The Role of Generational Status in Access to Mental Health Care and Quality of Mental Health of Asian Indians in the U.S.

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Abstract:

In today's world, mental health is a critical, yet underlooked topic that affects the health and well-being of everyone around the world (CDC, 2023). However, wide disparities within the mental healthcare industry currently exist because of a myriad of factors, the most prominent being cultural factors. Such individuals that retain these cultural factors include first and second-generation immigrants in America, more specifically Asian Indians. However, there are substantial differences between first-generation immigrants, who are more likely to retain their native cultural values, compared to second and later generations of immigrants, who may be conflicted by both the American and cultural values of their parents. Therefore, this study aims to discover how the different mindsets, lifestyle, and interaction between first and second, and later generations of Asian Indians affect their access to mental healthcare and quality of mental health.

An anonymous two-part survey was given to a mixture of first and second and later generations of Asian Indians. The survey had respondents fill out a demographic profile on themselves and answer various multiple-choice questions regarding mental health counseling, barriers to mental healthcare, and mental health symptoms. The data was then analyzed to test our hypotheses regarding access to mental healthcare and mental health quality.

Introduction:

In today's world, mental health is a critical, yet underlooked topic that affects the health and well-being of everyone around the world (CDC, 2023). Specifically, mental health includes the emotional, social, and psychological well-being of an individual and affects how a person may feel, perceive certain things, and behave on a day-to-day basis (CDC, 2023). However, as mental health plays such a big role in an individual's well-being, mental illnesses are found to be the most prevalent issue among residents and citizens of the U.S. (CDC, 2023). More specifically, 1 in 5 adults residing in the United States live with a mental illness (CDC, 2023). Unfortunately, due to a myriad of reasons including public stigma towards mental illnesses, there are numerous barriers that a person faces while attempting to seek adequate mental health treatment (APA, 2020).

Moreover, wide disparities within the mental healthcare industry currently exist because of many different factors. The most prominent of these factors include distinctive cultural beliefs as practiced by certain ethnicities, which critically shape low usage rates of mental health treatment. In a systematic literature review of the impact of culture on mental health, Gopalkrishnan (2018) found that with cultural diversity and limited resources allocated in the industry, mental health professionals are not enabled to work with individuals with diverse cultural backgrounds. The most prominent individuals who hold these values are immigrants to the U.S., and because of this, they are at a major disadvantage when seeking out mental healthcare (Derr, 2015). Solidifying this is a systematic review study conducted by Dr. Amelia Seraphia Derr, that found that due to an immigrant's unique values and experiences, their usage of mental health services was far below the rates of usage by the corresponding native U.S. citizens (Derr, 2015).

On the other hand, certain racial groups may also have further disparities compared to others in the U.S. which play a major role in worse mental health and lower rates of seeking treatment within a population (OMH, 2019). These disparities, as discussed previously, are almost entirely due to conflicting cultural values (Yang et. al, 2019). One specific racial group that has been hit the hardest compared to others in the United States due to their different cultural values is Asian Americans (Yang et. al, 2019). According to the most recent National Survey on Drug Use and Health, only 7.0 percent of Asian American adults received mental health services that year, compared to 19.8 percent of all Non-Hispanic White adults. (OMH, 2019). In addition to this, only 4.8 percent of Asian American adults received prescription medications for mental health illnesses compared to 16.6 percent of Non-Hispanic White adults. Consequently, 20 percent fewer Asian American adults received treatment for a depressive episode compared to Non-Hispanic White adults (OMH, 2019). The impact of cultural values on widening disparities in seeking mental healthcare is evident in a study that evaluated the National Survey on Drug Use and Health (Yang et. al, 2019). It was concluded that Asian Americans were dramatically less likely to seek out mental healthcare than white individuals due

to conflicting cultural values and the lack of culturally sensitive treatment options (Yang et. al, 2019).

In addition to just cultural values, generational status among Asian Americans has also created wide disparities within the population in terms of the usage of mental healthcare. In a study evaluating the National Latino and Asian American Study first-generation Asian Americans were more likely to possess family cultural conflict and seek some usage of mental health services (Chang et. al, 2013). Moreover, second-generation Asian Americans were found more likely to overall use mental health services as they possessed higher rates of cultural conflict as they strived to balance both the cultures of their ethnic heritage and America at the same time (Chang et. al, 2013). Additionally, in a systematic review and evaluation of national services, a study conducted by Vaghela and Ueno (2017) discovered that because second-generation Asian Americans have to hold two separate cultural identities—adapting to the United States and preserving traditional cultural beliefs—they are more likely to possess higher rates of mental illnesses and higher usage rates of mental health treatment.

