

2018

Korean Immigrant Women's Perceptions of Cervical Cancer Screening in Hawaii

Eurina Yujin Cha
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

 Part of the [Nursing Commons](#), [Public Health Education and Promotion Commons](#), and the [Women's Studies Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Health Sciences

This is to certify that the doctoral dissertation by

Eurina Yujin Cha

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Paige Wermuth, Committee Chairperson, Public Health Faculty

Dr. Frederic Grant, Committee Member, Public Health Faculty

Dr. Kim Sanders, University Reviewer, Public Health Faculty

Chief Academic Officer

Eric Riedel, Ph.D.

Walden University

2018

Abstract

Korean Immigrant Women's Perceptions of Cervical Cancer Screening in Hawaii

by

Eurina Yujin Cha

MSN, Walden University, 2008

BSN, Hawaii Pacific University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

November 2018

Abstract

Minority immigrant women are more likely to be diagnosed with and suffer from cervical cancer compared to other minority women in the United States. The purpose of this qualitative ethnographic study was to explore cultural health perceptions, behaviors, and barriers to cervical cancer prevention among Korean immigrant women (KIW) in Hawaii. The health belief model and the social ecological model were used to guide the study. Data were collected using individual structured interviews with 20 KIW ages 21 to 65 who are first-generation KIW immigrant to Hawaii. Data were coded and analyzed to identify themes. Findings revealed that participants (a) prefer a female gynecologist and Korean-speaking physicians; (b) are highly motivated to maintain physical health, including prevention; (c) prefer culturally appropriate community-based cancer prevention programs; and (d) expect innovative health maintenance approaches. Findings may be used by health care providers to identify culturally specific health needs of KIW related to cervical cancer screening, and to implement appropriate preventive measures for KIW to reduce cancer death.

Korean Immigrant Women's Perceptions of Cervical Cancer Screening in Hawaii

by

Eurina Yujin Cha

MSN, Walden University, 2008

BSN, Hawaii Pacific University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

Walden University

November 2018

Dedication

I dedicate this project to my beloved mother, Jeong Ja Park, who always trusted me and taught me to be strong, and to the best sons, Leon Sheen and Young-Woong Kee, who give me all the reasons to be happy and humble. I love you “*Saranghae*.” Most of all, I give all my thanks to God for raising me up high whenever I struggled and felt like giving up.

Acknowledgments

I am thankful to God for holding me tight through this long journey of success and completion of the doctoral program. Thanks to my mom and my sons who provided love and support through this long journey of my professional life. Most of all, I thank Dr. Paige Wermuth, the chair, and Dr. Fredric Grant, the committee member, who have been supported me and encouraged me. I also thank and acknowledge the support from Makana Craig and my colleagues. Writing and completion of the dissertation was one of the most painful and challenging commitments I have done. I, however, felt that this was a necessary step to move forward to grow as a nurse educator and nurse researcher who is passionate about minority health disparity and nursing education for diverse students.

Thank you. Mahalo.

Table of Contents

List of Tables	iv
List of Figures	v
Chapter 1: Introduction to the Study.....	1
Background.....	1
Problem Statement	3
Purpose of the Study	5
Research Questions	6
Theoretical Framework.....	7
Health Belief Model.....	7
Social Ecological Model	10
Nature of the Study	13
Definitions.....	14
Assumptions.....	15
Scope and Delimitations	15
Limitations	16
Significance.....	16
Summary	17
Chapter 2: Literature Review	19
Literature Search Strategy.....	22
Theoretical Foundation	23
Health Belief Model.....	23

Social Ecological Model	30
Methodologies Used in Previous Studies	32
Literature Review Related to Key Concepts.....	34
Etiology of Cervical Cancer.....	35
Prevalence and Mortality Rates for Cervical Cancer	36
Prevalence in Hawaii	37
Guidelines for Cervical Screening	37
HPV Vaccination as a Prevention Option.....	40
Cervical Cancer Screening to KIW.....	41
Barriers to Cervical Cancer Screening.....	42
Summary and Conclusions	43
Chapter 3: Research Method.....	45
Research Design and Rationale	45
Source of Information and Data.....	46
Role of the Researcher	48
Methodology	49
Issues of Trustworthiness.....	51
Summary	52
Chapter 4: Results	53
Pilot Study.....	54
Setting	56
Demographics	58

