Barriers and Facilitators to Health Care Utilization among Major Asian American Populations in the United States (A systematic review)

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ABSTRACT

Previous literature suggested that Asian Immigrants were less likely to access health care system, being less likely to be eligible for public health insurance or financial assistance. The aim of the study is to identify barriers and facilitators in accessing health care among Asian Americans, and to understand how the six major subgroups (Chinese, Asian Indian, Filipino, Vietnamese, Korean and Japanese) may differ in seeking care and in their utilization of health services. A total of 60 studies were included in a systematic review and 16 themes were identified, among which, Medical knowledge, attitudes and self-efficacy; Doctor-patient relationship and communication; Language, health literacy and computer literacy; Medical resources and information; Acculturation were most commonly reported. Comparative analysis between Chinese and Korean subgroups was also conducted and big differences were observed in some domains. ***Implication on intervention:*** Education programs and campaigns encouraging preventive care service be launched both through American and ethnic media and at multiple level; A call for culturally competent and diverse health care workforce; Explore resources to sustain clinical interpretation services; Continuing efforts on increasing access to health care insurance and controlling cost to improve affordability of care.

INTRODUCTION

Asian Americans are the fastest-growing (grew 72% between 2000 and 2015) and eventually might be "the largest immigrant group in the country, surpassing Hispanics in 2055"[1]. More than 22 million Asian Americans live in the United States, making up 6.9% of the total U.S. population (U.S. Census Bureau, 2017).Unlike Hispanic group, whose primary driving force in population growth is native birth, "growth in the Asian American population has been fueled primarily by immigration"[2].In other words, Asian Americans may face duel disadvantage in participating U.S. health care system both as a minority and an immigrant-dominant group. Furthermore, several studies have shown that despite overall health advantage upon arrival to the U.S. (sometimes referred to as *healthy immigrant effect*) collectively experience a downward trajectory in health outcome with increasing duration of stay in the U.S. (*acculturation effect*). To protect the health of the Asian American population, there is a need to continue investigating the barriers (and facilitators) faced within this population in seeking and receiving quality care in the U.S. health care system.

This paper presents a systematic review of the existing literature of both qualitative and quantitative studies that aim to identify barriers and facilitators in accessing health care among Asian Americans, and to understand how the subgroups (six major origin groups are Chinese, Asian Indian, Filipino, Vietnamese, Korean and Japanese) may differ in seeking care and in their utilization of health services, and the unique challenges faced by specific subpopulations.

SIGNIFICANCE

Asian Americans in general face various barriers in seeking health care. Previous studies have pointed out some major barriers which prevent Asian Americans from participating in the U.S. health system fully, e.g. language, health-related believes, access to health service and discrimination etc.[3] With the growing number of studies, new themes are emerging. For instance, "self-efficacy" is a concept within the social cognitive theory and now has frequently been considered an important factor in chronic care. Family relations and culture have also been brought to attention. A 2018 study involving old Chinese immigrants revealed that negative family relations could be a very important factor relating to more physician visits or inpatient service. A recent legislative proposal (under Trump administration) connecting Medicaid with denial of lawful residency has raised public concern and may as well become an enrollment barrier for certain population.[4] Thus, a collaboration with previous and existing literature can help stipulate a picture under current setting and possibly point out new directions for future researches.

Besides, Asian Americans are incredibly diverse, "a record 20 million Asian Americans trace their roots to more than 20 countries in East and Southeast Asia and the Indian subcontinent, each with unique histories, cultures, languages and other characteristics."[5] Table 1 presents key demographic and socioeconomic characteristics of

the six largest Asian American groups by origin. Although the uninsured rate for Asians declined after the ACA expansion, the large variation persists between subgroups. A 2018 report titled "income inequality in the U.S. is rising most rapidly among Asians" declared that "Asians now displace Blacks as the most economically divided group in the U.S." and "In 2016, Asians at the 90th percentile of their income distribution had 10.7 times the income of Asians at the 10th percentile. The 90/10 ratio among Asians was notably greater than the ratio among blacks (9.8), whites (7.8) and Hispanics (7.8)." [6] The increased income inequity may lead to serious socioeconomic consequences and wider disparities in health care use among these subgroups. Broad perception of Asian American as a single group (often a *model minority myth*) may ignore the considerable heterogeneity within this population, as already observed by some researchers. In addition, "As little research has been conducted on the barriers to health care experienced by Asian immigrants from specific ethnic groups, it is difficult to identify the unique health challenges experienced by these subpopulations".[7]Sharing findings from in-depth subgroup studies will help us better understand this population and address their needs at multiple levels.