Despite these findings, specific ethnic groups within the category of Asian Americans have differing results compared to the rest of the group. The most prominent ethnic groups with these different results include Asian Indians, who are the second largest Asian American group (4.6 million people) and make up a total of 21% of Asian Americans. Multiple studies have backed up the differing results of Asian Indians compared to other Asian American ethnicities and to the general population due to varying reasons, including distinct cultural values, socioeconomic status, and level of education. In a research report conducted by Gautam and Jain (2010), it was concluded that the emphasis on Eastern healing techniques and the emphasis on certain Hindu beliefs found in Hindu tests and relics reflects the low numbers of Indians seeking professional help for mental illnesses. In addition to cultural values, the unique socioeconomic status of Asian Indians has largely played a role in mental health quality within their population. In another evaluative study of the National Health Interview Survey, it was also concluded that Asian Indians were found to have lower levels of psychological distress compared to Non-White Hispanics in America due to lower multimorbidity and high socioeconomic status (Siddiqui and Sambamoorthi, 2022). Therefore, Asian Indians would seem to be the most equipped to seek out mental healthcare; nonetheless, there has been little research on how generational status specifically affects the barriers that Asian Indians may face when attempting to seek mental health treatment.

However, the research that has been published regarding this topic only addresses how immigration status and generational status affect the quality of life or substance usage among Asian Indians, or either evaluates barriers to seeking mental health. First-generation immigrants are identified as “individuals who are foreign-born,” second-generation immigrants are U.S. native citizens that have “at least one foreign-born parent,” and third-generation immigrants are U.S. native citizens who have parents who were also both born in the United States (U.S. Census Bureau, 2021, p. 6).

To begin, in an original study surveying both first and second-generation Asian Indians in the United States, Khera & Nakamura found that second-generation Asian Indians had higher rates of substance use compared to first-generation Asian Indians. First-generation Asian Indians had increased resiliency and better mental health outcomes, whereas second-generation Asian Indians had higher rates of potential cultural conflict, as they are more likely to adapt aspects of "American" culture while facing pressures of traditional Indian and immigrant values (Khera and Nakamura, 2018). These results in Asian Indians contradict the results discovered in the majority of Asian Americans.

Adding onto this an evaluative study by Panjwani et. al (2021) concluded that immigration status plays a huge role in the quality of life an Asian Indian resident in the U.S. might have. More specifically, even though some non-citizen Asian Indian residents in the U.S. may have a higher income or stable marital status, they have an overall lower quality of life compared to already established Asian Indian citizens in the United States; this is due to differences in acculturation and a stressful immigrant backlog in the United States (Panjwani et. al, 2021). Other research on this topic discusses the barriers to mental health treatment that may exist, but the study was conducted outside the U.S. on an African ethnic group. In this study, they identified the three most common barriers to the utilization of services at the Kabutare District Hospital in Rwanda as fear of stigmatization, poor awareness, and education about mental health, financial and cultural barriers, and limits due to geographical accessibility (Muhorakeye & Biracyaza, 2021). However, there has been very little research combining both topics—specifically how generational status affects the barriers to seeking mental health treatment in Asian Indians.

Therefore, it is important for current and future research conducted to bridge gaps in past research and evaluate the role of generational status in the potential barriers to seeking mental healthcare/treatment specifically for Asian Indians in the United States. As a result, this study intends to assist in bridging this research gap and seek a correlation between both generational status and barriers to mental health treatment among Asian Indians in the United States. Specifically, this study hopes to further research on this topic so the barriers to seeking mental healthcare for Asian Indians can hopefully be reduced or eventually eliminated in the future. With this, Asian Indians will be able to seek the proper professional healthcare that they need so they can live better lives. With the online survey that study participants filled out, we attempted to learn more and observe if 1) first-generation Asian Indians identify more barriers to seeking mental healthcare than second and later-generation Asian Indians, 2) if second and later generations of Asian Indians would identify a higher number of mental health symptoms, 3) if the majority of second-generation Asian Indians had lower mental health ratings, and 4) if first-generation Asian Indians would be more discouraged from seeking mental healthcare and have lower rates of success in seeking mental healthcare.

Methods:

Permissions and Participants

A total of 70 responses were collected in the survey. All of the participants identified themselves as Indian and belonged to either the first, second, or later generations of immigrants to the United States. All participants of the survey were made aware of the purpose and intention of the study. The participants were also notified that the entirety of the survey was confidential as no identifiable information was collected about the participants, as well that they could opt out of the study at any time. Out of the 70 responses collected, 36 participants (51.4%) identified themselves as first-generation whereas 34 participants (48.6%) identified themselves as second or later-generation Asian Indian. Of these respondents, 26 participants (37.1%) identified as male, and 44 participants identified as female (62.9%). Moreover, respondents were to select their age from these categories: 5-17 (15.7 %), 18-29 (12.9 %), 30-39 (4.3 %), 40-49 (38.6 %), 50-64 (21.4 %), and 65+ (7.1 %). Other than age, gender, and generational demographic information, respondents answered various questions regarding their religious affiliation, level of education, region of residence, proficiency in the English language, time lived in the U.S. and immigration status.