Data Collection	62
Data Analysis	64
Research Question 1: Health Perception.....	65
Research Question 2: Health Behaviors	71
Barriers and Challenges	76
Evidence of Trustworthiness.....	80
Results.....	82
Summary	83
Chapter 5: Discussion, Conclusions, and Recommendations	85
Interpretation of the Findings.....	86
Limitations of the Study.....	89
Recommendations.....	91
Implications.....	92
Conclusion	93
References.....	95
Appendix A: Interview Recruitment Flyer (English)	129
Appendix B: Interview Recruitment Flyer (Korean)	130
Appendix C: Data Collection Tool (English)	131
Appendix D: Data Collection Tool (Korean).....	138

List of Tables

Table 1. Top Ten States: Korean Americans per 100,000 Residents	1
Table 2. HBM to Cervical Cancer Screening and Prevention Measures	9
Table 3. Description of SEM Levels Related to Cervical Cancer Screening and Preventive Measures	12
Table 4. Summary of Pap Smear Recommendations	38
Table 5. Demographic Characteristics	59
Table 6. Summary of Health Perceptions	65
Table 7. Summary of Health Behaviors	72
Table 8. Summary of Health Barriers and Challenges	77

List of Figures

Figure 1. Health belief model for health behavior change.....	8
Figure 2. Social ecological model for health behavior change	12
Figure 3. The position of cervical cancer.....	36
Figure 4. Age group of participants	61
Figure 5. Years living in the United States and Hawaii.....	62
Figure 6. Self-reported current health status	68
Figure 7. Recent visit to physician and gynecologist	74
Figure 8. Preference of physician	76

Chapter 1: Introduction to the Study

Background

Korean American Immigrants (KAIs) are one of the most rapidly growing ethnic minority populations in the United States. In 2014, they were the fifth largest Asian American community (1.8 million) after Chinese except Taiwanese (4.5 million), Asian Indians (3.8 million), Filipinos (3.8 million), and Vietnamese (2.0 million) (U.S. Census Bureau, 2016). In 2010, there were 1,706,822 KAIs living in the United States (U.S. Census Bureau, 2012). Of that population, 505,225 KAIs were in California, and 153,609 were in New York (U.S. Census Bureau, 2012).

Although the total number of KAIs living in Hawaii (48,699) may not appear significant compared to the numbers in California and New York, the population per 100,000 is higher than in any other state (see Table 1). In Hawaii, the Korean American population per 100,000 residents is 3,580, compared to 1,356 in California and 1,190 in New York (East-West Center, 2012).

Table 1

Top Ten States: Korean Americans per 100,000 Residents (2010 Census Data)

State	Population (per 100,000)
Hawaii	3,580
California	1,356
Washington	1,190
New Jersey	1,141
Virginia	1,025
Maryland	954
Alaska	921
New York	793
Nevada	686
Georgia	628

Recent census data confirms that Asian alone, or in combination with other Asian populations, represented approximately 56.1% of the total population in the State of Hawaii (U.S. Census, 2012). The State of Hawaii has a history of attracting immigrants, especially from Asian countries, which explains why it has the largest portion of multiracial ethnicity groups. Hawaii's multiracial population accounts for approximately 24% of its total residents, followed by Alaska (8%) and Oklahoma (7%).

Over a century ago, KAIs like many other Asian immigrants in Hawaii were low-wage laborers and low-skilled farm workers who were targets for social and health discrimination. When compared with other U.S. groups, however, KAIs have excelled in a number of social benchmarks. By the age of 25, 53% of KAIs hold a college degree, compared to 29% of foreign-born Americans and 31% of the native-born Americans (Zong & Batalova, 2017). The significant difference is also reflected in median annual household income levels, where KAIs make an average of \$66,000 per year compared to \$49,800 for other American adults (Institute of International Education, 2016). In 2015, KAIs were less likely to be uninsured than the other immigrant populations; only 13% of KAIs were uninsured, compared to 22% of overall immigrant populations. Of the insured, only 25% of KAIs are enrolled in public coverage, as compared to 36% of Native Americans (Zong & Batalova, 2017).

