An Evaluation of the Relationship between Self-Reported Delays in Seeking Medical Care and

Gender

by

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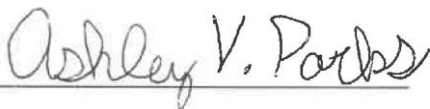

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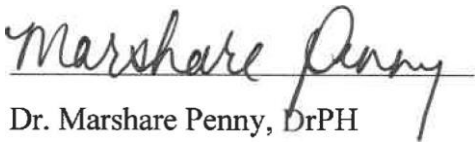This is to certify that the Master's Thesis of

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Abstract

Delay in seeking medical care has been a growing problem across the nation. People delay medical services that are required for their health every day. Delay in care is attributed to diagnosis of chronic conditions that cost millions of dollars to treat each year in the United States. The purpose of this study was to determine a relationship between delay in seeking medical care, gender, health care cost, and health insurance status. The study was conducted using the 2016 California Health Interview Survey (CHIS), which is a cross-sectional study that interviews California residents and evaluates a variety of heath topics. Subjects were drawn using a random sample of all adults ages 18-80 years of age who were non-institutionalized. The 2,072 participants in the study, males (n= 915) and females (n=1,157) all came from different ethnic backgrounds. A Chi-Square Test of Independence was conducted to analyze the relationship between delay in seeking care, gender, health care cost, and health insurance status. The results indicated no significant relationship between gender and delay in seeking care with only a 3% difference between males and females; 10% of males compared to 13% females reported delays in care in the last 12 months ($P > 0.05$). A Chi-Square Test of Independence was also conducted to test the relationship between delay in seeking care and health care cost and health insurance status. A smaller sample ($n = 224$) participants was drawn to only include the subset of the sample eligible: individuals who answered yes or no to delaying care in seeking care. Results indicated no significant relationship between gender and healthcare costs and health insurance status; 39.3% of males stated there was a delay in care due to health care costs, compared to 38.3% females ($P > 0.05$). Gender, health care cost, and health insurance status were not identified as factors that cause people to delay care. Future studies should evaluate other socioeconomic or social determinant factors.

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Review of Literature

Introduction

There are numerous studies that attempt to understand reasons why individuals may delay seeking medical care. Many studies have found that men have lower rates in health care utilization and a higher rate in the delay of seeking care compared to women (Tong, Raynor, & Aslani, 2014). Women tend to demonstrate more interest in their health and seek health care information more actively then men (Tong et al., 2014). Some sources indicate that there are socioeconomic factors that contribute to a decrease in the utilization of medical services and may contribute to delays in seeking medical care for treatment or prevention of acute or chronic conditions, and some sources have been linked these delays to health disparities, social determinants of health, and socioeconomic factors (Healthy People, 2020). Some of the socioeconomic factors that have been identified include the patient's perception of the cost of health care and the patient's lack of medical insurance. Patients may reasonably assume that if they are not experiencing serious symptoms or barriers to normal functioning then they are healthy, and they will not seek medical services for the fear of receiving a bill.

There have been many studies conducted in the attempt to identify reasons for delay in seeking medical care; some were inconclusive due the existence of many different barriers impacting different individuals. According to Healthy People 2020, some of the barriers may include high cost of care, inadequate or no insurance coverage, lack of availability of services (or access to health care), or lack of culturally competent care. Healthy People 2020 states that these barriers lead to unmet health needs, delays in receiving care, poor access to preventive services, financial hardships, and hospitalizations that could have been prevented. Gender was identified as a factor that may be linked to how likely someone will delay care or utilize medical services.

The purpose of this study is to examine the relationship between gender and delay in pursuing needed medical care and to research whether socioeconomic factors, such as cost and insurance coverage, play a role in delay in seeking medical services.

By identifying factors that contribute to delays in seeking medical care, health care professionals can understand how to provide education and resources that will optimize the utilization of health care services. This information could also empower health care professionals to work to find ways to be more proactive in identifying medical problems associated with adverse consequences, so that proper treatment can be provided during planned visits or periods of increased utilization. Delays in seeking medical care have many disadvantages that are important in public health, because these delays can lead to an increase in medical cost and expenditures in the long term which occur due to the decrease in potential benefits of early interventions as a patient may seek medical care too late in the stage of diagnosis (Ghazawy, Seedhom, & Mahfouz, 2015).

