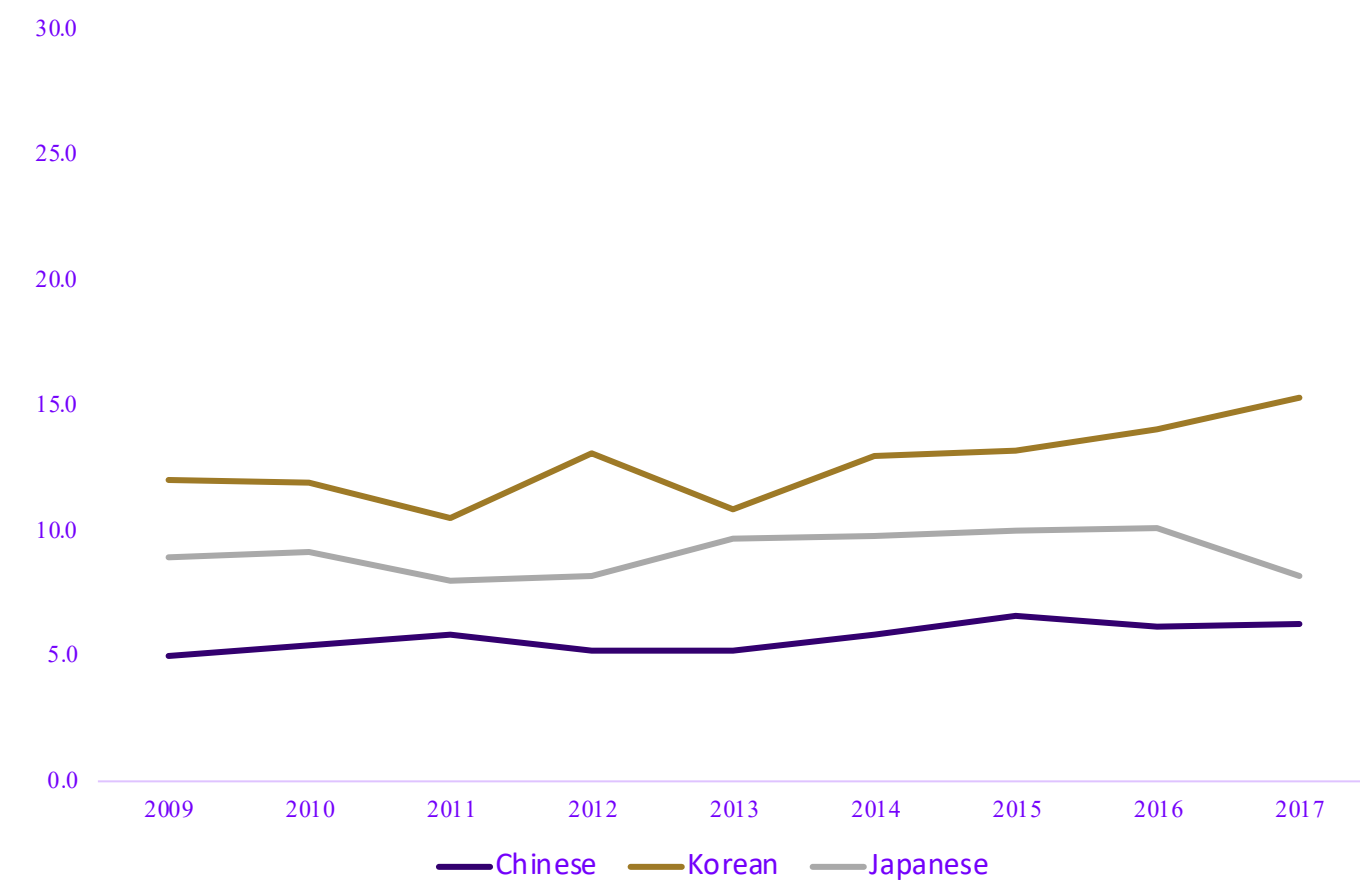# Suicide Among Chinese, Japanese, and Korean Americans: A Comparative Study

