

## COVID-19 Impact on the AAPI Population in Pima County

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### Abstract

The Together We Thrive Project (TWT) goal was to increase the capability of the Asian American and Pacific Islanders (AAPI's) to deal with COVID-19 and other respiratory infections in Pima County, Arizona, U.S.A. It is the second most populated county in the state. There was little published information available about the COVID-19 impact on the AAPI populations and the communities' needs in the county. The TWT Project conducted a needs assessment. The assessment survey results assisted the project in producing strategies and activities that address the needs. Fifty-six percent of the AAPI respondents had gotten COVID-19 during the pandemic. A third of the those who gotten the virus had long-lasting effects. The COVID-19 pandemic had significantly impacted Pima County AAPI population socially, mentally, physically, and economically.

**Keywords:** COVID-19, Assessment, Pima County, Asian American and Pacific Islanders

### Introduction

This is the fourth year of the COVID-19 (coronavirus) pandemic. The virus is also known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It is a respiratory disease (attacks primarily the lungs) that spreads from person to person through respiratory droplets (coughs, sneezes, and talks), and contaminated surfaces and objects. During the COVID-19 Pandemic, many Asian Americans and Pacific Islander (AAPI) communities were not included in the coronavirus health education and promotion efforts due to language, cultural, and health belief barriers and limited available public health resources and funding.

To address the disparities, the Pima County Health Department offered competitive grants in 2022 to increase the capability of underserved and unrepresentative populations to deal with the COVID-19 pandemic. The COVID-19 has significantly impacted the AAPI populations in Pima County (e.g., physically, mentally, socially, spiritually, and economically). The *Together We Thrive Project* (TWT) goal is to increase the capability of the AAPI communities to deal with coronavirus and other respiratory infections.

Pima County is the second most populated county in Arizona (1,057,597 in 2022) [1]. The county is in the southern part of the

state. It covers 9,184 square miles [2] which is larger than the state of New Jersey (8,723 square miles) [3]. The Arizona Department of Health Services reports there were 331,370 county COVID-19 cases and 4,401 deaths on October 4, 2023 [4].

In 2020, the U.S. Census reports the Pima County AAPI population is 47,944 (for race alone and combination) [5]. Three and seven tenths percent of the county residents are Asian Americans and Pacific Islanders (race alone) in 2022 [1]. The top six Asian American ethnic populations (race alone) in Pima County are: (1) Chinese-8,119, (2) Filipino-5,697, (3) Asian Indian-4,066, (4) Vietnamese-3,862, (5) Korean-2,735, and (6) Japanese-1,427 in 2020 [5]. The top three Pacific Islander populations (race alone) are (1) Native Hawaiian-489, (2) Chamorro-269, and (3) Samoan-220 [5].

There are many challenges working with AAPI populations in the county. They are small in numbers, reside throughout the county, and difficult to reach. There are language, cultural, and health belief and practice barriers. These populations do not easily open themselves to outsiders.

There is little published information available about the COVID-19 impact on the AAPI populations, making it difficult to identify

their needs in Pima County. The TWT Project conducts a needs assessment to identify the coronavirus impact on and needs of the AAPI communities. The assessment results will assist the project in producing strategies and activities that address the needs of the AAPI communities.

### Methods

This was a cross-sectional study that utilized a 17-question a paper and online survey. The study utilized a convenient snowball sampling method. The leaders of the AAPI communities and organizations recruited their members to participate in the needs assessment during a three- and half month period from February 17 to May 31, 2023.

The survey items were developed with input from community members representing the various AAPI communities. The survey had gone through three reviews that provided feedback: (1) at a TWT advisory committee meeting, (2) follow up review with the advisory committee members, and (3) a final review by the Advisory Committee members from the University of Arizona's four health professional colleges. The leaders of the Chinese, Filipino, Japanese, Korean, Marshallese and Vietnamese communities provided feedback on whether there was a need to translate the survey into their preferred languages. Only, the Korean community indicated there was a need to translate the printed survey.