TABLE 1 - Characteristics Of The Six Largest Asian American Groups (making up 87.3% of the total Asian American population)

Origin	Speaking English less than "very well" %	Public Health Insurance Coverage %	Uninsured %	Less than high school %	Unemployed %	Foreign-born %	Total Population
Chinese	40.1	21.0	12.9	17.3	4.2	60.4	4,520,101
Filipino	17.3	20.4	11.3	7.2	5.0	50.0	3,648,933
Asian Indian	19.7	13.8	10.4	8.2	4.1	67.8	3,461,017
Vietnamese	47.9	25.8	18.5	26.7	6.7	62.1	1,907,256
Korean	35.8	17.9	20.5	7.2	3.8	60.2	1,768,644
Japanese	14.5	22.1	7.4	4.6	3.4	24.1	1,433,105
White (Ref.)	5.9	30.5	12.9	11.5	4.6	8.5	240,924,897
Hispanic/Latino (Ref.)	32.3	33.8	28.4	35.3	6.7	35.2	53,986,412

Data Source: Selected Population Profile in the United States, 2013 American Community Survey 1-year Estimate. All race/ethnicities are alone or in combination.

METHODS

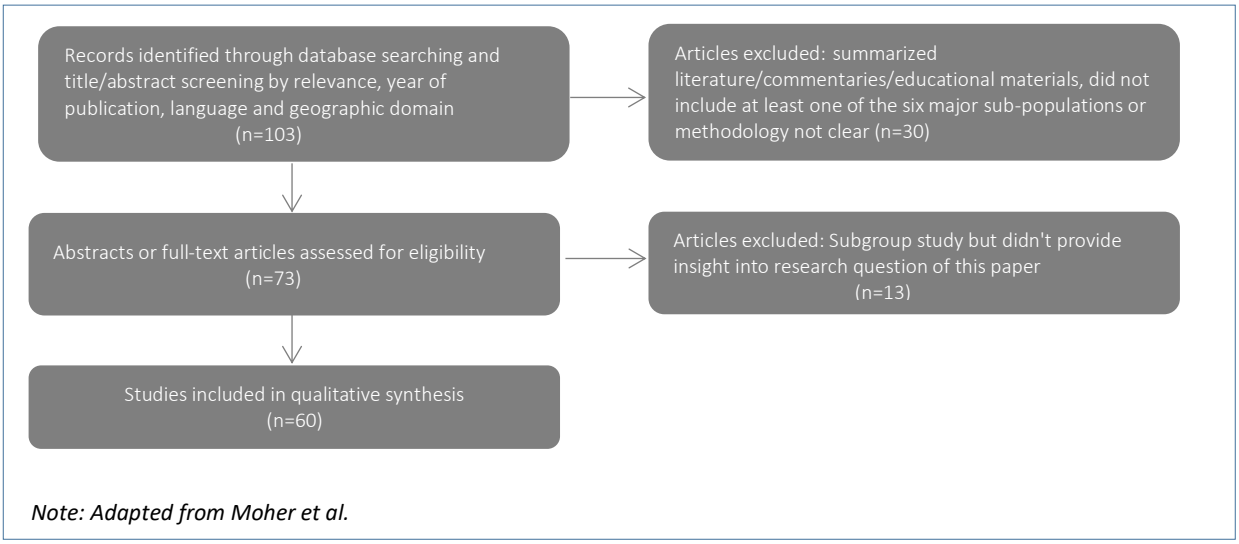
The systematic review was conducted in conformance with modified items of the PRISMA Statement and depicted in Figure 1. Database used to perform the initial literature search was Google scholar as it may have allowed for greater inclusion of online open-access journals. Abstracts and articles were selected on the basis of the following criteria.

Inclusion criteria - All original studies about barriers (and facilitators) to health care utilization among Asian Americans were included, regardless of method (e.g. qualitative, quantitative or mixed), age, gender or medical setting (e.g. preventive care, chronic disease, mental health, etc.). The target population of interest in the articles had to include at least one of the six major subgroups (Chinese, Asian Indian, Filipino, Korean, Vietnamese and Japanese), and at least one of the study's aim or results was or contributed to identify the barriers or facilitators. Only English-language articles published between January 2015 and August 2019 were reviewed and search was limited to the studies conducted in the United States to account for the health care context that is unique to U.S. residents.

Exclusion criteria - Summarized literature, commentaries, and educational materials were excluded, as were those without clear methodology.