Despite health insurance coverage and health care services enabling Americans to live healthier and longer lives, most KAIs are unable to take advantage of medical privileges due to cultural and linguistic barriers, limited access to high quality health

services, and providers' limited knowledge of KAI patients and their culture (Kim & Keefe, 2010). Sherman, Wang, Carreon, and Devesa (2005) claimed the cervical cancer rate among American women has dropped dramatically due to increased availability of cancer screening tests for early detection over the last five decades. Despite these efforts, cervical cancer is still the leading cause of death among many Asian Americans, including KAIs (Nighiem, Davies, Chan, Mulla, & Cantor, 2016). Immigrants are generally the most vulnerable population in the context of health care access and public health services (Derose et al., 2007).

Problem Statement

Advanced medical treatments and innovative health technologies have improved the quality and longevity of American life in the last few decades. The limited research on health perceptions and health behaviors among minority populations, however, continues to limit knowledge regarding effective interventions addressing health disparities (Centers for Disease Control and Prevention [CDC], 2011). To enact national health strategies aimed at improving health equity and equality for minority populations, the U.S. Department of Health and Human Services (2011) introduced an action plan to reduce racial health disparities. The State of Hawaii Department of Health (SOH DOH, 2013) also developed a variety of health promotions and wellness education programs with the goal of improving the health status of Hawaii residents, including minority populations.

The cervical cancer prevention program in the United States is a product of national, state, and local health efforts to improve cancer mortality rates. Cervical cancer

is the second most common type of preventable cancer among women globally (Ott et al., 2011). Cervical cancer is the seventh most common cancer and the third leading cause of cancer related deaths among Korean women in Korea (Kweon, 2018). The mortality rate among Korean immigrant women diagnosed with cervical cancer was significant that age-specific incidence rate of cervical cancer showed a decreasing trend in all age groups except those younger than 30 years (Son & Yun, 2016). The increase of cancer-related deaths among Asian Americans may be associated with the fact that cancer screening rates are significantly lower in this ethnic group than in other American populations (Hirth et al., 2016). Studies on cancer screening barriers among minority females showed lack of accurate knowledge about the causes of cervical cancer, stigma, language barrier, fear, and embarrassment (Fang & Baker, 2013). In a study of cultural factors associated with cervical cancer screening among Korean American women, Lee (2015) found that a lack of family support, embarrassment, preventive health orientation, fatalism, and years of acculturation influenced screening rates.

The Hawaii Comprehensive Cancer Control Coalition has been developing the state's first Comprehensive Cancer Control Plan for residents in Hawaii. The coalition suggested a 5-year strategic plan to reduce cancer death rates and improve individual, family, and community health (SOH DOH, 2013). Understanding health perceptions, health behaviors, and health barriers of a particular ethnic group is essential to develop effective local, state, and national strategies for improving health equity and equality of minority populations, particularly underserved Asian immigrants such as Koreans (S. Y. Choi, 2013).

To improve cancer-screening rates, the Hawaii Breast and Cervical Cancer Control Program offers free mammograms and pap smear tests to uninsured or underinsured females. Early detection and early intervention increase cancer survival rates (Hiom, 2015). The cancer screening rate, however, continues to be disproportionately lower result among KAI in Hawaii (S. Y. Choi, 2013). This signals the importance of exploring cultural factors such as health beliefs and health values, which might impact health-related decisions and outcomes. Health literacy on the Human Papilloma Virus (HPV) vaccination among young Korean Americans must also be addressed through the lens of sociocultural factors to understand how these factors influence a KAI who is deciding whether to obtain the vaccination or to complete the series of vaccination shots (H. Y. Lee et al., 2015). To establish culturally effective and appropriate health interventions for cervical cancer screening, accurate health perceptions, health behaviors, and barriers to preventive care practices among Korean immigrant women in Hawaii need to be explored.

Purpose of the Study

This study addressed the health perceptions, behaviors, and barriers to cervical cancer screening among Korean immigrant women between the ages of 21 and 65. Exploring specific cultural health perceptions and health expectations through cancer preventive care is essential to assessing the health status of minority populations (Wallington et al., 2016). National health initiatives continue to focus on reducing cancer mortality and improving health disparities of minority populations, including Asian Americans in the United States. Healthy People 2020 (2015) suggested that improving

health care access by offering comprehensive quality health care services can diminish current and potential health disparities among minority populations. The State of Hawaii Department of Health Office of Health Equity (SOH DOH OHE, 2015) also announced its health goals for promoting the health and self-sufficiency of vulnerable minorities.

