Examining Differences in Mental Health Status among Adult Asian Immigrants

Background

The national and community-based studies have consistently showed that Asians have better mental health (Takeuchi et al., 2007). In 2016, 18.3% of all U.S. adults aged 18 or older had any mental illness (AMI) but the prevalence of AMI was lowest among the Asian ethic group (12.1%). Similarly, 4.2% of all U.S. adults had serious mental illness (SMI) but the prevalence of SMI was the lowest among Asian group (1.6%) (National Institute of Mental Health, 2018). These national statistics shows that Asians have the lowest levels of psychological distress of all racial/ethnic groups but there are variations within Asian subgroups.

The Asian ethnic subgroups are exceptionally heterogeneous on economic, social, migration and cultural backgrounds and these characteristics may have direct or indirect effects on their health (Antecol & Bedard, 2006; Prus, 2011). Asians have more than 20 national origins from the Far East to Southeast Asia to the Indian subcontinent such as China, India, the Philippine Islands, Japan, Korea, Vietnam, Malaysia, Pakistan, Thailand, and Cambodia (U.S. Census Bureau, 2017). The top five countries of origin of Asian immigrants are China, India, Philippines, Vietnam, and South Korea (Pew Research Center, 2017). The heterogeneous Asian populations may have different experiences during life. The different experiences may influence across various illnesses and diseases, including mental health. Therefore, we assumed that mental health outcomes of Asians differ across Asian subgroups.

Asians are diverse in their income, education, and skills. A compelling body of evidence documents that socioeconomic status (SES) can be a significant predictor of mental health outcomes (John, de Castro, Martin, Duran, & Takeuchi, 2012; Zhang & Ta, 2009). The SES factors explain differential exposure to conditions of life that affect immigrants' health

outcomes; and Asians have a high SES profile (Williams, Priest, & Anderson, 2016). Across subgroups, the median income ranges from $36,000 for Burmese to more than $100, 000 for Asian Indians. Only Indians, Filipinos, and Japanese have crossed the median family incomes for all Asians combined, whereas Chinese, Pakistani, and Korean median annual income falls between all U.S. and all Asian median annual income (Pew Research Center, 2017).

In terms of educational attainment, the Asian American population is above national average level, but those of Indian, Chinese, Filipino, and Japanese descent have much higher education levels than do Bhutanese, Cambodians, and Laotians (U. S. Census Bureau, 2017). As pointed out by Pew Research Center (2017),72 % of Asian Indian holds a bachelor's degree or higher, as compared to Chinese at 51.6%, Korean at 49.2%, Filipino at 42%, and Bhutanese at only 9%. The recent wave of immigrants from India and China includes skilled migrants, college students, and immediate relatives of naturalized citizens (Migration Policy Institute, 2017). Similarly, after removal of the national-origin system, a new wave of Filipino immigration consisting of educated and highly trained specialists in certain fields, particularly health care, engineering, and accounting have started to enter the United States (Migration Policy Institute, 2017). Higher education and professional skills ensure health insurance coverage for immigrants in the U.S. Therefore, high SES factors are expected to serve as protective factors that may be directly and indirectly associated with better health outcomes. A compelling body of evidence documents that SES can be a significant predictor of mental health outcome (Salk et al., 2017; Zhang & Ta, 2009). A positive relationship exists between higher SES and better health outcomes (John, de Castro, Martin, Duran, & Takeuchi, 2012).

Despite these differences among Asian subgroups, Asian Americans are portrayed as a model minority assuming that all Asians are the same and they represent the model for other

minorities to follow (Zhang, 2010). This myth is not applicable to all segments of the Asian population because this stereotype conceals the economic status of Southeast Asians, who are poorly educated, underemployed, and trapped in low paying nonprofessional jobs (Pew Research Center, 2015).