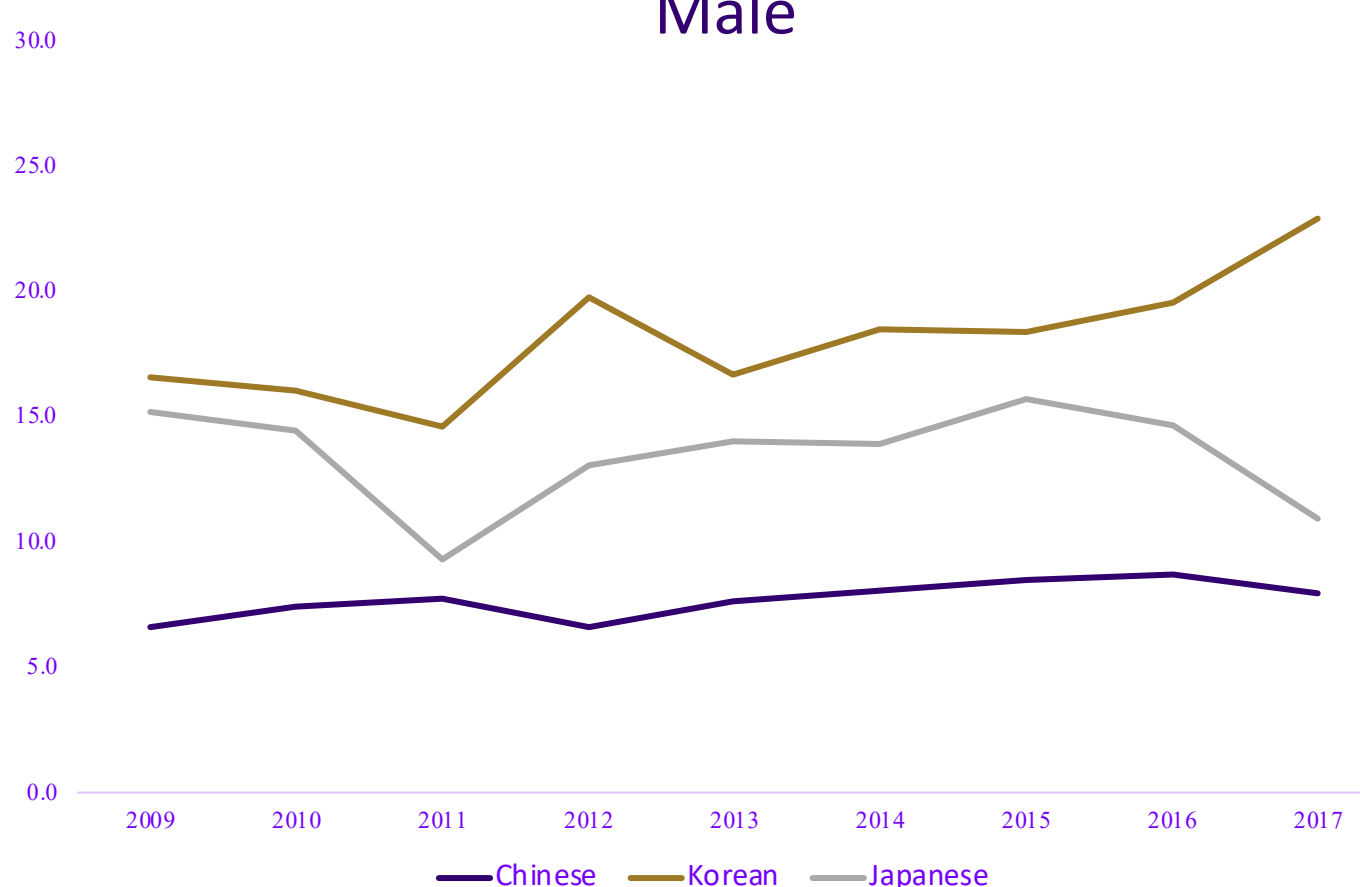Xueqi Chen
Advisor: Professor William Lavely

Backgrounds:

> As of 2018, suicide has become the tenth leading cause of death for Asian Americans.
> Asian Americans, a census category compromising 5.6% of the U.S. population, has high in-group diversities. Suicide rates as well vary across specific Asian American categories. Yet, despite the differences, there is little research on variation in suicide rates across Asian American subgroups.
> The current academic literature on the Asian American suicidology focuses extensively on teens or college students. There lacks research on other specific groups within the Asian Americans, like middle-aged males, and how suicide rates have changed over time for each Asian sub-group.