According to the Centers for Disease Control ([CDC] 2017), nationally Americans use preventive services at about half of the recommended rate, which can lead to other chronic illnesses. The CDC adds that this is a burden to our economy because health problems impact productivity, resulting in 69 million workers missing work days due to illness each year; the loss of this productivity reduces the economic output by $260 billion per year (CDC, 2017). Delay in seeking medical care and preventive services can also lead to billions of dollars spent on chronic conditions that could be prevented. According to the American Public Health Association (APHA), billions of dollars are spent on heart conditions, cancer, COPD/asthma, diabetes, and hypertension, which are the top five chronic conditions that cost the U.S. nearly $347 billion – 30% of total health spending as of 2010 (APHA, 2010). The CDC (2019) states that 90% of the

nation's $3.3 trillion in annual health care expenditures are for people with chronic and mental health conditions as of 2019, all of which are preventable or treatable conditions. This study seeks to understand if there is a relationship between gender and delay in seeking care and accessing medical services.

Gender

Recent studies reveal that there may be a relationship between gender and delay of seeking medical care dependent on medical illnesses or symptoms experienced. According to Widanapatahirana, Whyle, Chang, Dodoo, Morgan, and Decoster (2016), men's life expectancy remain lower than women's life expectancy, and that is partly due to poor seeking behaviors by men compared to women, due to interplay of factors relating to masculinity and workforce participation that drive men to ignore health issues. Some gender differences in seeking care may be associated with reproductive biology and conditions that may be specific to gender. Women tend to have higher rates in morbidity, health perceptions may be different for men and women, and there is greater likelihood that women will not delay care or prevention services compared to men (Bertakis, 2000).

In a study conducted by Thompson, Anisimowicz, Miedema, Hogg, Wodchis, and Aubrey-Bassler (2016) health seeking behaviors were examined for physical and mental health issues in Canada. The study used a cross-sectional Patient Experiences Survey that was collected from 7,260 participants, both men and women. They also used a tool named the Responsive Care Scale (RCS) to help understand the degree of health care-seeking behavior across 11 health conditions and used multiple regression analysis. The study concluded that there were gender differences in health care seeking behaviors based on patients' self-reports with females reporting more frequent visits to their primary care providers then men (Thompson et al., 2016).

The study also concluded that women who were younger had greater confidence in their ability to prevent health issues, had greater trust in physicians, and reported chronic conditions that were currently being treated by their primary provider compared to older women (Thompson et al., 2016).

A study conducted by Vaidya, Partha, and Karmaker (2012) examined gender differences in preventive care utilization in the United States. The study followed a retrospective, cross-sectional design using the 2008 Medical Expenditure Panel Survey (MEPS) that is conducted by the Agency for Healthcare Research and Quality (AHRQ) of the U.S. Department of Health and Human Services. The study presented 33,066 participants who responded to the survey and met the criteria for the study on various type of preventive measures that included blood pressure check-ups, dental check-ups, obtaining a flu shot, cholesterol screenings, and other preventive measures. A Chi-Square analysis was conducted and revealed that women were more likely to utilize more preventive care services than men in all of the different screenings examined. Utilization rates were significant and found that preventive services ranged from 52% to 57% in women compared to men's 43%-48% (Vaidya et al., 2012).

From this research it seems clear that women are more likely to seek medical care services for medical conditions and preventive care. They were more likely to visit a doctor on a more frequent basis, obtain blood pressure check-ups, dental check-ups, and obtain preventive screenings compared to men. Although the results concluded no significant difference in gender, it did find some factors that are relevant. It found that men sought less preventive care then women in all areas examined, including colonoscopy testing (Vaidya et al., 2012). This study will expand on gender disparities in accessing care and will also examine whether other factors,

such as health care costs and health care insurance, play a major role in the utilization of medical services.