The immigration-related factors like historical experiences, culture, duration, language, and nativity are important factors that shape immigrant health (Mui & Kang, 2006). Asians' historical experiences with the United States' vary with their relationships in terms of military or labor exchanges or colonialism. For instance, Filipinos have a long-history with the U.S. either in military trade or in labor exchanges after World War II (Pew Research Center, 2017). Therefore, the Filipinos were heavily influenced by the American culture and this cultural advantage and having English as their official language would help them adjust to living in the U.S. faster than most of the other Asian subgroups (Tseng, 2009). Similarly, Asian Indians are fluent with English proficiency because English is one of their official languages and is also related to the history of British colonialism, which may help them to adjust quickly into the American culture (Tseng, 2009). Therefore, some subgroups may be at higher risk than other (Ye et al., 2009) because of a series of factors associated with their cultural belief system and immigration-related factors.

The Asian cultural system is characterized by their joint family structure and traditional health belief system (Kramer, Kwong, Lee, & Chung, 2002). The group cohesion and social stability are dominant determinants of their culture, which might be helpful in reducing stress (Marmot & Syme, 1976). Therefore, Asian culture can serve as a protective factor for immigrants' better health (Lee & Knobf, 2016). Living in an extended family structure may help in building and maintaining broad networks within their communities and these social networks

have played vital support roles in immigration and resettlement process for newcomers (Choi, 2009).

Asian culture values self-control and endurance discouraging emotional expressions, thus this strong social stigma may directly associate with elevated depression and anxiety (Zhu, 2018). The family members also try to hide mental disorders due to the loss of face concerns (David, 2010). This could be justified by their low utilization of mental health services despite health care accessibility provided by health insurance coverage (David, 2010; Javier et al., 2014). The potential barriers to seeking professional help may be their health cultural norms and limited culturally and linguistically appropriate mental health services (Abe-Kim et al., 2007). In addition to this, the Asian culture usually tends to view emotional or psychological symptoms as physical complaints that directly affects mental illness (Zhu, 2018). Asians tend to internalize their emotions, anger, and accumulating discontent and these patterns of repressing emotional problems may lead to psychological stress. Thus, the Asian culture is expected to have both positive and negative impacts on their mental health outcomes.

Another acculturation variable is the duration of stay in the U.S. that can be considered as the proxy variable to measure acculturation (Alegria et al., 2007). Many Asian immigrants have stayed for a significant portion of their lives in the U.S. and they are thought to be more likely to become more acculturated through prolonged exposure and adaptation to the American lifestyle. Past studies demonstrate that those Chinese immigrants who had lived longer in the U.S. were more likely to have psychiatric disorders (Shen & Takeuchi, 2001). In the same vein, the health advantages tend to decline with duration of residence (Argeseanu Cunningham et al., 2008). The high-level acculturation may intensify the immigrant's sense of disagreement and conflict while attempting to achieve a balance between two cultures rendering their vulnerability to mental

illness. Theories of acculturation generally predict that immigrant health advantage deteriorates with longer duration of stay in the U.S. (Mui & Kang, 2006).

Previous research has extensively focused on the study psychological distress across Hispanics (Alegria et al., 2007; Flores, Tschann, Dimas, Bachen, Pasch & Groat, 2008). Although the Asian American literature on the mental health is growing, limited research has disaggregated Asian ethnic group. The aggregate analysis may mask important ethnic-specific patterns (Chang & Moon, 2016; Chau et al., 2018). To our knowledge, however, no studies have examined the associations between various factors of demographic, SES, acculturation, and mental health outcomes across Asian subgroups. To address the main gaps in the existing literature, this study used the National Health Interview Survey (NHIS) to examine mental health differences among adult Asian immigrants, and to assess how demographic, socioeconomic, and acculturation factors contribute to mental health differences.

All these key factors are integral parts of the social determinants of health (SDOH) explaining unique health experiences across immigrants. The unique experience of immigrant is the result of the interactions of these factors influencing either any mental health outcome or serious mental illness among respondents. Therefore, many studies have demonstrated empirical support for the social determinants of health perspective in immigrant health (Dunn & Dyck, 2000; Prus, 2011; Williams et al., 2016). Considering these emerging evidences, it is important understanding of various factors related to mental health outcomes among Asian Americans. Using the SDOH framework and its different interconnected elements (i.e. age, gender, ethnicity, socioeconomic contexts, and immigration-related factors) enable researchers to disentangle the causes of and solutions for health disparities among the racial/ethnic minorities population in the United States.