Table 1. Demographic distribution of participants.

Frequencies

Frequencies of Gender

Gender	Counts	% of Total	Cumulative %
1 - Male	26	37.1%	37.1%
2 - Female	44	62.9%	100.0%

Frequencies of Age

Age	Counts	% of Total	Cumulative %
1 - 5-17	11	15.7%	15.7%
2 - 18-29	9	12.9%	28.6%
3 - 30-39	3	4.3%	32.9%
4 - 40-49	27	38.6%	71.4%
5 - 50-64	15	21.4%	92.9%
6 - 65+	5	7.1%	100.0%

Frequencies of Generational Status

Generational Status	Counts	% of Total	Cumulative %
1	36	51.4%	51.4%
2	34	48.6%	100.0%

Frequencies of Level of Education

Level of Education	Counts	% of Total	Cumulative %
1 - High School not completed	1	1.4%	1.4%
2 - Current High School student	8	11.4%	12.9%
3 - High School Graduate	2	2.9%	15.7%
4 - 2 year college or other technical degree	2	2.9%	18.6%
5 - 4 year undergraduate degree	9	12.9%	31.4%
6 - Postgraduate Degree	46	65.7%	97.1%
7 - None of the above	2	2.9%	100.0%

Survey Design:

The 70 participants all filled out a digital survey consisting of 18 questions. The first portion of the survey consisted of 12 questions regarding the respondent's demographic information (as mentioned above). The 13th question asked all of the participants to rate their mental health on a scale from 1-5, with 1 being poor and 5 being excellent. The 14th question then asked respondents to select any of the 5 feelings listed that they felt. The 18th question also asked respondents to identify any (or multiple) of the 9 barriers listed to seeking mental health treatment for different generation Asian Indians. The rest of the questions (15th, 16th, 17th) asked respondents their perceptions and feelings about seeking mental healthcare.

Although there was no specific origin for the survey questions, the questions were based on many sources. All of the questions contained in the survey collected responses in various

ways. For example, when collecting demographic information, the survey questions had multiple options that the participant could choose from that encompassed many experiences and demographical backgrounds. Such questions regarding demographic information asked participants for their level of education, religion, age, immigration generation, immigration status, gender, region of residence, and English proficiency level. Although there was no specific origin for the survey questions, the questions were based on many sources. Many of the questions regarding the level of education, religion, age, and gender and most of the demographic questions were inspired or based on the 2020 Indian American Attitudes Survey which aimed to survey the perspectives and outlook on life from Asian Indians in the year 2020 and derives from the Carnegie Endowment for International Peace (Badrinathan et. al, 2021). This study was used as a basis for my survey because not only is the Carnegie Endowment for International Peace endorsed by Johns Hopkins University and the University of Pennsylvania. In addition, after a thorough review of many sources and questionnaires/surveys, it was determined that the type of questions and answer choices from the 2020 Indian American Attitudes Survey would best fit and be the most similar to the demographic questions that were to be asked in the survey that was distributed to participants. The definitions of each immigration generation were listed and defined by the U.S. Census with age divided into specific categories based on the findings of Hartshorne et. al (2018), who defined that youth are adept at learning a language until 17-18 years old. To determine the option choices for English Proficiency Level, we used the Interagency Language Roundtable scale (ILR) defined by the United States Foreign Service Institute. To collect mental health ratings from the participants, the survey used a Likert scale from 1 to 5 for respondents to voice their quality of mental health, ranging from poor to excellent. Other questions regarding the need and view of mental health treatment asked participants to simply answer yes or no. Finally, another question had participants identify the barriers to seeking mental health treatment in Asian Indians, consisting of 9 barriers found earlier by Muhorakeye and Biracyaza (2021).

Data Collection:

To start, this survey was disseminated using multiple methods. We used student-peer Asian Indian networks (through Reddit), Asian Indian Facebook groups, survey emails, direct messaging, and in-person inquiries at Asian Indian-specific events to recruit all of our survey participants. The lead author posted the links to these platforms and was the main point of contact for any questions regarding the study, survey, or participation.