Health Care Costs and Health Care Insurance

Some research alludes to the likelihood of delay in seeking medical care related to health care costs and medical insurance status. Families that lack medical insurance coverage or have high deductibles and out of pocket expenses may associate health care with high costs and delay utilizing services. A study conducted by Taber et al. (2014) examined health care utilization and the reasons people avoid medical care. Data for this study was collected using the 2008 Health Information National Trends Survey, which utilizes a cross-sectional survey. It included 1,369 participants of different ethnicities: Hispanic or Latino, non-Hispanic White, and non-Hispanic black. The key results of the study conducted by Taber and his colleagues identified that many of the participants reported barriers that included high cost (24.1%), no health insurance (8.3%) and time constraints (15.6%). This concluded that some of the participants were not able to afford the high cost of health care and it was partly due to income and lacking insurance. Additionally, some statistics demonstrate that delay in seeking medical care varies among the population, such as the study mentioned by the National Cancer Institute, in which 1369 participants were surveyed, 33.3% of them reported unfavorable evaluation seeking medical care, 12.2% of participants perceived their symptoms as something that would improve over time, and 58.4% reported traditional barriers such as high cost (24.1%), no health insurance (8.3%), and time constraints (15.6%) (Taber et al., 2014).

Another study by Lee, Hasnain-Wynia, and Lau (2011) examined the health disparity of seeing the doctor due to cost in older adults with and without disabilities, and whether the disparity can be related to health and financial variables. This cross-sectional study used the

2006 Behavioral Risk Factor Surveillance System to analyze data for 85,015 participants who were 65 years of age or older and had current health insurance. The data found that older adults with disabilities had a significantly higher chance of delaying care due to cost than older adults without disabilities. This study demonstrated that despite having medical insurance, older adults with disabilities delayed seeing the doctor because of greater economic difficulties and hardships than their counterparts with no disabilities.

Further studies, like the one conducted by Rowas, Rothberg, Johnson, Miller, AlMahmoud, Friderici, Goff, and Lagu (2017), aimed to identify the relationship between insurance type (private vs. public) and delays in care due to cost, stratified by income, in a cross-sectional study. They developed a questionnaire to measure health care utilization and tier reported impact of cost on utilization on health care (Rowas et al., 2017). Researchers for the study recruited English-speaking adults in waiting rooms in emergency departments or outpatient clinics within a large medical organization in Massachusetts and provided them with a survey. A total of 619 participants of the 800 individuals who were approached completed the survey. The survey included anyone over 18 years of age who was English-speaking, despite ethnic background or educational level. The majority of the participants (61.4%) had public insurance, 34.1% had private insurance, and 4.5% were uninsured. The results demonstrated that 13.3% reported delays in seeking care related to cost and the impact of insurance on delay of care differed by income tertile (P=0.2) (Rowas et al., 2017). The study referenced the Affordable Care Act and how it aimed to expand health insurance coverage to those in need to decrease the number of uninsured and aimed to improve population health by removing the financial barriers to health care, yet this study found that the barriers still exist despite of insurance status.

Conclusion

Delay in seeking medical care has been a growing concern for adults living in the United States. Despite efforts to increase access to utilization of care and access to health insurance via the Affordable Care Act, there continues to be barriers for the U.S. population accessing care for prevention and treatment of current medical conditions. This study is aimed at understanding the relationship between gender and delay in seeking medical care and whether health care costs or medical insurance status is a barrier to accessing care. The study will analyze medical seeking behaviors and self-perception on whether a person will delay care because of the cost or whether or not they have insurance.

Purpose of the Study

The purpose of this study was to identify whether there is a relationship between self-reported delays in seeking medical care and delays related to health care costs and/or health insurance and gender. Understanding gender differences and financial barriers across a population could lead to more important insights needed to increase health education, linkage to public programs for financial assistance, and reduced barriers to accessing care. This can also assist future researchers in understanding gender differences in delay in seeking medical care to build systems that will target a specific gender to decrease delays and increase access and utilization of medical services.

Research Questions

In this study there are two research questions:

1. Is there relationship between the rate of self-reported delays in access to medical care and gender?

2. Is there a relationship between the rate of self-reported delays in access to medical care attributed to financial barriers or lack of health insurance and gender?

Hypotheses

H_1: It is hypothesized that there is a relationship between the rate of self-reported delays in seeking medical care and gender. Women are more likely to seek medical care, compared to men.