Methodology

This study used the Asian American data from the NHIS 2012-2016. The NHIS is a nationally representative, cross-sectional, personal household interview survey annually through U.S. Census Bureau for the National Center for Health Statistics (Lynn et al., 2018). The NHIS is the principal source of information on the health of the civilian noninstitutionalized population of the United States. The survey has core questions on demographic and key health-related variables including number of years spent in the U.S., language spoken, health status, and self-assessed mental health status. The NHIS, therefore, this survey provides researchers the ability to analyze health characteristics among minority population living in the United States. The annual response rate for the NHIS survey was approximately 70% representing 35,000 randomly selected households containing about 87,500 persons (Lynn et al., 2018).

From the aggregated Asian American sample, we excluded cases with missing values, leaving a final analytic sample of 8,578 cases, including Chinese (*n*=1,811), Asian Indian (*n*=1,729), and Filipino (*n*=1,874). We focused on three most populous Asian ethnic groups in the U.S. because the NHIS provided ethnic specific information on these three subgroups individually. Respondents were 18 or over during the interview. The 3,164 cases form the "other Asian" category was included in the all-Asian analyses but excluded from subgroup analyses. Sample data were weighted to produce national estimates that are representative of racial/ethnic minority groups.

Psychological distress is a dependent variable and it was measured by the Kessler Psychological Distress Scale 6 (K6), a six-item scale designed to assess non-specific psychological distress (Kessler, Barker et al., 2003; Kessler, Green et al., 2010). This scale has been commonly used in national and international population-based studies (Jang et al., 2018;

Kang et al., 2015). The scale is designed to identify the individuals with a likelihood of having serious mental illness and any symptoms of mental illness in population survey. It measures the frequency of experiencing six different items of psychological distress in the last 30 days: 1) nervous, 2) hopeless, 3) restless, 4) depressed, 5) everything was an effort, and 6) worthless (Kessler, Andrews et al., 2002; Kessler, Barker, 2003). The respondents answered these 6 questions and the responses were scored from 0 (none of time) to 4 (all of time) and summed, with total K6 score ranging from 0 to 24. A score of 6 or greater is indicative of any symptoms of mental illness, and 13 or greatest suggests serious mental illness. The K6 had good reliability among this sample (Cronbach's Alpha = (e.g.,0.83).

The independent variables were classified into three sets of variables: demographic characteristics; socioeconomic status; and acculturation factors. Ethnicity, age and gender were included in demographic characteristics whereas educational attainment, family income, marital status, family size, and family with children were covered in SES factors. Similarly, the acculturation factors included English proficiency, duration of stay in the United States, citizenship status, and nativity.

The descriptive analysis showed different sample characteristics including age, gender, ethnicity, educational attainment, family income, marital status, length of stay in the U.S., nativity, citizenship status, and English proficiency (Table 1). Bivariate analysis examined the relationship between psychological distress and all sample characteristics mentioned previously (Table 2). The multiple regression was conducted in three steps (Table 3). To examine factors associated with K6 psychological distress, we performed multivariate logistic regressions to account for the dichotomous outcome variable. All models were weighted to account for the sample design, using the "*svy*" family of commands in STATA.

Results

As shown in Table 1, Asian Indians were younger than other ethnic subgroups. Filipinos had the highest proportion of female (59%) participation in the study. Among Asian subgroups, Filipinos had the lowest level of college education compared to Chinese and Asian Indians. About 69% of Asian Indians were married and more Asian Indian families had children compared to Chinese and Filipinos. About 42% of the Filipino subgroup had lived for 15 or more years in the U.S. With regard to unemployment, 40% of the Chinese were unemployed or not in the labor force. About 40% of the Asian Indians had household income of $100,000 or more but Filipinos had the lowest income among three Asian subgroups.

As shown in Table 2, Chinese, Asian Indians, and Filipinos had the lowest prevalence of serious mental illness compared to another racial/ethnic groups in the U.S. Among Asian subgroups, only 1.28% of the Asian Indians had SMI compared to that of Chinese (1.85%) and Filipinos (1.84%). Those with higher mental illness were also had self-reported fair/poor health.