Key words used for the literature were "Asian immigrants", "Asian Americans health care utilization", "Barriers to health care", "Access to care among Asian Americans", "Chinese American", "Asian Indian", "Filipino American", "Korean American", "Japanese American", "Vietnamese immigrants", and key strings combining these terms. Searchers continued until the author believed that the saturation of content had achieved. A total of 103 abstracts or full-text articles were retrieved from the systematic literature search by screening titles, year of publication and geographic region. Quantitative analysis was not possible due to heterogeneity across studies in term of study design, target group and setting. 43 studies were excluded for not meeting the inclusion criteria and finally 60 studies remained for qualitative synthesis. Data were then extracted and organized into a standard format and into tables that recorded title of the article, year of publication, methodology, region where the study was conducted, target subgroups of Asian Americans, health care setting. The Andersen Healthcare Utilization Model was adapted to conceptualize determinants of health care utilization by examining need factors (e.g. health status, self and family history of disease), predisposing factors (e.g. age, marital status, education, household size, etc.) and enabling factors (e.g. income, health insurance, English proficiency, citizenship, family support and social network, etc.).

FIGURE 1 – Flow diagram for systematic review of qualitative and quantitative studies regarding the barriers or facilitators to health care utilization for major US Asian American populations from a search on Google Scholar from January 2015 to August 2019.



Note: Adapted from Moher et al.

LITERATURE REVIEW

The literature on Asian Americans' participating in U.S. health care has burgeoned over the past decades, gauging by several systematic or literature reviews on the topic. Among them, the traditional review conducted by Clough et al.[8] was one of the most comprehensive and enlightening summary and served as groundwork and starting point for this paper.

Clough et al. reviewed four major barriers faced by Asian Americans in health care utilization in the U.S.: (1) access to health care services (institutional and societal levels). Topics include health insurance, usual source of care, policy and legal status (e.g. PRWORA by President Clinton in 1996), alongside a brief discussion on the acculturation; (2) linguistic discordance and inadequate health communication (at interpersonal level). Consequences of low English proficiency, benefits and disadvantages of interpreter services, the dynamics of a doctor-patient relationship, and challenges on intervention were closely examined; (3) Health-related beliefs and cultural incompetency of health care system. A wide-range of cultural differences was brought to attention, e.g. eastern medicine and traditional beliefs in *cupping*, *phong*, role of blood and use of ginseng, widespread belief among all subgroups that Western medical care is best for serious and acute issues while traditional Eastern care with fewer side effects may be better for chronic care, unfamiliarity with U.S. medical culture and health care system, misperception and inaccurate knowledge about disease risk, and social stigma associated with HIV/AIDs and mental disorder. 4) Perceived discrimination on race, language ability, perceived legal status and health literacy and its consequences. Although Clough et al. established a solid base for our study, their review has certain limits. Potential selection bias by using purposive strategy (as mentioned the author), unable to provide relative importance of these factors, and we had no idea to what degree patients' perspectives were taken into their assessment. Finally, with an emphasis on barriers, critical facilitating factors (equally or more important for intervention program design) may have been ignored.

A qualitative study[9] involving 15 in-depth individual interviews conducted in a Korean community in North Carolina partly complemented Clough et al.'s work by including perspectives and voices from participants. 20 themes about barriers to health care access were organized into four domains, including practical barriers to health care, negative perceptions about care, contingencies for care, and provider misconceptions about local needs. Although most of the findings fell into the scope of Clough et al.'s framework, this study pointed out a very important context for immigrants, the "duel health systems" they reside in. If you take a little search in google, you will find that health insurance is compulsory, universal, and relatively inexpensive in Korea and Korean Americans may also the options and alternatives to receive care in Korea. Thus, "high cost of care" is a relatively high cost compared to the similar practice in Korea, "Even if you can afford it, you don't purchase health insurance here because it feels way expensive compared to the cost in Korea and what you get for it." Low quality, inconvenience and inefficiency of the U.S. health system were "observed" when the experience in home country was counted in, "Annual screening I had in Korea covers everything, including vision test, blood

work, dental screening, endoscopy, osteoporosis, stress test, and so on." "In Korea, you can go to hospital whenever you are sick, weekend and late night, it doesn't matter. But here, you can't even call your primary doctor during weekend. You can't get the same day appointment and have to wait days to see a doctor." "In Korea, you walk in and get the testing and treatment you need. But here, you have to come back or go somewhere else for another test. You don't get the result right away. Process is too slow." Distrust also arose due to perception of health professional's role, as one put "Sometimes, nurses do things that are supposed to be done by doctors." However, despite the new perspectives from Korean Americans, the result of this research may not be generalizable to other populations of other populations.