H_2: It is hypothesized that there is a relationship between delays in seeking medical care that can be attributed to healthcare cost, insurance status, and gender.

<center>**Methods**</center>

Design

This study employed a cross-sectional design and utilizes data from the 2016 California Health Interview Survey (CHIS). The CHIS is one of the largest health surveys in the nation and evaluates a variety of health topics to give a clear picture on health and health care needs for Californians (CHIS, 2016). The CHIS includes a representative sample of various racial and ethnic groups (CHIS, 2016). The CHIS data is crucial for policymakers, researchers, and health experts because it provides credible information on the health of Californians (CHIS, 2016). CHIS is overseen and conducted by the UCLA Center for Health Policy Research and in collaboration with the California Department of Public Health and the California Department of Health Care Services. The CHIS provided a great amount of information over a specific time frame for the data was that was used for this study. Survey data was collected via random-dial and collected on an ongoing basis for the purpose of obtaining information on an array of health topics.

Procedures

Sample Design Objectives. The CHIS used a sample that is designed to meet two objectives: (1) provide estimates for large and medium-sized counties in the state, and for groups of the smallest counties (based on population size) and (2) provide statewide estimates for California's overall population, its major racial and ethnic groups, as well as several racial and ethnic subgroups (CHIS, 2016). The CHIS sample represents the population of California and does not include those who are institutionalized (nursing homes, prisons, etc.). The CHIS 2016 data was collected between January and December 2016 and has specific weights that are included based on the State of California's Department of Finance population estimates and

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projections; it is then adjusted to remove the population living in group quarters who are not eligible to participate in CHIS (CHIS, 2016). Once the weights are applied to the data, the end result only demonstrates California's residential population during that year for the age group (adult, adolescent, or child) (CHIS, 2016).

In order to achieve its goals, the CHIS must achieve the two objectives mentioned previously. The CHIS employed a dual-frame, multi-stage sample design that uses a random-digit-dial (RDD) sample that includes both landline and cellular device telephone numbers (CHIS, 2016). The RDD is designed to obtain adult interviews that include 50% landline and 50% cellular phone numbers. The RDD sample includes 58 counties in the State of California that are grouped in 44 geographic sampling layers, and 14 sub-layers within the two most populated counties in the state, Los Angeles and San Diego (CHIS, 2016). Within each geographic layer, residential numbers are randomly selected within each household, one adult (age 18 and over). In the household where adolescents (ages 12-17) and/or children (under age 12) cohabitate, one adolescent and one child of the randomly selected parent/guardian were randomly selected; the adolescent was interviewed directly, and the adult sufficiently knowledgeable about the child's health completed the child's interview (CHIS, 2016). In order to account for the increasing number of households without landline telephone service, a separate RDD sample was conducted to draw cellular phone numbers. Cell numbers that belonged children under 18 were excluded from the sample.

Data Collection. RDD interviews used six different languages, English, Spanish, Chinese (Mandarin and Cantonese dialects), Vietnamese, Korean, and Tagalog. The languages were selected using the information from the 2010 Census data that determined the languages covered the largest number of Californians. RTI, a non-profit institute that provides research worldwide,

designed the methodology and collected data for the CHIS 2016 under the direct contract with

UCLA Center for Health Policy Research. Interviews used for the survey were conducted using

RTI's computer-assisted telephone interviewing (CATI) system. The average interview time for

an adult was 41 minutes, while the surveys for adolescents and children took about 19 to 22

minutes to complete (CHIS 2016).

Participants

The data used for this study included CHIS participants aged 18 years of age and older

who were current residents in the State of California. The sample size was drawn using G*Power

Software, Version 3.1.92, with a medium effect size of .3, an alpha level of .05, and a power of

80%, which provided a sample size of 180 participants. Due to the large sample size of adult

respondents provided by the 2016 CHIS data, a 10% random sample was extracted from the

original sample. The outputs presented by each random sample of three random samples

conducted were all similar and represent the larger sample. The 10% random sample used for

this analysis was 2,072 respondents, Male (n = 915) and Female (n =1,157) from different ethnic

backgrounds (see Table 1). The original participants were drawn by random selection via

sampling strata based on the 58 counties in California. The 10% random sample was used to

analyze the first research question, "*Is there a relationship between gender and delay in seeking

medical care?*". The second research question was a sub-question that was only completed by

those who answered "yes" to a delay in care, an whether they delayed care due to health care

cost or health insurance status. Participants demonstrated a range of different age groups,

ethnicities, English proficiency, and education attainment levels.