Before filling out the survey, respondents consented to their participation in the survey and its purpose. In the Google Forms Description, participants read about the potential risks/discomforts, a subject disclaimer, data access, time commitment, procedures, and confidentiality aspects of the study before consenting to take part in the survey. Furthermore, to protect anonymity, no identifiable/confidential information regarding the participants was collected. Almost all of the participants were residents of various regions around the United

States and were either first, second, or third-generation Asian Indians. The data collected from the responses were analyzed using Chi-squared tests between statistical variables and correlational matrix tests among the variables. This was to specifically test how significant the relationships or correlations were between the variables. We also calculated the median, IQR, minimum, and maximum values of the numerical data to compare some of the results between the first and second, and later generations of Asian Indians (i.e. number of barriers identified and number of mental health symptoms). Lastly, we used frequency tables to see the number and percentage of participants in both generational statuses that identified each mental health rating (i.e. one to five).

Results:

We tested and analyzed four significant correlations and relationships between different categories and topics discussed within the essay. First, we wanted to test if generational status had a role in the number of barriers identified in seeking mental healthcare. Next, we wanted to determine if generational status was a factor in the number of mental health symptoms. Third, we wanted to see if generational status affected mental health ratings. Finally, we wanted to see if generational status played a role in rates of discouragement and success in seeking mental healthcare.

#1. There was a difference in terms of the number of barriers identified by generational status.

To test our first hypothesis, we wanted to discover that first-generation Asian Indians were more likely to identify more barriers compared to second and later generations of Asian Indians. The barriers/choices that individuals could identify were “Lack of awareness of available mental health services and mental health professionals” (Barrier 1), “Fear of stigmatization and its consequences” (Barrier 2), “Negative attitudes of society toward mental illness” (Barrier 3), “Societal, cultural, and religious beliefs in traditional healers and prayers” (Barrier 4), “Lack of available mental healthcare” (Barrier 5), “High cost of mental health services and health insurance” (Barrier 6), “Geographical accessibility to mental health services” (Barrier 7), “Language barriers between patients and mental health services” (Barrier 8), or no barriers (Appendix 1). The three most identified barriers in total were Barrier 2, for a total of 31 times (44.3%), Barrier 6, for a total of 26 times (37.1%), and Barrier 3 for a total of 23 times (32.9%) (Appendix 1). We observed the median amount of barriers to seeking mental health care for both first-generation Asian Indians was one barrier (Min = 0, Max = 7, IQR = 3.00) (Table 2). In contrast, in second and later generations of Asian Indians, the median amount of barriers to seeking mental health identified fell around two barriers (Min = 0, Max = 8, IQR = 2.00) (Table 2). Additionally, there was a weak positive correlation, $r = .160$, $n = 68$, that did not have a statistical significance ($p = 0.168$) (Appendix 2). Therefore, our hypothesis that first-generation

Asian Indians would identify more barriers to seeking mental healthcare compared to second and later generations of Asian Indians was actually rejected.

#2 There was a difference to support the role of generational status in the number of symptoms identified.

To test our second hypothesis and to determine the mental health symptoms of participants, we had respondents choose any or multiple of the following choices: “Withdrawn from Friends and Social Activities,” “Fear, Worry, or Anxiety,” “Feeling Sad, Down, or Hopeless,” “Mood Changes,” or “None of the Above” (Appendix 1). The three most identified choices were “Feeling, Sad, Down, or Hopeless” (55.7%), “Mood Changes” (37.1%), and “Withdrawn from Friends and Social Activities” (34.3%) (Appendix 1). The median rate of mental health symptoms for first-generation Asian Indians fell at two symptoms (Min = 1, Max = 4, IQR = 1.00) (Table 2). Similarly, the median value for second and later generations of Asian Indians identified was one mental health symptom (Min = 1, Max = 4, IQR = 3.00) (Table 2). Moreover, we found that there was indeed a weak positive correlation between generation status and the number of mental health symptoms, r = .286, n = 68, but it had fairly strong significance (p = .016) (Appendix 2). As a result, our hypothesis regarding second and later generations of Asian Indians identifying more mental health symptoms was statistically supported through association.

Table 2. Comparisons between generational status, the number of barriers identified, and mental health symptoms.

Descriptives

	Generational Status	N	Missing	Mean	Median	IQR	Minimum	Maximum
Number of Barriers Identified	1	36	0	1.69	1.00	3.00	0	7
	2	34	0	2.29	2.00	2.00	0	8
Number of Mental Health Symptoms	1	23	13	2.48	2	1.00	1	4
	2	33	1	2.48	2	3.00	1	4

#3 There was a difference to support the role of generational status quality of mental health.