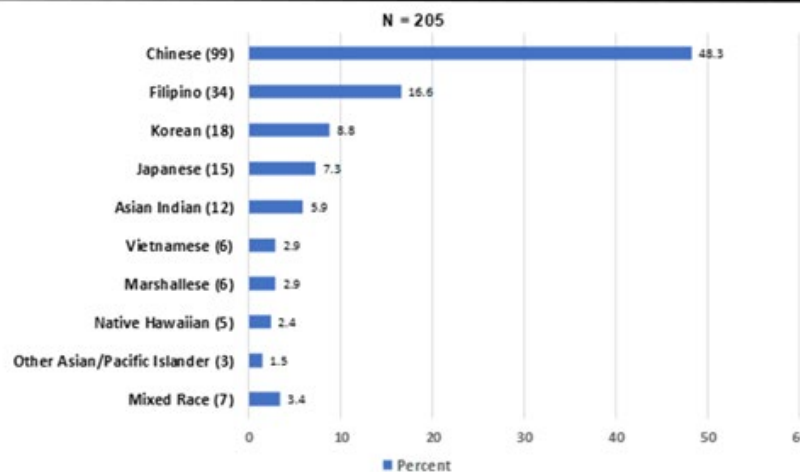
There were several limitations to the study. AAPIs were reluctant to participate in a COVID-19 survey. Respondents were more likely to participate in the needs assessment if they knew other people who participated. Several respondents accessed the online Qualtrics survey and did not begin or decided not to answer many of the questions. Self-report information was collected. There was no survey follow-up. Except for Korean translation, all the surveys were in English.

### Results

The final number of surveys included in the analysis was 205. The percents reported were based on the number (N) who answered the question. For the open-ended responses, there may be more than one similar answer. These were grouped together to form a total that is represented by (#).

**Respondent Demographics:** There were 11 Asian/Pacific Islander communities that participated in the survey. The top three communities that had the highest percentages of respondents were (1) Chinese-48.3%, (2) Filipino-16.6%, and (3) Korean-8.8%. Figure 1 identifies the AAPI respondent race/ethnicity numbers and percentages.

**Figure 1: AAPI Survey Respondent Race/Ethnicity Summary.**



Others: Cambodian, Taiwanese, and Thai

Two hundred individuals identified their assigned sex at birth. Of this, 59 percent (N=118) identified as female, and 41 percent (N=82) identified as male. Most of the respondents were U.S. citizens (91.1%, N=184). Seventy percent (N=142) spoke primarily

English at home. All the age groups were represented. The top two age groups who had the highest respondents were 70-79 years of age (24.9%) and 60-69 years (18.9%). Figure 2 summarizes the respondent age groups.

**Figure 2: AAPI Survey Respondent Age Summary.**

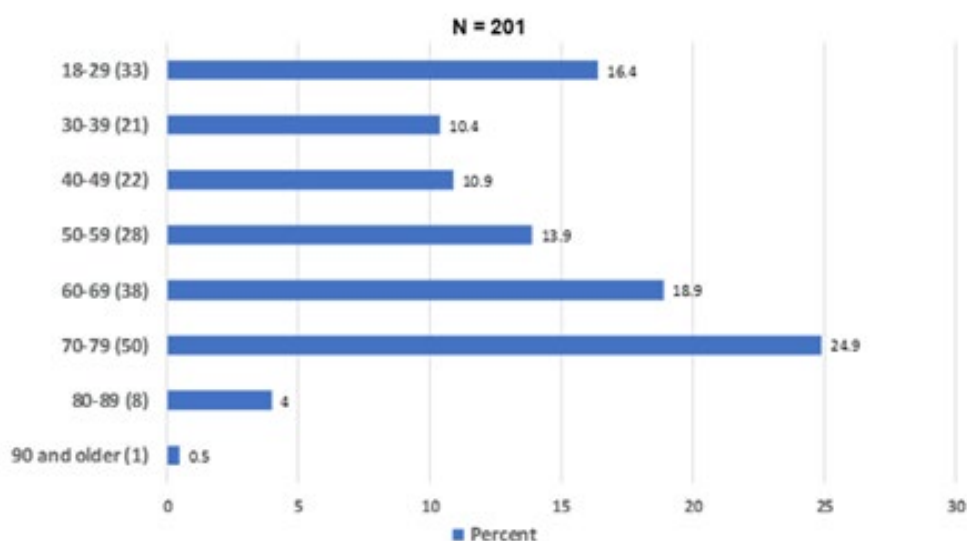
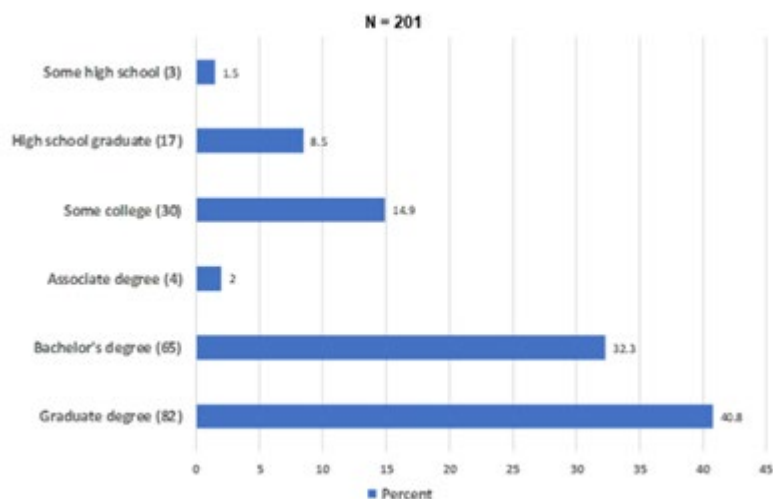