To better support local and national efforts to reduce the number of deaths caused by cancer, it is important to identify the distinct characteristics of risk factors, including physical, social, and cultural aspects among Koreans (S. K. Kim & Chu, 2015). This qualitative study was conducted to bridge the gap in current literature regarding health perceptions, behaviors, and barriers Korean American women encounter in receiving cervical cancer screening. The goal of this study was to identify and encourage culturally sensitive approaches to cervical cancer prevention, among Korean immigrant women in Hawaii.

Research Questions

Cervical cancer prevention among Korean immigrant women (KIW) is a significant target for population-focused public health efforts. The following research questions were developed to explore the health perceptions, behaviors, and barriers to cervical cancer screening and prevention among KIW in Hawaii:

1. What are the health perceptions regarding cervical cancer screening, follow-up health management, and prevention measures among KIW in Hawaii?
2. What are the health behaviors related to routine cervical cancer screening, follow-up health management, and prevention measure practices among KIW in Hawaii?

3. What are the barriers and challenges to cervical cancer screening, follow-up health management, and prevention measures among KIW in Hawaii?

Theoretical Framework

Health Belief Model

This study was based on two theories and their key constructs of health. First, the health belief model (HBM) was applied to explore the individual health perceptions and health behaviors regarding cervical cancer screening among the study population. The HBM was developed by social psychologists in the 1950s to determine the reasons why people fail to adopt health promotion and disease prevention strategies, such as screening tests and early detection methods (Townsend et al., 2016). The HBM is widely considered to be one of the best frameworks for characterizing health behaviors relative to current health care practices (Yeo, Fang, Thilagamangai, Koh, & Shorey, 2018). The HBM indicates that a person's value in individual health will predict his or her health behaviors, specifically regarding his or her likelihood to make health decisions (Heydari & Noroozi, 2015).

The HBM was considered as a framework for predicting individual cervical cancer screening behaviors including ongoing pap smear tests and HPV vaccinations in the following six dimensions: (a) perceived susceptibility to health threats from cervical cancer; (b) perceived severity of the health threat caused by cervical cancer and cancer complications; (c) perceived benefits of performing the recommended cancer screening, follow-up health management, and prevention measures; (d) perceived barriers to performing the recommended screening tests, follow-up health management, and

prevention measures; (e) cue to action, with health decision to accept screening test, follow-up health management, and prevention measures to change individual health behaviors; and (f) self-efficacy to engage in ongoing cancer screening tests as recommended by health care providers, including follow-up health management, and further prevention measures, as shown in Figure 1 and Table 2. The KIW's health behaviors relating to cervical cancer screening practices were based on their perceived susceptibility, perceived severity, perceived benefits, and perceived barriers to cervical cancer screening and prevention strategies such as ongoing Pap smear tests and the HPV vaccination as recommended.