To test our third hypothesis, we first had all respondents rate their mental health quality on a scale from 1-5, with one being poor and 5 being excellent. To start, the majority (55.6%) of first-generation Asian Indians reported their mental health ratings as a five or excellent mental health quality, whereas some respondents (33.3%) responded with a four as their mental health

rating, and others (8.3%) as a three (Table 3). On the other hand, a large portion (52.9%) of second and later generations of Asian Indians reported a slightly worse mental health quality at a rating of four. (Table 3). Furthermore, a smaller portion (26.5%) of second and later-generation Asian Indians rated their mental health quality as excellent, or five, and another portion (20.6%) rated their mental health qualities as three (Table 3). Therefore, this hypothesis regarding the majority of second and later-generation Asian Indians having lower mental health ratings was supported.

Table 3. Frequencies of Mental Health Ratings among generational status.

Generational Status	Number of Participants	Mental Health Ratings	Counts	Percent
1	36	2	1	2.777777778
		3	3	8.333333333
		4	12	33.33333333
		5	20	55.55555556
2 and Later	34	2	0	0
		3	7	20.58823529
		4	18	52.94117647
		5	9	26.47058824

#4 There was a statistically significant association to support the role of generational status in discouragement of seeking mental healthcare.

To test our final hypothesis, we attempted to see if generational status played a role in discouragement or success in seeking mental health treatment. We asked participants simple yes or no questions regarding their discouragement and success in seeking mental healthcare. We discovered that there was indeed a significant negative correlation between generational status and discouragement from seeking mental healthcare," r = -.249, n = 68, which was found to be statistically significant (p = .037) (Appendix 2). Correlating with this is the findings of a statistically significant relationship between generational status, as second and later-generation Asian Indians on average were more likely to be discouraged when seeking out mental healthcare compared to first-generation Asian Indians, X^2 (1, n = 70) = 4.36, p = .037 (Table 4). However, for generational status and success in seeking mental healthcare, r = -.106, n = 68, there was a slight negative correlation, which was also found to not be statistically significant (p = .384) (Appendix 2). Adding on to this, there was no statistically significant relationship found

between generational status and "success in seeking mental healthcare," X^2 (2, n = 70) = .866, p = .648. Overall, there was a significant relationship to reject the first part of the second hypothesis of first-generation Asian Indians seeking mental healthcare. Moreover, there was not a significant statistical association to support the second part of the third hypothesis.

Table 4. Chi-squared test of independence between generational status and discouragement from seeking mental healthcare.

Contingency Tables

	Discouraged from seeking Mental Health care		
Generational Status	1 - Yes	2 - No	Total
1	5	31	36
2	12	22	34
Total	17	53	70

χ^2 Tests

	Value	df	p
χ^2	4.36	1	0.037
N	70		

Discussion:

Overall, the majority of second and later-generation Asian Indians identified a higher number of barriers, a higher number of symptoms, and lower mental health ratings, being discouraged from seeking out mental healthcare. In addition, individuals with a higher level of education were less discouraged to seek mental healthcare. These findings reject our first hypothesis, support our second and third hypotheses, and support half of our fourth hypothesis. Although these results support the findings of Muhorakeye & Biracyaza, 2021, they actually contradict prior research on this topic from Chang et. al (2013). Moreover, these results support the findings of Khera and Nakamura (2018) and Vaghela & Ueno (2017) in terms of poorer mental health quality in second-generation Asian Indians.

Limitations:

However, there are some limitations to this study that may have influenced the results. To start, this project never attained official IRB or IRB-exempt status due to logistical issues. Therefore, this puts the respondents at risk and raises some ethical issues. However, ethical practices were ensured through this project as all the participants and their data were not identified and stayed confidential. Furthermore, the survey responses were different for the different sections, therefore some of the sections have a total of 70 participants, whereas some of the later sections have 68 total responses due to survey response error. Adding on to this, there were 14 total missing values when conducting data analysis because of the phrasing of "None of the Above" in the question that asked for mental health symptoms in the survey (Table 2). These may have played a role in the data analysis and influenced the results in this way. Moreover, the study presents potential risks from sampling and respondent bias. The proportion of people from each gender, age, and level of education was different, indicating some type of sampling bias. For example, 36 participants (37.1%) identified as male, and 44 participants identified as female (62.9%). In addition to this skew, 38.6% of all participants were from the ages 40-49, whereas the next biggest category out of the 6 was 50-59 (21.4%). For the level of education, 65.7% of respondents had postgraduate degrees, whereas the next two biggest categories out of seven were a 4-year undergraduate degree (12.9 %) and a current high school student (11.4 %), which may have influenced the data through sampling bias.