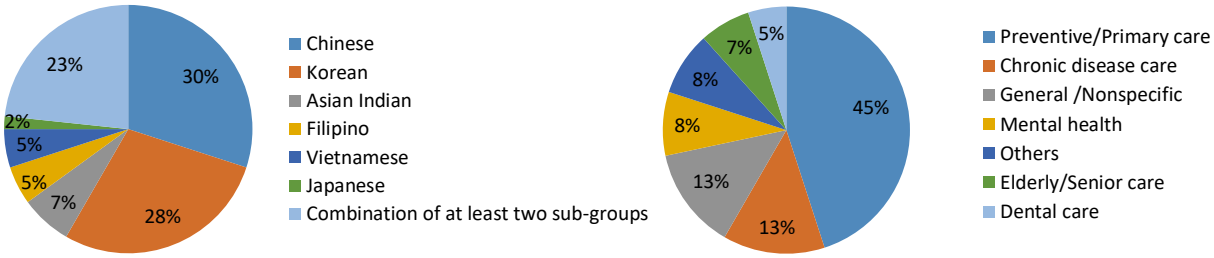
The most recent two studies on colorectal cancer screening, one involving Chinese and Korean American[10] and the other targeting old Filipino Americans[11], provide an opportunity to simultaneously examine barriers and facilitators among Chinese, Korean and Filipino Americans. Lack of need, logistic issues, cost and health insurance coverage, awareness and knowledge of CRC and CRC screening, medical resources and information, physician's recommendation are shared barriers and facilitators. However, Chinese and Korean did not seek preventive health care because of no symptom, while Filipino Americans believed that by maintaining optimum health, there was no need to see a healthcare provider for immediate CRC screening or even a notion that they had colon cancer. Regarding the medical resources and information, Filipino complained that no government health programs promoted preventive screenings among Filipinos, and in Korean and Chinese, some indicated that they were not aware that screening was covered under the ACA (possibly due to lack of exposure to American media). They physician's recommendation is also a complex situation. In the setting for Filipinos, "Although health care providers recommend CRC screening, they were not insisting enough to convince the accuracy and long-term benefit of colonoscopy, on contrary to this, a physician might experience mistrust from a Korean patient, "there are some doctors who do it for money. Even if it's not necessary to go, they say to come." As a result, physician's recommendation might be ignored or reluctantly given by the physician who noted the mistrust. The unique cultural distinction observed in qualitative analyses was that "only Korean participants identified embarrassment as a barrier to CRC screen, particularly colonoscopy, while Chinese participants denied embarrassment as hindering screening." The most interesting and significant finding about Filipino is that language and health literacy are not barriers, and participants perceived that "Culture has nothing to do with CRC screening", while the three barriers all identified in Korean and Chinese Americans. Considering the historical background of Filipino Americans and the duration of stay in the U.S. (>27 years for majority of the participants), acculturation might be a possible explanation (though not clearly concluded in the study). And another two factors, fearing being a family burden and stigma, were shared by Chinese and Korean but not among Filipino participants.

However, search result showed a very limited data for Japanese Americans, Vietnamese Americans and Asian Indians only, thus comparative analysis among sub-groups generally was not possible and may only be applied to very specific setting.