In the multiple regression, we included three sets of variables in our final model. In the first step, the two demographic variables were age and gender. Age is statistically significant predictor for psychological distress ($b = -.02$, $p = <.001$). The regression showed that Chinese ($b= -.60$, $p = <.001$) had the highest psychological distress among Asian subgroups compared to non-Hispanic white. in the second step, the set of variables expanded to include four acculturation-related variables (citizenship, nativity, duration in the U.S., and non-English interview language). The length of the years in the U.S. was found a significant predictor for psychological distress. However, those who used non-English interview language ($b = 0.271$, $p = <.001$) have significantly more psychological distress compared to those who used English during interview. All previously included set of variables that first came up as a significant predictor were also remained significant in this step as well.

Table 1. Demographic Characteristics of Sample Adult Population, NHIS 2012-2016 (N=8,578; weighted)

Variables	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Asian Sub-Groups			
				Chinese	Filipino	Asian Indian	Other Asian
	Mean or %	Mean or %	Mean or %	Mean or %	Mean or %	Mean or %	Mean or %
Age	50.50	46.15	42.74	42.95	47.77	39.97	45.08
	(18.48)	(17.64)	(16.71)	(18.07)	(17.48)	(14.20)	(17.90)
Female	53.38	58.94	53.41	54.61	59.26	47.01	54.45
Foreign-born	4.97	10.36	51.34	77.37	61.72	91.30	70.90
U.S. Citizen	98.46	96.10	68.62	63.82	83.73	51.98	74.30
Years in the U.S.							
<5 yrs. in the U.S.	0.49	1.26	3.66	17.31	4.60	21.12	7.94
5 to <15 yrs. in the U.S.	0.83	2.96	15.33	19.35	15.33	31.65	15.17
15 or more years in the U.S.	3.70	6.35	37.68	40.72	42.44	38.53	47.80
Non -English interview	0.36	0.22	34.35	13.70	0.54	0.49	8.97
Household size	2.17	2.25	2.98	2.19	2.66	2.68	2.56
	(1.28)	(1.45)	(1.72)	(1.31)	(1.65)	(1.37)	(1.57)
Marital status							
Never married	24.64	43.51	32.34	36.90	25.54	23.51	33.24
Married	46.22	25.27	45.24	49.41	51.36	68.88	49.29
Widowed/Divorced	29.14	31.21	22.42	13.70	23.09	7.61	17.47
Family with no children	75.31	67.01	52.32	74.12	66.68	56.58	65.83
Household Income							
$0 - $34,999	33.76	55.52	50.42	37.26	29.41	21.78	37.04
$35,000 - $74,999	31.01	27.62	30.68	22.55	28.38	24.00	29.55
$75,000 - $99,999	11.99	7.32	8.34	8.82	14.02	14.61	10.01
$100,000 and over	23.24	9.55	10.56	31.37	28.20	39.61	23.40
Unemployed	40.94	43.74	36.85	40.05	36.13	29.74	40.48

Table 1. (Continued)							
Education							
Less than high school	8.53	16.55	32.54	7.72	6.53	4.54	11.51
Some college	32.49	34.13	26.86	18.95	31.86	10.66	25.42
College or more	34.58	20.70	15.31	60.93	44.80	76.27	43.96

Source: National Health Interview Survey, 2012-2016

Parentheses indicate standard deviation

The final step of this model added the six socioeconomic related variables: household size, marital status, family type, household income, employment status, and education.

Table 2. Mental Health Outcomes of sample Adults by race/ethnicity, NHIS 2012-2016 (n = 8,578; weighted).

	Mental Health			Self-Reported Health
Race/Ethnicity	K6 Scale (K6 Scale: 0-24)	Any Mental Illness (AMI) (K6 Scale: 6-24)	Serious Mental Illness (SMI) (K6 Scale: 13-24)	Fair/Poor
	Mean	%	%	%
Asian				
Chinese	2.05 (3.32)	12.68	1.85	7.70
Filipinos	1.95 (3.21)	11.92	1.84	9.88
Asian Indian	1.58 (2.89)	9.47	1.28	5.06
Other Asian	2.05 (3.46)	12.99	2.30	11.35
Non-Hispanic White	2.59 (3.88)	16.02	3.47	12.59
American Native	3.64 (4.85)	26.72	8.23	22.69
African-American	2.58 (4.01)	17.81	3.67	20.04
Hispanic	2.57 (4.10)	17.31	3.86	15.68