Overall, all of the skews in the categories might have dramatically shifted or influenced the overall shape of the responses. Additionally, as 26 participants (37.1%) were born in the U.S., 15 participants (21.4 %) emigrated to the U.S. at the age of 10 or younger, 7 participants (10.0 %) emigrated when they were 11-16, and 17 participants (24.3 %) emigrated from ages 17-29. This high concentration of participants emigrating to the U.S. before age 29 might have largely influenced the overall shape of the data because they emigrated early enough to possibly share the characteristics of both first and second and later generations of Asian Indians through the generation "1.5" phenomenon, indicating some sort of respondent bias. Complementing this is that 35 participants (50.0%) have lived in the U.S. for 30 years and above, so this might have largely influenced the responses because they might have already been accustomed to mental health services in the U.S. Another limitation may be that 6 participants (8.5 %) did not identify as citizens of the U.S., so these responses may have been influenced by a possible lack of access to mental health services or lack of acclimation to these services, indicating a type of respondent bias. Lastly, a limitation of this study is that an overwhelming amount of questions are regarded as categorical instead of numerical. Therefore, many types of numerical data analysis were not possible on this data set, which may have produced or given new insights and results. A further limitation is that due to an existing stigma in the Asian Indian community, it is hard to tell if any of the responses including barriers, mental health ratings, or mental health symptoms are actually reflecting the true feelings of the Asian Indian community, or if the data was subject to respondent bias.

Future Studies/Implications:

Future studies on this topic should use a uniform way of collecting responses, such as using the Likert scale for each of the questions so different types of numerical data analysis can be conducted. Adding on to this, an equal number of individuals should be ensured for each gender, age, and level of education, accounting for the generation “1.5” phenomenon. Next, studies should ensure an IRB to completely protect participant identification and uphold ethical standards. Other studies can go more in-depth about why second-generation and later generations Asian Indians have poorer mental health ratings, a higher number of identified barriers, and higher numbers of mental health ratings, trying to find a root cause or origin of this trend.

Another thing that future studies can implement is including interviews or a mixed-method study to find out more about why second and later generations of Asian Indians have trouble accessing mental healthcare compared to first-generation Asian Indians. It can be more insightful to conduct interviews rather than collecting multiple choice responses, revealing new data that might not have been discovered before. As time progresses, studies can also compare the differences in barriers to seeking mental healthcare between second-generation Asian Indians and third and fourth-generation Asian Indians. Studies in the future can also focus more on the level of education, the high cost of seeking out mental healthcare, additional barriers to seeking mental healthcare that wasn’t tested, and success rates in seeking out mental healthcare. Finally, studies in the future should ensure their best to decrease stigma (e.g. protecting identity) when having participants answer the survey, so the answers are reflective of the true feelings of the Asian Indian community.

Conclusion:

All in all, after data analysis was conducted on the survey results, it was found that the majority of second and later generations of Asian Indians had lower mental health ratings, higher numbers of barriers in seeking mental healthcare, and higher numbers of mental health symptoms, as well as feeling more discouraged in seeking mental healthcare compared to first-generation Asian Indians. It was also concluded that individuals with a high level of education were less discouraged from seeking out mental healthcare. Despite not evaluating the cause and origin of these barriers to seeking mental healthcare or certain mental health states of these Asian Indian individuals, this study is beneficial; there are very limited studies regarding the impact of generational status on mental health in the Asian Indian population in the United States. We aspire that this study motivates many researchers to further investigate the wellness of Asian Indians, particularly second and later generations of Asian Indians.

References

Badrinathan, S., Kapur, D., Kay, J., Vaishnav, M. (2021, June 9). *Social Realities of Indian Americans: Results From the 2020 Indian American Attitudes Survey*. Carnegie Endowment For International Peace. https://carnegieendowment.org/2021/06/09/social-realities-of-indian-americans-results-from-2020-indian-american-attitudes-survey-pub-84667

Borenstein, J. (2020, August). *Stigma, Prejudice and Discrimination Against People with Mental Illness*. American Psychiatric Association. https://www.psychiatry.org/patients-families/stigma-and-discrimination

Budiman, A. (2021, April 29). *Indians in the U.S. Fact Sheet*. Pew Research Center. https://www.pewresearch.org/social-trends/fact-sheet/asian-americans-indians-in-the-u-s/

Centers for Disease Control and Prevention. (2023, April 25). *About Mental Health*. Centers for Disease Control and Prevention. https://www.cdc.gov/mentalhealth/learn/index.htm#:~:text=Mental%20health%20includes%20our%20emotional,others%2C%20and%20make%20healthy%20choices.&text=Mental%20health%20is%20important%20at,childhood%20and%20adolescence%20through%20adulthood

Chang, J., Natsuaki, M. N., & Chen, C. N. (2013). The importance of family factors and generation status: mental health service use among Latino and Asian Americans. *Cultural diversity & ethnic minority psychology*, *19*(3), 236–247. https://doi.org/10.1037/a0032901

