = 205)				High Blood Pressure (N = 340)			
	Males		Females		Males		Females		Males		Females		Males		Females	
Food Preference	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Vegetarian	31	42	10	45	111	42	62	46	62	45	31	46	104	46	58	52
Vegetarian/Non-vegetarian	21	28	4	18	83	31	30	22	40	29	17	25	64	28	27	24
Non-vegetarian	22	30	8	36	72	27	43	32	35	26	20	29	60	26	27	24
Total	74	100	22	99	266	100	135	100	137	100	68	100	228	100	112	100

Note: Diseases were self-reported and included those who reported, "Had, but resolved," "Yes, getting treatment," and "Yes, no treatment."

APPENDIX B

Survey Sources and Data User Guidelines

Survey Sources and Data User Guidelines

South Asian Health Needs Assessment Survey Instrument
Terms of Use

Description of the survey. The South Asian Health Needs Assessment (AsANA) survey instrument and its translated versions were developed by Dr. Beverly J. Gor, Dr. Mala Pande at the University of Texas M.D. Anderson Cancer Center with members of the Indian American Cancer Network (IACAN) (collectively, the "Authors") from October, 2012 to June, 2013 and the copyright for the SAHNA survey is jointly held by the Authors.
The SAHNA survey instrument was developed to collect self-reported health and behavioral risk factors data from Asian Indians living in the Greater Houston area. The foundational component of the SAHNA survey is the Texas Community Health Survey (TxCHS) which was derived from the Behavioral Risk Factors Surveillance System (BRFSS). The BRFSS is a survey instrument created by the Centers for Disease Control and Prevention and is in the public domain. However, the following questions from other sources were used by permission in the SAHNA survey instrument.

Questions #17, 19, 68-85. South Asian General Health Survey. N. Mehrotra, S. Gaur, A Petrova. Department of Pediatrics, UMDNJ/RWJMS, One Robert Wood Johnson Place, MEB-322, New Brunswick, NJ 08903-0019. Email: nmehrotra67@gmail.com.

Questions #6, 7, 12, 23, 113-124. Unmet Needs of Asian American & Pacific Islander Cancer Survivors Survey. https://www.aapihealth.org/study.

Individuals wishing to use the ***specific questions*** listed above must seek permission from the creator(s) of those questions. Individuals seeking to use questions original to the SAHNA survey or the ***entire SAHNA survey instrument*** must send a written request, including a description of the proposed use, to:

Indian American Cancer Network (IACAN)
Research Committee
P.O. Box 741886
Houston, TX 77274
iacannetwork@gmail.com

Guidelines for Data Use

The SAHNA project was conducted to provide the impetus for additional research and health promotion programs in the Asian Indian and South Asian communities. Therefore, students, researchers, and other individuals who are interested in using the SAHNA survey instrument or its data may submit a written request, including a description of the proposed project, to the Research Committee, IACAN , P.O. Box 741886, Houston, TX 77274, or iacannetwork@gmail.com. The Research Committee includes the principal investigator of MD Anderson protocol 2013-0128.

The proposal should include the following:

- Name of the person requesting the data
- Purpose for requesting the data
- Variables requested
- How the data will be protected and assurances that it will not be shared
- Timeline for completion of the project
- Assurance that IACAN and MD Anderson are credited for the original data.

The proposal will be reviewed by the Research Committee, and a decision will be made about the application. Requestors should allow at least 6-8 weeks for this process

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