Figure 3 identifies the education level. Of the respondents, more than 70 percent had at least a bachelor's degree.

**Figure 3: AAPI Survey Respondent Education Level Summary.**



**COVID-19 Impacts and Needs:** Table 1 summarizes the ten COVID-19 impacted areas asked in the survey. The top five areas impacted by COVID-19 reported: attended less social gathering events (87.3%), became more socially isolated (59.5%), decreased regular exercising (42.0%), had a negative impact on my mental health (41.0%), and missed or skipped preventive care check-ups (38.5%). Twenty-two percent experienced more anti-Asian racism. Other impacts reported included: lost job (3); less traveling (3);

closure of favorite stores, restaurants, etc.; constant worry about my elderly mother; expense and time sewing masks; gained weight; got into lazy habits; got sick with COVID; lower my coping ability to deal with other problems in life, made extra money; more childcare responsibilities; online school; spend more for masks and sanitizer; undetected gout problem; and work from home and Zoom fatigue.

**Table 1: COVID-19 Impacts on AAPI Population Summary.**

COVID-19 Impact	N = 205	Number	Percent
Attended less social gathering events		179	87.3%
Became more socially isolated		122	59.5%
Decreased regular exercising		86	42.0%
Had a negative impact on my mental health		84	41.0%
Missed preventive care medical/dental/vision checked ups		79	38.5%
Missed routine health screenings		73	35.6%
Had a negative impact on my physical health		67	32.7%
Reduced household income		51	24.9%
Experienced more anti-Asian racism		46	22.4%
Missed elective procedures		29	14.1%
Other impact		21	10.2%

The top five AAPI community COVID-19 needs identified were: access to COVID-19 testing (39.5%), where to find accurate information about COVID-19 (35.1%), access to COVID-19 vaccine (32.7%), COVID-19 information in plain language (20.5%), and financial support (17.6%). Table 2 lists the eight AAPI Community COVID-19 needs asked in the survey.

**Table 2: AAPI Community COVID-19 Impacts Needs Summary.**

COVID-19 Need	N = 205	Number	Percent
Access to COVID-19 testing		81	39.5%
Where to find accurate information about COVID-19		72	35.1%
Access to COVID-19 vaccine		67	32.7%
COVID-19 in plain language (easier to understand)		42	20.5%
Financial support		36	17.6%
Need help using technology		24	11.7%
Help paying for healthcare cost		22	10.7%
COVID-19 written information in my language		19	9.3%
Other needs		13	6.3%

Other needs identified were: childcare (2); communication with health professional related to health issues; food; meet with people outdoors; AAPI mental health/community support and media support; more social events in safe setting; socialization opportunities; and wanted people to be more reasonable, not so mean or opinionated.

**Preventive Health Behaviors:** One question asked about preventive health practices: “In the past week, how often did you practice each of the following preventive health behaviors?” Table 3 summarizes the frequency of eight behaviors asked in the survey. The top three behaviors with the highest percentages reported for “All the Time” were: wash hands frequently (79.5%), stay away from people who have COVID-19 (75.8%), and stay hydrated (64.6%).