Derr, A. S. (2015, December 15). *Mental Health Service use among immigrants in the United States: A systematic review*. Psychiatric Services. https://doi.org/10.1176/appi.ps.201500004

Gautam, S., & Jain, N. (2010). Indian culture and psychiatry. *Indian journal of psychiatry*, *52*(Suppl 1), S309–S313. https://doi.org/10.4103/0019-5545.69259

Gopalkrishnan, N. (2018, June 19). *Cultural diversity and mental health: Considerations for policy and practice*. Frontiers. https://doi.org/10.3389/fpubh.2018.00179

Hartshorne, J. K., Tenenbaum, J. B., & Pinker, S. (2018). A critical period for second language acquisition: Evidence from 2/3 million English speakers. *Cognition*, *177*, 263–277. https://doi.org/10.1016/j.cognition.2018.04.007

Khera, G. S., & Nakamura, N. (2018). Substance use, gender, and generation status among Asian Indians in the United States. *Journal of ethnicity in substance abuse*, *17*(3), 291–302. https://doi.org/10.1080/15332640.2016.1201715

Lyons, D. (2020, January 26). *How (And Why) To Determine Your Level Of Language Proficiency*. Babbel Magazine. https://www.babbel.com/en/magazine/how-and-why-to-determine-language-proficiency

Muhorakeye, O., and Biracyaza, E. (2021) Exploring Barriers to Mental Health Services Utilization at Kabutare District Hospital of Rwanda: Perspectives From Patients. *Front. Psychol.* 12:638377. doi: 10.3389/fpsyg.2021.638377

Niemeyer, H., Bieda, A., Michalak, J., Schneider, S., & Margraf, J. (2019). Education and mental health: Do psychosocial resources matter?. *SSM - population health*, *7*, 100392. https://doi.org/10.1016/j.ssmph.2019.100392

Panjwani, S., Manyam, S. B., & Prasath, P. R. (2021). The Impact of Immigration Status on the Quality of Life Among Asian Indians in the United States of America. *Journal of Asia Pacific Counseling*, *11*(2), 109–124. https://doi.org/10.18401/2021.11.2.7

Siddiqui, Z. A., & Sambamoorthi, U. (2022). Psychological Distress Among Asian Indians and Non-Hispanic Whites in the United States. *Health equity*, *6*(1), 516–526. https://doi.org/10.1089/heq.2021.0159

U.S. Census Bureau. (2021, December 16). *About the Foreign-Born Population*. Census.gov. https://www.census.gov/topics/population/foreign-born/about.html

U.S. Department of Health and Human Services Office of Minority Health. (2021, April). *Mental and Behavioral Health - Asian Americans*. U.S. Department of Health & Human Services. https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=54

Vaghela, P., & Ueno, K. (2017). Racial-ethnic Identity Pairings and Mental Health of Second-generation Asian Adolescents. *Sociological Perspectives*, *60*(4), 834–852. https://www.jstor.org/stable/26579836

Yang, K. G., Rodgers, C. R., Lee, E., & Cook, B. L. (2019, October 2). *Disparities in Mental healthcare Utilization and Perceived Need Among Asian Americans: 2012–2016*. Psychiatric Services. https://pubmed.ncbi.nlm.nih.gov/31575351/

Appendix 1. Frequencies of identified barriers to seeking mental health care and mental health symptoms.

Binomial Test

	Level	Count	Total	Proportion	p
Barrier 1	0	48	70	0.686	0.003
	1 - Lack of awareness of available mental health services and mental health professionals	22	70	0.314	0.003
Barrier 2	0	39	70	0.557	0.403
	1 - Fear of stigmatization and their (its) consequences	31	70	0.443	0.403
Barrier 3	0	47	70	0.671	0.006
	1 - Negative attitudes of society toward mental illness	23	70	0.329	0.006
Barrier 4	0	52	70	0.743	<.001
	1 - Societal, cultural, and religious beliefs in traditional healers and prayer	18	70	0.257	<.001
Barrier 5	0	59	70	0.843	<.001
	1 - Lack of available mental health care	11	70	0.157	<.001
Barrier 6	0	44	70	0.629	0.041
	1 - High Cost of Mental Health services and health insurance	26	70	0.371	0.041
Barrier 7	0	67	70	0.957	<.001
	1 - Geographical accessibility to mental health services	3	70	0.043	<.001
Barrier 8	0	67	70	0.957	<.001
	1 - Language barriers between patients and mental health professionals	3	70	0.043	<.001
No Barriers	0	48	70	0.686	0.003
	1 - No Barriers	22	70	0.314	0.003
Withdrawn from Friends and Social Activities	0	46	70	0.657	0.012
	1 - Withdrawn from Friends and Social Activities	24	70	0.343	0.012
Feeling Sad, Down, or Hopeless	0	31	70	0.443	0.403
	1 - Feeling Sad, Down, or Hopeless	39	70	0.557	0.403
Mood Changes	0	44	70	0.629	0.041
	1 - Mood Changes	26	70	0.371	0.041
None of the Above Feelings	0	57	70	0.814	<.001
	1 - None of the Above Feelings	13	70	0.186	<.001

Note. H_a is proportion ≠ 0.5

Appendix 2. Table of Correlational Matrix tests conducted on the variables included in the survey.