RESULTS and DISCUSSION

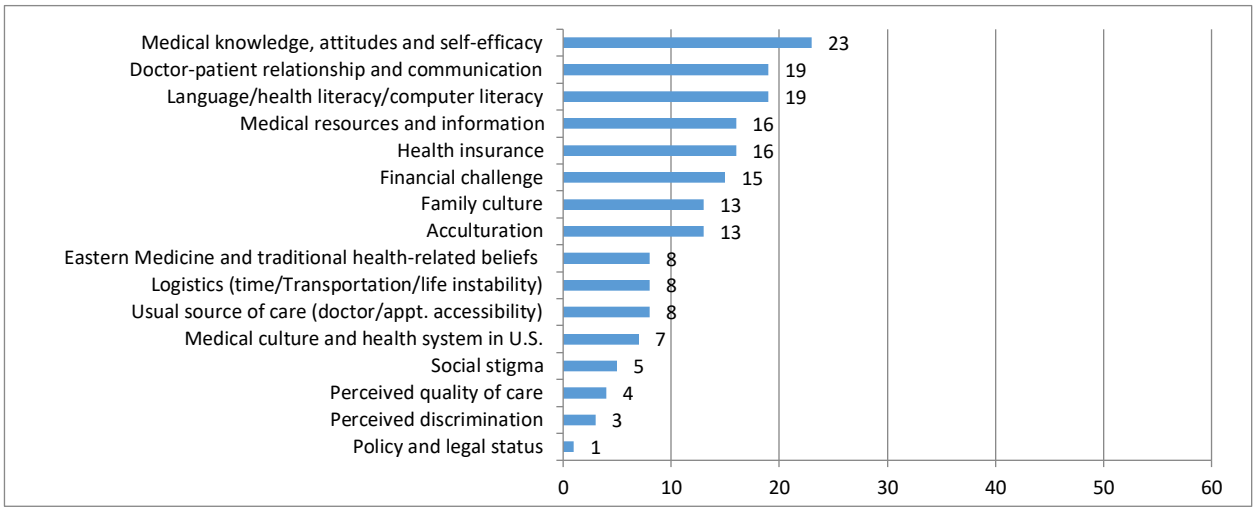
A total of 60 studies met the inclusion criteria. Of the 38 abstracts and 22 full-text articles included, 21 used qualitative methods such as focus groups and individual interviews, 33 used quantitative methods that statistically analyzed data collected through surveys, the remaining 6 articles used mixed methods. 18 studies were exclusively conducted among Chinese Americans, 17 among Korean Americans, 4 among Asian Indians, 3 among Filipinos, 3 among Vietnamese Americans, 1 among Japanese Americans, and the remaining 14 studies included a combination of at least 2 of the six sub-groups (Figure 2). CA, NY, IL, TX, NJ, HI, D.C., GA, WA, MA were the top 10 states where studies were conducted. The majority of studies were for adults (72%) and among those with specific gender information (n=34), 15 studies were exclusively for women, 1 for men only, and the remaining 18 were for both. Preventive/primary care (n=27) dominated the literature (Figure 2).

FIGURE 2 – Distribution of the Reviewed Articles by Sub-groups and by Health Care Setting



Guided by Anderson's Healthcare Utilization Model, need factors (health status/disease history for self and family) were reported by 20 studies and predisposing factors (age/gender/marital status/household size/education) were found in 12 studies, and 16 enabling factors – the main focus of our study and also referred to as barriers and facilitators to health care utilization – were identified: Medical knowledge, attitudes and self-efficacy; Doctor-patient relationship and communication; Language, health literacy and computer literacy; Medical resources and information; Acculturation; Eastern Medicine and traditional health-related beliefs; Logistics (time/Transportation/life instability); Usual source of care (doctor/appt. accessibility); Medical culture and health system in U.S.; Social stigma; Perceived quality of care; Perceived discrimination; Policy and legal status.

FIGURE 3 – Barriers and Facilitators to Health Care Utilization among Major US Asian American Populations (as Observed in the Studies)



Medical knowledge, attitudes and self-efficacy was the most frequent theme identified in the included studies, followed by doctor-patient relationship and communication, and language/health literacy/computer literacy. Figure 3 depicts these themes and their distribution across the studies.

Medical knowledge, attitudes and self-efficacy: This theme was observed in 23 studies. Examples were lack of knowledge and awareness on cancer and cancer screening, misconception about the cause and transmission of the disease (e.g. believing cancer is "contagious" and "breast cancer as an indication of bad luck"[12]), not knowing the significance of Family health history (FHH) in disease detection and prevention[13], not seeing a doctor when asymptomatic. Self-efficacy was referred to as the attitude and belief that one can successfully execute the behavior required to produce the desired results, and as an important factor related to HBV screening. One study found that the effect of self-efficacy was significant in subgroup analyses among Chinese and Korean, but not for Vietnamese.[14]

Doctor-patient relationship and communication: 19 studies reported doctor-patient relationship and communication as an important factor. Patient–provider ethnicity concordance, trust or mistrust medical experts, perceived physician's attitude and involvement could either facilitate or hinder effective care. Though overall Asian Americans tend to respect and trust doctors, situation can be complicated. For example, in a survey about the use of using Traditional Vietnamese Medicine (TVM), "although the survey was assured to be anonymous, 45% declined to answer the question", and overall, the result seemed to suggest "a level of distrust between the Vietnamese patients and their healthcare providers regarding their use of traditional medicine."[15] Also as mentioned earlier, physician's recommendation might be ignored if there is patient mistrust toward the physician.