Independent Variable

The study consisted of two research questions. The independent variable for the first and second research question was gender, which was measured by the question, "*Are you male or female*?", with the response options being either male or female. Gender categories of male and female were used throughout the study to evaluate the gender differences in seeking medical care.

Dependent Variables

In this study there were two dependent variables. The dependent variable for the first research question was patients' self-reported delay in seeking medical care in the last 12 months, measured by the following question "*During the past 12 months, did you delay or not get any other medical care you felt you needed-such as seeing a doctor, a specialist, or other health professional*?" with the response options of "Yes" or "No."

The second dependent variable was whether cost or lack of insurance were the reasons why a respondent self-reported a delay in seeking medical care. This was determined by the question: "*Was cost or lack of insurance a reason why you delayed or did not get the care you felt you needed?"* The responses that the participant could provide were "Yes," "No," "Refused," and "Don't Know."

Data Analysis

The first research question was evaluated using a Chi-Square Test of Independence to understand if there is a relationship between gender and delay in seeking medical care. The second question of the study was also assessed using a Chi Square Test of Independence to determine if there is a relationship in delay in seeking care due to health care cost or insurance,

and gender. Descriptive statistics were calculated on gender, utilization of health care, health

care cost and health insurance status.

<center>**Results**</center>

Participant Demographics

      To evaluate the research questions for this study, data was analyzed using the 2016

California Health Interview Survey (CHIS). There was a total of 2,072 respondents used for the

purpose of this study. The demographic characteristics of the participants are shown in Table 1.

Gender was a variable in this study, and from the respondents who were evaluated, 56% were

women and 44% were men. The participants' ages ranged from 18 to 80 years of age.

Participants' self-reported races and ethnicities are also described in Table 1 and consisted of

African American, American Indian, Asian, Other Asian, Chinese, Latino/Hispanic, Japanese,

Korean, Filipino, Vietnamese, White, and Other Race. The majority of the respondents identified

as White (66.1%), Latino/Hispanic (25.7%), and Asian (15.9%).

Gender and Delay in Utilizing Health Care Services

      The study aimed to determine if there was a relationship between gender and delay in

seeking medical care. The variable used to determine if participants experienced a delay in

seeking care was assessed using the following question: "During the past 12 months, did you

delay or not get any other medical care you felt you needed such as seeing a doctor, a specialist,

or other health care professional?" To test the research question and determine if there was a

relationship between the rate of self-reported delays in seeking medical care and gender, a Chi-

Square Test of Independence was conducted. Results indicated that 10% of males compared to

13% of females answered "Yes," they did delay care, while 90% of men compared to 87% of

females answered "No," they did not delay in seeking medical care in the last 12 months. Results

indicated no significant relationship between gender and delay in seeking medical (care $X^2(1) =$

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3.30, $p > .05$; see Table 2). Thus, men were not more likely to delay seeking care compared to women. Women were 3% more likely to delay care compared to men.

Delay in Seeking Health Care Due to Health Care Costs and Medical Insurance Status

To determine if there was a relationship between gender and self-reported delays in seeking medical care that is attributed to healthcare cost and/or insurance status a Chi-Square Test of Independence was performed. The test was used to explore the potential relationship between gender and self-reported delays in seeking care due to health care cost and/or whether an individual was insured. The data was recoded to include only the subset of the sample eligible to answer the question for dependent variable, which was, "*Was cost or lack of insurance a reason why you delayed or did not get the care you felt you needed?*". Only those who answered "Yes" to delay in care, in the first research question were included in the sample for the second research question, (n = 224, male (n = 117) and female (n = 107)). The sample excluded any respondent who was "inapplicable." Results indicated that 39.3% of males answered "Yes" to delaying the care they needed because of cost or health insurance status; 60.7% of males answered "No," it was not a factor. Of the female respondents 38.3% stated "Yes" to delaying the care they needed because of cost or health insurance status; 61.7% answered "No" this was not a factor. Results indicated no significant relationship between gender and delays in seeking care due to health care cost and insurance status ($X^2 (1) = 0.23$, $p > 0.05$; see Table 3). In summary, there is no relationship between delays in seeking care related to health care cost or insurance status and gender.