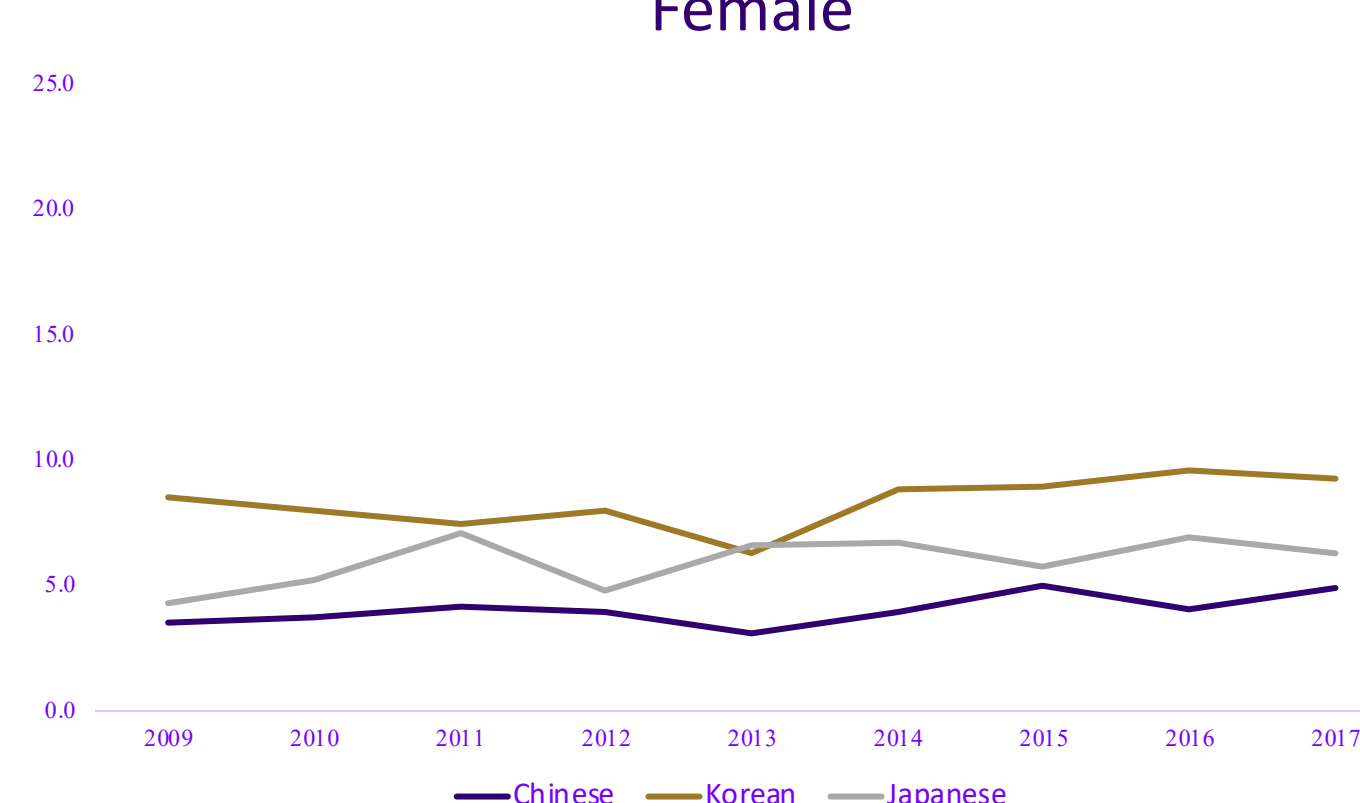## Age-Adjusted Suicide Rates of Total Population from 2009 - 2017

Age-Adjusted Suicide Rates by Sex from 2009 - 2017

Male

Female

Hypotheses:

1. The suicide rates of Chinese, Korean, and Japanese Americans have all increased between 2009 to 2017.
2. The suicide rates of male members in the three sub-groups have increased more than the female members'.
3. Higher education status is associated with higher suicide rates in all three sub-groups.