Correlation Matrix

		Age	Gender	U.S. Region/Country	English Proficiency Level	Generational Status	Level of Education	Immigration Status	Religion	Need for Mental Health Care	Success in seeking Mental Health Care	Discouraged from seeking Mental Health care	Mental Health Ratings	Number of Mental Health Symptoms	Number of Barriers Identified
Age	Pearson's r	—													
	df	—													
	p-value	—													
Gender	Pearson's r	0.16	—												
	df	68	—												
	p-value	0.185	—												
U.S. Region/Country	Pearson's r	0.234	-0.065	—											
	df	68	68	—											
	p-value	0.052	0.596	—											
English Proficiency Level	Pearson's r	-0.108	-0.078	-0.124	—										
	df	68	68	68	—										
	p-value	0.374	0.521	0.307	—										
Generational Status	Pearson's r	-0.413 ***	-0.081	0.027	0.338 **	—									
	df	68	68	68	68	—									
	p-value	< .001	0.504	0.826	0.004	—									
Level of Education	Pearson's r	0.638 ***	0.161	0.182	-0.006	-0.153	—								
	df	68	68	68	68	68	—								
	p-value	< .001	0.182	0.131	0.961	0.207	—								
Immigration Status	Pearson's r	-0.101	-0.16	-0.058	-0.114	-0.167	-0.026	—							
	df	68	68	68	68	68	68	—							
	p-value	0.404	0.185	0.634	0.349	0.166	0.83	—							
Religion	Pearson's r	-0.009	-0.081	-0.19	0.158	-0.045	0.034	0.149	—						
	df	68	68	68	68	68	68	68	—						
	p-value	0.942	0.506	0.116	0.192	0.713	0.783	0.222	—						
Need for Mental Health Care	Pearson's r	0.008	-0.205	-0.055	-0.089	-0.14	-0.032	-0.054	-0.059	—					
	df	68	68	68	68	68	68	68	68	—					
	p-value	0.95	0.088	0.654	0.466	0.248	0.792	0.66	0.628	—					
Success in seeking Mental Health Care	Pearson's r	-0.005	-0.154	0.005	-0.103	-0.106	0.009	0.027	-0.109	0.857 ***	—				
	df	68	68	68	68	68	68	68	68	68	—				
	p-value	0.966	0.204	0.966	0.396	0.384	0.944	0.825	0.37	< .001	—				
Discouraged from seeking Mental Health care	Pearson's r	0.219	0.185	-0.093	-0.302 *	-0.249 *	0.226	0.047	0.05	0.354 **	0.217	—			
	df	68	68	68	68	68	68	68	68	68	68	—			
	p-value	0.069	0.126	0.441	0.011	0.037	0.06	0.702	0.68	0.003	0.071	—			
Mental Health Ratings	Pearson's r	0.279 *	-0.107	-0.066	0.101	-0.24 *	0.279 *	-0.173	0.128	0.54 ***	0.412 ***	0.408 ***	—		
	df	68	68	68	68	68	68	68	68	68	68	68	—		
	p-value	0.019	0.38	0.589	0.405	0.045	0.02	0.151	0.292	< .001	< .001	< .001	—		
Number of Mental Health Symptoms	Pearson's r	-0.236	0.035	0.154	-0.108	0.003	-0.242	-0.112	-0.211	-0.378 **	-0.321 *	-0.29 *	-0.377 **	—	
	df	54	54	54	54	54	54	54	54	54	54	54	54	—	
	p-value	0.08	0.797	0.257	0.428	0.984	0.072	0.412	0.119	0.004	0.016	0.03	0.004	—	
Number of Barriers Identified	Pearson's r	-0.178	-0.022	0.007	0.167	0.16	-0.239 *	-0.126	-0.039	-0.177	-0.21	-0.341 **	-0.202	0.284 *	—
	df	68	68	68	68	68	68	68	68	68	68	68	68	54	—
	p-value	0.141	0.859	0.953	0.168	0.187	0.046	0.299	0.759	0.143	0.081	0.004	0.094	0.034	—