**Table 3: COVID-19 Preventive Health Behavior Summary.**

Preventive Health Behavior	N	All the Time # (%)	Sometime # (%)	Never # (%)
Wash hands frequently	200	159 (79.5%)	41 (20.5%)	0 (0.0%)
Stay away from people who have COVID -19	198	150 (75.8%)	42 (21.2%)	6 (3.0%)
Stay hydrated (drink lots of fluids)	195	126 (64.6%)	66 (33.8%)	3 (1.5%)
Get plenty of sleep	195	81 (41.5%)	102 (52.3%)	12 (6.2%)
Exercise regularly	193	75 (38.9%)	96 (49.7%)	22 (11.4%)
Wear a face mask when around people	196	59 (30.1%)	100 (51.0%)	37 (18.9%)
Wear a face mask indoors only	182	43 (23.6%)	80 (44.0%)	59 (32.4%)
Maintain social distancing (6 feet apart)	193	35 (18.1%)	107 (55.4%)	51 (26.4%)

Other health behaviors reported included: covering cough, eat healthy, took supplements, and wore a mask for 5 days after possible exposure.

**COVID-19 Vaccination:** Most of the respondents received at least

one vaccine shot. Eighty-seven percent were fully vaccinated (received 1 shot of Johnson & Johnson or first two shots of Pfizer/Moderna). The percentages declined in the number of booster received over time. Table 4 provides the vaccination summary.

**Table 4: COVID-19 Vaccination Summary.**

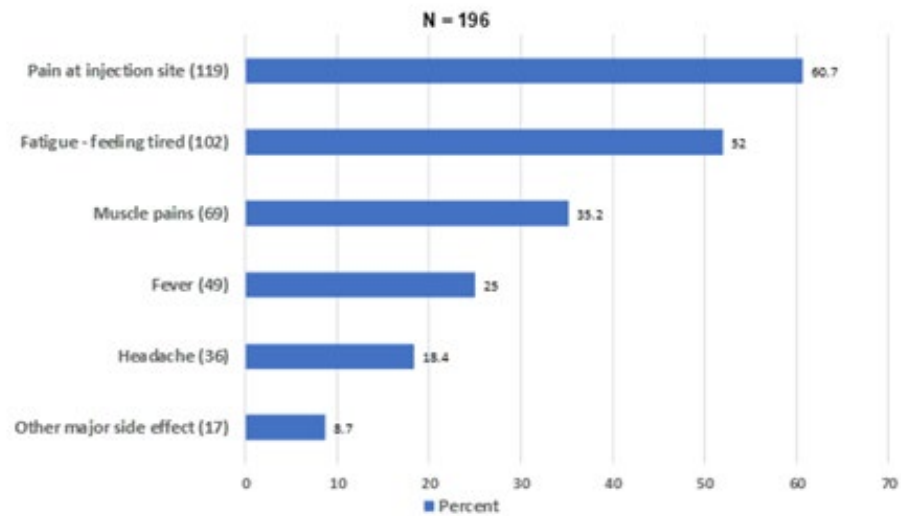
COVID-19 Vaccination	N = 205	Number	Percent
Johnson & Johnson (1 shot)		9	4.4%
Pfizer/Moderna first shot		170	82.9%
Pfizer/Moderna second shot		169	82.4%
Pfizer/Moderna first booster		143	69.8%
Pfizer/Moderna second booster		87	42.4%
Pfizer/Moderna bivalent booster		73	35.6%
Other COVID-19 vaccine		1	0.5%
Have not received any COVID-19 vaccine		9	4.4%

Four percent did not get the vaccine. The reasons for not receiving vaccines were: do not trust it (2), did not believe the efficacy of COVID vaccines, never got sick, religious exemption, and vaccine may make you sick.