Discussion

Summary of Major Findings

The purpose of this study was to determine if there was a relationship between gender and self-reported delays in seeking medical care. It was also intended to examine a potential relationship between gender and delaying care due to health care cost and/or insurance status. The study examined a population of 2,072 respondents who came from different ethnic backgrounds and age groups ranging from 18 to 80+ years of age.

Various studies reviewed illustrate a relationship between gender and delays in seeking care, but this study did not demonstrate the same results. These results are important to public health because it provides clarity that assumptions are not always correct and that there may be other underlying factors to delays in care. The findings of this study suggest that there may be other social determinants of health (SDOH) that are factors in delay in seeking medical care and that it may not be related to only gender or health care cost. The CDC classify SDOH as conditions in the places where people live, learn, work, and play that affect a wide range of risks and outcomes. Furthermore, the CDC adds that SDOH can affect the way people access health care, especially individuals in communities with poor SDOH who may have unstable housing, low income, unsafe neighborhoods, or substandard education (CDC, 2018). Further research needs to be conducted to evaluate the inconsistency of this study in comparison to current literature that dictates the contrary. Future studies should continue to explore gender differences in seeking care because the information might be helpful in developing new tactics and development of new policies that are aimed at improving the health status of individuals based on gender.

Results should be further examined to understand the shift of gender roles in our society and a possible linkage of women delaying care due to an increased participation in the labor force, prioritizing their education or career, and therefore delaying motherhood until later in life. This can be attributed to women having time constraints and possibly delaying preventive care and medical services. Women who work, compared to women who don't, face less physical and mental health problems (Mayor, E, 2015). Contrary to this, some women still have other gender roles that need to be further explored, especially when delay in care is related to time constraints due to caregiving for a family member or loved one. Many women still bear this role and will delay care due to not having enough time to care for themselves while trying to care for others.

Study Limitations

The research in this study has various limitations that need further exploration. First, this study only sampled data collected through the 2016 CHIS data, which is limited to California residents. The study may also be at risk for Type II error due to the sample size and the results of the second research question, where most of the respondents were categorized as "inapplicable" and did not actually provide a response to the question. Given the smaller sample size that needed to be extracted for this specific research question, it may have underpowered the results.

The study also uses secondary data that may be outdated since it is now 2019 and this data was conducted during 2016. Additionally, most of the CHIS data is self-reported data that cannot be interpreted into objective information because of self-perception, and the data collected was through phone calls, which can be a limited way to sample. For instance, sometimes the calls can be perceived as telemarketing calls and negatively received by the respondents. Also, questions need to be very precise and short so the respondent can understand

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the questions. Lastly, timing is crucial; the length of the interview and the time of day will determine how many interactions will occur and how many questions will be answered.

Another limitation that should be questioned is whether all participants understood the questions, since many of the participants come from different ethnic backgrounds, have different education levels (see Figure 1, Table 4), and have different levels of English proficiency (see Figure 2, Table 5). The CHIS questionnaire is offered in six different languages to 11 groups of different ethnicity and dialects, which may be subject to some form of interpretation and understanding.

Other limitations observed in the data is non-response errors by respondents. Some of the answers provided were noted in categories such as "Refused" or "Don't Know." Some respondents skipped questions or were defined as "inapplicable" in the survey (CHIS, 2016). This results in insufficient information or partial data that cannot constitute consistent findings when analyzing data. The study has various limitations that have impacted the results, so future research should look at these limitations and further expand in the areas mentioned to ensure minimal error.

Public Health Implications

The findings of this study convey that there is no relationship between gender and how individuals delay seeking medical care or services, including gender and health care cost or insurance status. The results from this study can help many health care professionals in understanding other SDOH or health care disparities that may be barriers to individuals getting the care that they need, so that they can develop strategies or programs that will assist patients in breaking down those barriers to decrease delays in medical care. Future studies exploring relationships in gender and delay of seeking care should dive further into other factors, such as

ethnicity, religion, cultural background, and other social determinants that may be affecting how males and females access care.