Language, health literacy and computer literacy: Language has long been widely known as a major barrier and again gained the attention in 19 of the included studies. "In the group with Low English Proficiency (LEP), the odds of not having usual place for care increased by 2.09 times, of not having regular check-up by 1.69 times, of having unmet needs for medical care by 1.89 times, and of having communication problems in healthcare settings by 4.95 times."[16] "Those with limited English proficiency were 3.5 times as likely to lack dental health insurance and 3.2 times as likely to rate their oral health as fair or poor. The odds of not using preventive dental care services were 6.4 times as great in those without dental health insurance"[17]. Contrary to common

assumption, results revealed that "spoken English proficiency and print health literacy are independent communication barriers that are directly associated with health status among elderly Chinese American immigrants"[18], thus underscore the importance of addressing both on designing intervention strategy. Also, with some internet-based program being implemented, low computer literacy posed as a new challenge.[19]

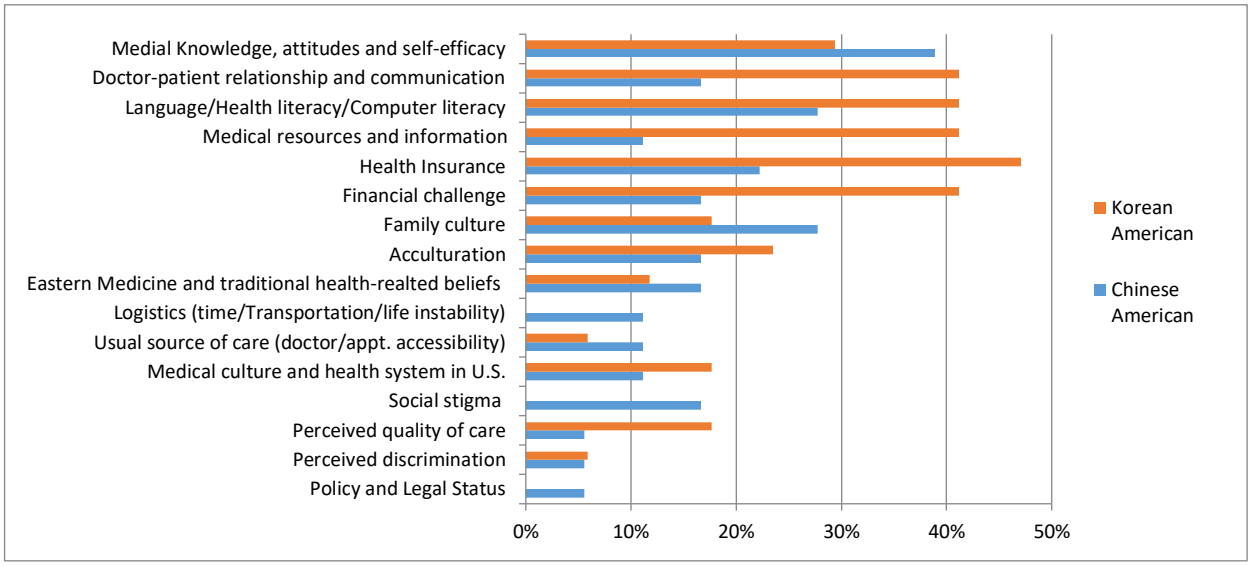
Medical resources and information: 16 studies came up with the results indicating how patients seek health care information and their utilization of resources. Not knowing where to get screened, larger family network, dependence on friends and community-based organization as the primary source of medical information, using internet or ask family or friends for self-diagnosis and self-treatment, and lack of exposure to American media were some of the scenarios. Some interview revealed that "Asians do not receive the same exposure since they tend to rarely on ethnic media" and "lacking exposure to screening media campaign due to language barrier"[20], which was consistent with prior studies.

Family culture: e.g. filial obligation,spousal support,family tradition, family conflict. 13 studies revealed this seemingly new emerging theme with several interesting findings shared. Patients with diabetes reported that they tried not to be a burden for their families and felt worried about affecting the traditional family meal ritual.[21] Filial obligation were a shared value by among Asian Indian, Chinese American and Japanese American groups generally in elder care setting. Additionally, family conflict seemed to be more influential than close family relations in predicting service use, "negative family relations had more doctor visits and were marginally more likely to use inpatient services. Respondents who talked to their spouse for medical concerns were less likely to use inpatient services."[22] These findings shed light on future studies and interventions by emphasizing the importance of assessing family dynamics among Asian Americans.