The most common vaccination side effects reported were pain

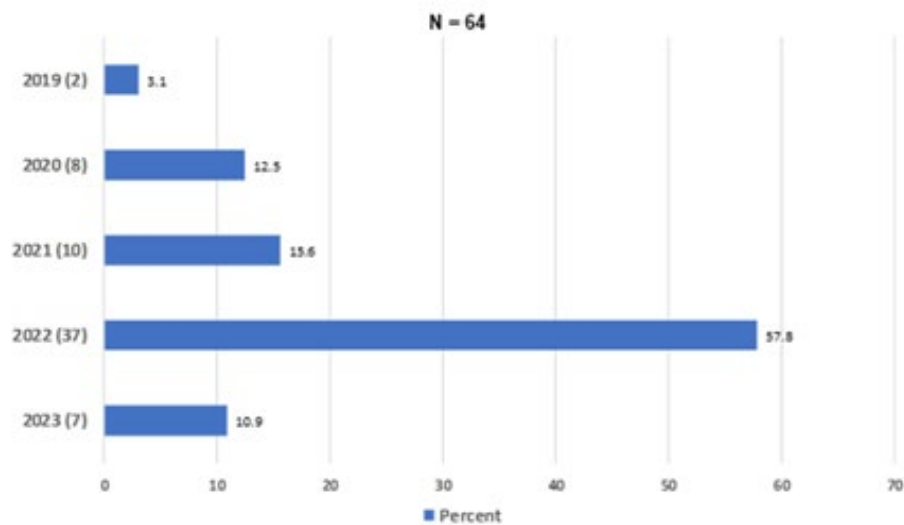
at injection site, fatigue, muscle pains, fever, and headaches (see Figure 4 for percentages). Other major side effects reported included: chills (2); rash (2); first booster- got COVID; heart palpitations; loss taste and smell; nausea; prolonged fatigue, feverish, shortness of breath for 6 weeks; swollen lymph nodes; threw up; and very stiff spine.

**Figure 4: COVID-19 Vaccination Side Effects Summary.**



**COVID-19:** Fifty-six percent (N=108) of the respondents had COVID-19. Of these, 14 percent (N=15) had it more than one time (7.5% had it twice and 6.5% had it three or more times). Many first-time cases occurred in 2022 (see Figure 5).

**Figure 5: First Time Had COVID-19 Summary: 2019-2023.**



The most common long-lasting COVID-19 effects (more than two weeks) reported were extreme tiredness, joint or muscle pains, shortness of breath, loss of smell, lost of taste, and brain fog. Table 5 lists the long-lasting effects asked in the survey.



**Table 5: COVID-19 Long-Lasting Effect Summary.**

Long-lasting Effect	N = 108	Number	Percent
Extreme tiredness (fatigue)		36	33.3%
Joint or muscle pains		22	20.4%
Shortness of breath		19	17.6%
Loss of smell		19	17.6%
Loss of taste		18	16.7%
Problem with memory or concentration (Brain Fog)		18	16.7%
Cough		8	7.4%
Chest pain or tightness		7	6.5%
Other major effect		6	5.6%

Long-lasting effect- more than 2 weeks

Other effects reported were chills; excessive mucus; sore throat; stomach pain; and GI discomfort, brain aneurysm and eye strokes.

### Discussion

The AAPI Community COVID-19 needs assessment was conducted in the early part of the pandemic fourth year when the cases were low. Even though there was little empirical data about AAPI locally, observational and anecdotal information was reported. Many of the findings in the survey results were expected.

The greatest reported impact was social health (attended less social gathering events and become more socially isolated). This was expected since one of the primary preventive strategies was to stay home and avoid unnecessary people contact. What was unexpected was the high percentage of respondents experiencing more anti-Asian racism (22.4%). The greatest community needs reported were access to vaccine, testing, and accurate COVID-19 information. These were requested by AAPI's throughout the pandemic.

The respondents continued to practice preventive health behaviors even when fewer cases of COVID-19 were reported. For the preventive health behaviors examined, six out of eight had more than 80 percent practice level (combined all the time and sometimes). The top two practiced health behaviors were: washing hands frequently (79.5% - all the time) and stay away from people who have COVID-19 (75.8%-all the time).

The AAPI respondents had higher vaccination rates than the reported CDC national rates on May 10, 2023 (87.3% versus 69.5% were fully vaccinated and 35.6% versus 17.0% received bivalent booster). The vaccine hesitancy had been growing seen in the percentages who had gotten boosters 1-3 (69.8%, 42.4%, and 35.6%, respectively).

Fifty-six percent of the respondents had gotten COVID-19 during the pandemic. Many have lingering long-lasting effects (more than two weeks).

### Conclusion

More than half of the AAPI respondents had gotten COVID-19. Many cases occurred in 2022. A third of the those who gotten the virus had long-lasting effects. The COVID-19 pandemic had significantly impacted Pima County AAPI population socially, mentally, physically, and economically.

### Conflict of Interest

Nothing to declare.

### Funding

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### Acknowledgement

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