Source: National Health Interview Survey, 2012-2016

Parentheses indicate standard deviation

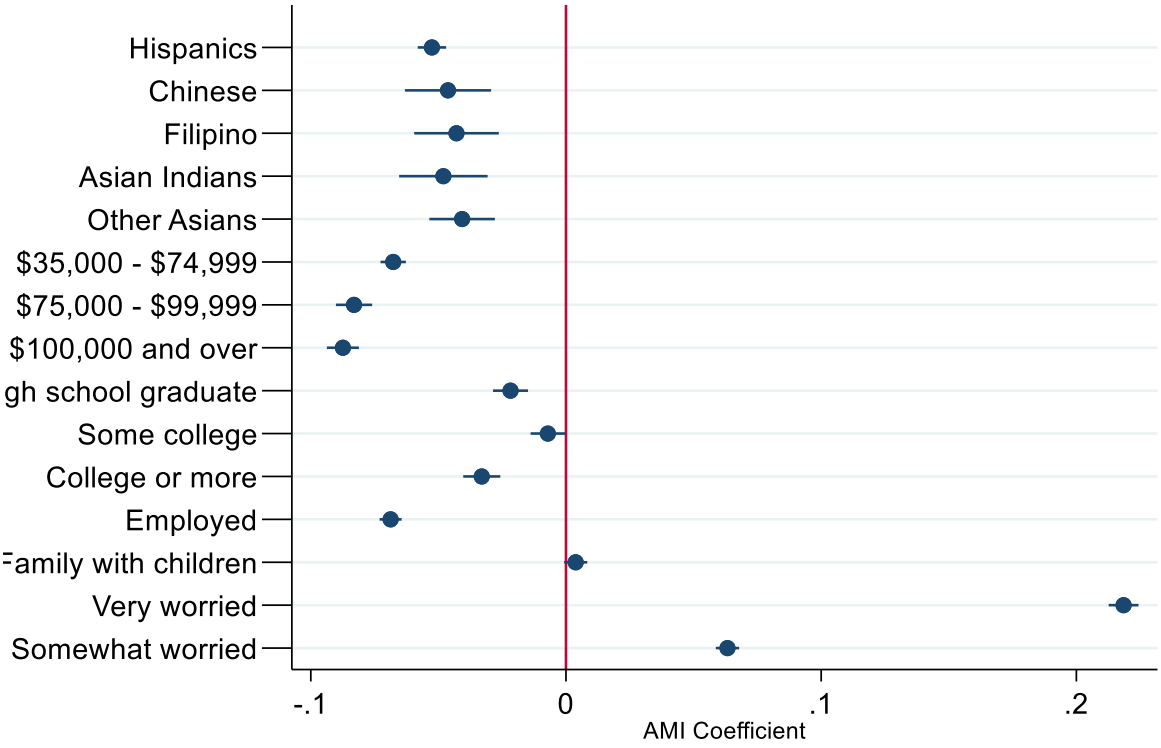
Table 3. Predictors of Mental Illness (K6 Scale) by Race/Ethnicity

Characteristics	K6 SCALE													
	Base				Demographic				Acculturation-related				Socioeconomic factors	
	b	(S.E.)	Sig.[1]		b	(S.E.)	Sig.[1]		b	(S.E.)	Sig.[1]		b	(S.E.)	Sig.[1]
Race/Ethnicity (Non-Hispanic White)														
Chinese	-0.54	(0.12)	***		-0.60	(0.12)	***		-0.39	(0.13)	**		-0.27	(0.13)	*
Filipino	-0.64	(0.10)	***		-0.69	(0.10)	***		-0.49	(0.10)	***		-0.39	(0.10)	***
Asian Indian	-1.00	(0.10)	***		-1.07	(0.10)	***		-0.74	(0.11)	***		-0.45	(0.11)	***
Other Asian	-0.53	(0.08)	***		-0.59	(0.08)	***		-0.39	(0.09)	***		-0.48	(0.08)	***
African American	0.00	(0.04)			-0.07	(0.04)			-0.05	(0.04)			-0.45	(0.04)	***
Hispanic	-0.01	(0.04)			-0.09	(0.04)			-0.07	(0.05)			-0.39	(0.10)	***
Demographic Factors														
Age					-0.02	(0.00)	***		-0.01	(0.00)	***		-0.02	(0.00)	***
Female					0.62	(0.03)	***		0.62	(0.03)	***		0.26	(0.02)	***
Acculturation Factors														
Foreign-born									-0.87	(0.18)	***		-0.79	(0.18)	***
Non U.S.-citizen									0.09	(0.07)			-0.87	(0.18)	***
Duration (15 or more yrs)														
0 yr in the U.S.									-0.97	(0.18)	***		-0.78	(0.17)	***
Less than 5 yrs in the U.S.									-0.28	(0.11)	*		-0.36	(0.11)	**
5 to less than 15 yrs in the U.S.									-0.4	(0.07)	***		-0.41	(0.08)	***
Non-English interview llanguage									0.271	(0.07)	***		-0.34	(0.07)	***
														(Continued)	