Health insurance coverage, financial challenge (including income, employment status and perceived cost of care) and acculturation (often measured by length of stay in U.S. and English proficiency, recently there was an approach to incorporate mainstream and ethnic media immersion as a new dimension[23]) remained as most common concerns and were reported in 16, 15, 13 studies respectively. Surprisingly policy and legal status was the least reported factor possibly because studies did not reach certain policy-sensitive groups. Other themes are not further discussed here as they empirically supported the previous studies.

Finally a comparative analysis was conducted using studies for Chinese (n=18) and Korean (n=17) Americans respectively (FIGURE 4). There are significant gaps in four themes: Medical resources and information, health insurance, financial challenge, doctor-patient relationship and communication. Due to limited data, Logistics (time/transportation/life instability), social stigma, policy and legal status though only shown as barriers for Chinese Americans, cannot be readily identified as unique challenges for this sub-population. Due to the very sparse exclusive studies among Asian Indians (n=4), Filipino (n=3), Vietnamese (n=3) and Japanese subgroups (n=1), a case report might be prepared separately if further required.

FIGURE 4 – Barriers and Facilitators to Health Care Utilization among Korean American and Chinese American sub-groups (as observed % in the studies)



CONCLUSION

This systematic review of the literature between January 2015 and August 2019 identified 16 key themes (shown in FIGURE 3) of barriers and facilitators to health care utilization among the majority of Asian American population, namely, six largest origin groups including Chinese, Asian Indian, Filipino, Vietnamese, Korean and Japanese Americans. The most commonly reported and concerned factors were: Medical knowledge, attitudes and self-efficacy; Doctor-patient relationship and communication; Language, health literacy and computer literacy; Medical resources and information; Acculturation. The remaining 10 themes, though less frequently reported, were also worth ongoing attention.

Relative importance of some barriers and facilitators were also examined between Chinese and Korean subgroups and major disparities were detected in four domains: Medical resources and information, health insurance, financial challenge, doctor-patient relationship and communication.

The findings from this review also points to the unique need to conduct more research focusing on Asian Indian, Filipino, Japanese and Vietnamese immigrants, especially Vietnamese, the group with the highest rates of Low English Proficiency, less than high school education, unemployment, also less likely to be insured and may lack of outreach due to their legal status.

Implication on intervention: Education programs and campaigns encouraging preventive care service be launched both through American and ethnic media and at multiple level; A call for culturally competent and diverse health care workforce; Explore resources to sustain clinical interpretation services; Continuing efforts on increasing access to health care insurance and controlling cost to improve affordability of care.

LIMITATION

Although 16 themes were identified and ranked to imply a relative importance, this result is very limited in generalizability and only considered to be appropriate for this study. Inclusion large percent of abstracts in review process might lead to misclassification and information inaccuracy which poses a risk for the validity. Also because of this, we are not able to further separate facilitators and barriers due to inadequate details. Finally, there is a possibility of selection bias that may have affected the articles discussed in this paper, but the narrative synthesis method is considered to be appropriate for the purpose of summarizing, drawing insight from the collective body of work when research on a topic is limited.

Reference:

1. Gustavo L, Neil GR, Eileen P. Key facts about Asian Americans, a diverse and growing population. *Pew Research Center*. 2017; https://www.pewresearch.org/fact-tank/2017/09/08/key-facts-about-asian-americans/. Accessed July 27, 2019.
2. Anna B. U.S. Hispanic and Asian populations growing, but for different reasons. *Pew Research Center*. 2014; https://www.pewresearch.org/fact-tank/2014/06/26/u-s-hispanic-and-asian-populations-growing-but-for-different-reasons/. Accessed July 27, 2019.
3. Juliana C, Sunmin L, David HC. Barriers to Health Care among Asian Immigrants in the United States: A Traditional Review. *Journal of Health Care for the Poor and Underserved*. 2013; 24(1):384-403. DOI: 10.1353/hpu.2013.0019.
4. Henry J Kaiser Family Foundation. Health Coverage of Immigrants. https://www.kff.org/disparities-policy/fact-sheet/health-coverage-of-immigrants/. Accessed July 27, 2019.
5. Gustavo L, Neil GR, Eileen P. Key facts about Asian Americans, a diverse and growing population. *Pew Research Center*. 2017; https://www.pewresearch.org/fact-tank/2017/09/08/key-facts-about-asian-americans/. Accessed July 27, 2019.
6. Rakesh K, Anthony C. Income Inequality in the U.S. Is Rising Most Rapidly Among Asians. *Pew Research Center*. 2018; https://www.pewsocialtrends.org/2018/07/12/income-inequality-in-the-u-s-is-rising-most-rapidly-among-asians/. Accessed July 27, 2019.
7. Juliana C, Sunmin L, David HC. Barriers to Health Care among Asian Immigrants in the United States: A Traditional Review. *Journal of Health Care for the Poor and Underserved*. 2013; 24(1):384-403. DOI: 10.1353/hpu.2013.0019.
8. Juliana C, Sunmin L, David HC. Barriers to Health Care among Asian Immigrants in the United States: A Traditional Review. *Journal of Health Care for the Poor and Underserved*. 2013; 24(1):384-403. DOI: 10.1353/hpu.2013.0019.