			B	Std. Err.
Chinese			0.162**	0.049
	Male		0.210**	0.065
		Aged 15 - 24	0.757**	0.258
		Aged 25 - 44	0.220	0.207
		Aged 45 - 64	0.223*	0.128
		Aged 65+	0.305	0.665
	Female		0.138**	0.066
		Aged 15 - 24	0.295**	0.150
		Aged 25 - 44	0.178	0.174
		Aged 45 - 64	0.193	0.146
		Aged 65+	0.158	0.203
Korean			0.413**	0.140
	Male		0.700**	0.216
		Aged 15 - 24	1.557**	0.370
		Aged 25 - 44	1.473**	0.400
		Aged 45 - 64	-.935*	0.578
		Aged 65+	0.908	1.067
	Female		0.197	0.119
		Aged 15 - 24	0.052	0.343
		Aged 25 - 44	0.289**	0.110
		Aged 45 - 64	0.295	0.239
		Aged 65+	0.789**	0.383
Japanese			0.092	0.109
	Male		0.050	0.287
		Aged 15 - 24	1.492**	0.497
		Aged 25 - 44	0.310	0.328
		Aged 45 - 64	0.047	0.473
		Aged 65+	0.412	0.770
	Female		0.207*	0.113
		Aged 15 - 24	0.820**	0.338
		Aged 25 - 44	0.320**	0.134
		Aged 45 - 64	0.280	0.457
		Aged 65+	0.030	0.346

Independent variable: year.
Dependent variables: suicide rate per 100,000.
*$p < 0.1$, **$p < 0.05$

			OR	SE	95% CI
Chinese					
	Male				
		Bachelor degree	1.172**	0.112	[0.971,1.413]
		Master degree and above	2.059**	0.236	[1.644,2.578]
	Female				
		Bachelor degree	0.939	0.105	[0.754,1.169]
		Master degree and above	1.421**	0.186	[1.099,1.836]
Korean					
	Male				
		Bachelor degree	1.125	0.108	[0.932,1.357]
		Master degree and above	0.644**	0.085	[0.497,0.836]
	Female				
		Bachelor degree	0.768**	0.094	[0.605,0.976]
		Master degree and above	0.438**	0.079	[0.308,0.624]
Japanese					
	Male				
		Bachelor degree	0.913	0.142	[0.672,1.239]
		Master degree and above	0.843	0.167	[0.571,1.243]
	Female				
		Bachelor degree	0.874	0.159	[0.611,1.249]
		Master degree and above	0.453**	0.128	[0.260,0.789]

Notes: Number of observations = 2,961. *$p < 0.1$. **$p < 0.05$.
OR = Odds Ratio. CI = Confidence Interval. SE = Standard Error

• Data on the number of suicide cases is from the Multiple Cause of Death Mortality Data from the National Vital Statistic System (NVSS) of the National Center for Health Statistics (NCHS)

• Data on the population of the subgroups, and of different sex and age groups is calculated based on the Public Use Micro Data Sample (PUMS) from the U.S. Census Bureau and estimations made by the American Community Survey (ACS) 5-year records.

Primary Findings

> From 2009 to 2017, suicide rates have increased in the Chinese and Korean American group but not in the Japanese American group.
> Male Chinese and Korean Americans have a higher rise in suicide rates than females in each of these two sub-groups, while the suicide rates of female Japanese Americans have risen more than male Japanese Americans'.
> Chinese, Korean, and Japanese males aged 15 - 24 have the highest rise in suicide rates compared to members in other age groups within the sub-group respectively, indicating that teen suicide remains to be a pressing issue for the three Asian sub-groups.
> Male Korean Americans aged 45 - 64 is the only group that has shown a downward trend with a statistical p-value of 0.072.
> Obtaining a bachelor degree is a risk factor for male Chinese Americans, while it is a protective factor for female Koreans.
> Obtaining a master or above degree has a positive relationship with suicide rates of both male and female Chinese Americans, while it has a negative relationship with female Japanese, male Korean, and female Korean Americans.

Biases and Limitations

> The cause of death is partially reported by family members. Due to cultural reasons, family members in the three Asian subgroups may be ashamed of admitting someone in their family has committed suicide, and may report wrong cause of death.
> Physicians and funeral directors may be trained differently in each state and may use inconsistent measures to determine whether the cause of a case is suicide.
> The sample size in the PUMS is relatively small, especially for Japanese Americans. This may lead to inaccurate estimations of the total population.