Table 3. (Continued)															
Household SES Factors															
Household size													0.04	(0.02)	**
Marital status (Married)															
Never married													0.07	(0.04)	0.113
Widowed/Divorced/Separated													0.59	(0.04)	***
Family Type													-0.25	(0.04)	***
Household Income ($100,000 or more)															
$0-$34,999													0.99	(0.76)	***
$35,000-$74,999													0.15	(0.04)	***
$75,000-$99,999													-0.01	(0.04)	***
Employment Status													-0.95	(0.03)	***
Education (College or higher)															
Less than high school													0.62	(0.05)	***
High school graduate													0.13	(0.03)	***
Some college													0.19	(0.03)	***
Constant	2.58	(0.02)	***		2.78	(0.05)	***		3.787	0.191	***		5.85	(0.21)	***

[1]Indicates statistical differences between the samples at the folowing levels: † p<.10, * p<.05, **p<.01, ***p<.001.
Notes: Data weighted and adjusted for survey design.

Figure 1. Estimation of AMI across various socioeconomic measures



Discussion

This study sheds light on the various correlates and potential predictors of psychological distress among adult Asian immigrants in the United States. It assesses whether there was a relationship between psychological distress and socioeconomic factors among Asian subgroups. This study revealed several findings. The first is that the prevalence of psychological distress differs among subgroups of adult Asian immigrants, meaning that ethnicity is significant predictor of psychological distress. Overall all Asian subgroups have lower prevalence of psychological distress than whites and Hispanics (Figure 1). Second, however, there is variation among Asian subgroups in which Asian Indian subgroup has the lowest risk of mental illness. Acculturation and SES factors, however, did not explain Asian's advantage over whites.

Limitations

There are several limitations to this study. First, self-reporting problems with psychological distress is subject to cultural bias among respondents. Because some of the questions were culturally sensitive, therefore, some participants may not have shared their actual experiences of psychological distress. Culture is important to understanding the mental health of Asian immigrants because psychological distress is seen as a sign of personal weakness, shame, and embarrassment (Chang & Moon, 2016). Thus, this study may not fully capture the variation the traditional value in Asian culture (Liu et al., 2016). Future research should consider cultural component to examine associations between psychological distress and mental health outcomes in adult Asian immigrants. Second, the use of cross-sectional dataset limits the ability of researchers to establish the causal relationship between the variables. Future studies should employ longitudinal data to examine the cause and effect mechanism associated with psychological distress.

Implications

These findings have several implications for policy makers, health care practitioners and researchers. Policymakers should be aware about the consequences of serious mental illness that may be detrimental to the overall health and well-being of the U.S. population (Dong, Chang, Wong, & Simon, 2012). Clearly, the rapidly increasing Asian immigrant population will continue to force policymakers for better understanding issues related to their mental health. This study clearly calls attention of researchers on the heterogeneity of mental health among Asian subgroups. Asian immigrants comprise refugees that deserve further attention and research. The

findings suggest that there is a significant relationship between psychological distress, socioeconomic characteristics, and acculturation factors. More importantly, the findings emphasize the importance of understanding the unique cultural backgrounds of Asian subgroups in utilizing health care services on mental health.

[Note: I am working on this paper. My next step is to work on interaction terms examining the effects of set of interaction terms on mental illness.]

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