Understanding that there is no relationship between gender and delay in seeking care proves that there may be other contributing factors aside from gender, cost, or health insurance that need to be further explored. More data needs to be analyzed to understand possible confounding factors that may be affecting utilization of care or delay of care among genders. This can provide linkage to community resources, better insurance plans, and education on prevention. This future exploration should also include demographics of specific areas to understand different populations and how they access care to eliminate barriers that prohibit individuals from seeking preventive and ongoing treatment. Collecting this data and analyzing it will help health care professionals identify health inequalities and disparities that exist within that population.

This research can also help identify proper scripting for health care professionals to use for someone that is at risk of delaying care. It can also help create educational materials that are geared at engaging both men and women in receiving the care they need and in a timely fashion. The education materials can be used in many areas of clinical education that include secondary and tertiary care and specialties. For instance, it can help health care professionals implement educational materials that are equitable to either gender and provide similar access to care and services. This can also help grant writers and fundraising departments zone in on social determinants of health that may factors in delay of care by individuals rather than investing time looking at relationships with gender and health care costs. This further research can also help to better public health policy in the long run to ensure patients are accessing care and obtaining

services that they need. Empowering health care professionals to provide proper education can

go a long way and save many lives.

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Appendix

Tables

Table 1

Demographics Details for CHIS Participants (n = 2072)

	N	%
Gender		
Male	915	44.2
Female	1157	55.8
Age		
18 to 29	285	13.8
30 to 39	224	10.8
40 to 49	222	10.7
50 to 59	358	17.3
60 to 69	480	23.2
70 to 79	319	15.4
80 and Up	184	8.9
Ethnicity		
African American	128	6.2
American Indian	73	3.5
Asian	329	15.9
Asian Other (Excludes Japanese)	96	4.6
Chinese	123	5.9
Latino Hispanic	532	25.7
Japanese	55	2.7
Korean	35	1.7
Other Race	226	10.9
Filipino	27	1.3
Vietnamese	35	1.7
White	1369	66.1

Note: n = sample size; % = percentage. Data Source: 2016 California Health Interview Survey

Table 2

Bivarate Association between Gender and Delay in Seeking Care

Gender	Yes-Delayed Care *n* (%)	No-Delayed Care *n* (%)	Adjusted OR 95% CI
Male	117 (10.1)	1040 (89.9)	.85
Female	107 (11.7)	808 (88.3)	(0.6, 1.1)

OR=Odds Ratio; CI = Confidence Interval. Chi-Square Test of Independence to determine relationship between Gender and Delay in Seeking Medical Care. * *p*= .250

Table 3

Bivarate Association between Delay in Seeking Care and Health Care Cost and Insurance Status

Gender	Yes-Delayed Care n (%)	No-Delayed Care n (%)	Adjusted OR 95% CI
Male	46 (39.3)	71 (60.7)	1.04
Female	41 (38.3)	66 (61.7)	(0.6, 1.8)

OR=Odds Ratio; CI = Confidence Interval. Chi-Square Test of Independence to determine relationship between Delay in Seeking Medical Care and Health Care Cost and Insurance Status. * *p*= .88

Table 4

Education Attainment for CHIS Participants (*n* = 2072)

	n	*%*
Education Level		
No Formal Education or Grade 1-8	142	6.9
Grade 9-11	92	4.4
Grade 12/H.S. Diploma	475	22.9
Some College	316	15.3
Vocational School	46	2.2
AA or AS Degree	151	7.3
BA or BS Degree/Some Grad School	503	24.3
MA or MS Degree	263	12.7
Ph.D. or Equivalent	84	4.1
Total	2072	100

Note: n = sample size; % = percentage. Data Source: 2016 California Health Interview Survey
Figure 2

Table 5

Level of English Proficiency: General (n = 2072)

	n	%
English Proficiency		
Inapplicable	1291	62.3
Very Well	291	14.0
Well	219	10.6
Not well	156	7.5
Not at All	115	5.6
Total	2072	100
BA or BS Degree/Some Grad School	503	24.3

Note: n = sample size; % = percentage. Data Source: 2016 California Health Interview Survey