9. Scott DR, Eunyoung S, Sang N, Sarah JC, Seungyong C. Identifying and intervening on barriers to healthcare access among members of a small Korean community in the southern USA. *Patient Education and Counseling*.2015; 98(4):484-491. DOI: 10.1016/j.pec.2015.01.001.
10. Mary YJ, et al. The Chinese and Korean American immigrant experience: A mixed-methods examination of facilitators and barriers of colorectal cancer screening. *Ethn Health*. 2018; 23(8):847–866. DOI:10.1080/13557858.2017.1296559.
11. Anna MP. *Barriers and facilitators to colorectal cancer screenings among Filipino Americans, age 50 years and older, living in a senior housing unit in Southern California* [dissertation]. San Marcos: California State University; 2018.
12. Kenny K. Cancer beliefs and cancer screening behaviors among low income Chinese immigrants – Implications for culturally relevant interventions. *Journal of Nursing Education and Practice.*2016; 6(10): 130-140. DOI: 10.5430/jnep.v6n10p130.
13. Lei-Shih C, Ming L, Divya T, Lei X, Mei Z. Chinese Americans' Views and Use of Family Health History: A Qualitative Study. *PLoS ONE*. 2016; 11(9): e0162706. DOI: 10.1371/journal.pone.0162706.
14. Xiaoxiao L, Hee-Soon J, Sunmin L. Do Recommendations by Healthcare Providers, Family-members, Friends, and Individual Self-Effi cacy Increase Uptake of Hepatitis B Screening? Results of a Population-Based Study of Asian Americans. *International Journal of MCH and AIDS.*2017; 6(1): 9-18. DOI: 10.21106/ijma.176
15. Long TN, et al. The Use of Traditional Vietnamese Medicine among Vietnamese Immigrants Attending an Urban Community Health Center in the United States. 2016; 22(2): 145-153. DOI: 10.1089/acm.2014.0209.
16. Yuri J, Miyong TK. Limited English Proficiency and Health Service Use in Asian Americans. *Journal of Immigrant and Minority Health.*2019; 21(2):264-270.
17. Jang Y, et al. Oral Health and Dental Care in Older Asian Americans in Central Texas. *J Am Geriatr Soc.*2017; 65(7):1554-1558. DOI:10.1111/jgs.14832.
18. Janice YT, et al. Healthcare Communication Barriers and Self-Rated Health in Older Chinese American Immigrants. *Journal of Community Health*. 2016; 41(4): 741-752.
19. Yun H, Chingyu C, Wonshik C, Eun-Ok I. Issues in internet-based support for chinese-american breast cancer survivors. *Informatics for Health and Social Care.* 2019; DOI: 10.1080/17538157.2019.1624967.
20. Mary YJ, et al. The Chinese and Korean American immigrant experience: A mixed-methods examination of facilitators and barriers of colorectal cancer screening. *Ethn Health*. 2018; 23(8):847–866. DOI:10.1080/13557858.2017.1296559.
21. Winnie MW. *Chinese Immigrants with Non-Insulin-Dependent Diabetes Mellitus: Nutritional Self-Management Approach*. [Capstone: Nova Southeastern University; 2018. Retrieved from NSUWorks, College of Nursing. (54). https://nsuworks.nova.edu/hpd_con_stuetd/54.
22. Guo M, Sabbagh Steinberg N, Dong X, Tiwari A. Is family relations related to health service utilization among older immigrants: Evidence from Chinese elderly in the United States. *Health Soc Care Community*.2019; 27: 215–225. https://doi.org/10.1111/hsc.12642.
23. Jo-Yun QL. *Breaking the Silence: Extending Theory to Address the Underutilization of Mental Health Services among Chinese Immigrants in The United States [Dissertation]*. Columbia: University of South Carolina; 2018. Retrieved from https://scholarcommons.sc.edu/etd/4666.