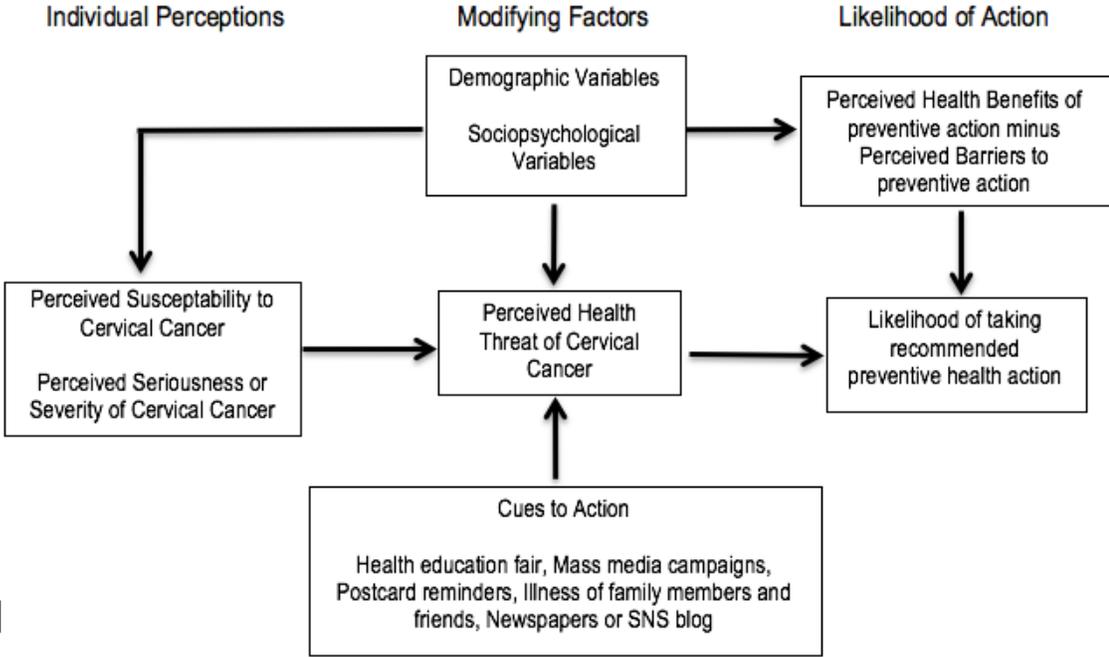


Figure 1. Health belief model for health behavior change

Table 2

HBM to Cervical Cancer Screening and Prevention Measures

Six Dimensions	Cervical Cancer Screening	Prevention Measures
Perceived Susceptibility	Individual KIW believes they are vulnerable to cervical cancer	Individual KIW believes they are at-risk of contracting cervical cancer if they are not engaged in prevention measures such as routine pap smears and HPV vaccination
Perceived Severity	Individual KIW believes the consequences of having cervical cancer and cancer complications without knowledge of screening method for early detection	Individual KIW understands the seriousness of cervical cancer and is also aware of the minor discomfort caused by the pap smear test and HPV vaccine injection
Perceived Benefit	Individual KIW believes cancer screening is for early detection of cervical cancer which can be treatable	Individual KIW believes routine prevention measures for early detection of cervical cancer will improve cancer survival rate and prognosis
Perceived Barriers	Individual KIW identifies personal barriers to get cancer screening and continuous follow-ups	Individual KIW identifies personal barriers to engaging in routine pap smear tests and HPV vaccination series and understand potential side effects
Cue to Action	Individual KIW receives routine cues and reminders for cancer screening appointments	Individual KIW receives cues and reminders for on-going pap smear schedules and HPV vaccination schedules
Self-Efficacy	Individual KIW receives educational information regarding cancer screening and engages in the screening schedule annually	Individual KIW receives educational information regarding pap smear tests and HPV vaccination information and engages in routine pap smear tests annually and HPV vaccination series as directed

Even though HBM may have limits to explaining non-health-related behaviors such as social acceptability, environmental factors, or economic factors, it provided a foundation for understanding the relationship between personal health perceptions and cervical cancer screening behaviors among KIW in Hawaii. Cervical cancer screening and preventive measures, such as the Pap smear test and HPV vaccination, are highly effective but underutilized among Korean Americans (Gulten, Aygul, & Cengiz Han, 2011). Exploring how these women perceived cervical cancer detection and preventive measures based on HBM, including both cultural and social factors, explained the reason behind current participation rates in cervical cancer screening and suggested ethnically appropriate approaches to improving cervical cancer screening rates.

Social Ecological Model

The social ecological model (SEM) was used to understand internal and external factors affecting KIW's health behaviors regarding cervical cancer screening and preventive measures. The SEM is a theory-based framework for understanding the levels of a social system and interactive effects of personal and environmental factors that determine behaviors, and for identifying behavioral and organizational leverage points for health promotion and wellness such as cervical cancer prevention (Maar et al., 2016). The SEM provided recommendations for developing effective health strategies based on successful programs that supported KIW within their unique social environments. Although the HBM was used to interpret KIW's health perceptions, the SEM emphasized multiple levels of influence such as interpersonal, organizational, community, and public

policy. The SEM suggested that health behaviors of KIW were shaped by individual experiences and also by external and social factors.

According to Senore (2012), cervical cancer screening for at-risk female populations should be suggested as an effective health promotion strategy through a combination of models (individual, social, and environmental) to maximize the health benefits. The approach to changing health behaviors has traditionally focused solely on individual factors such as an individual's health knowledge, health beliefs, and health habits (Menard et al., 2010). The SEM offers a broader approach by including not only individual factors but also other levels of influence. Health and public health professionals agree that multifactor and multilevel approaches lead to effective behavioral modification in terms of cervical cancer screening and prevention measures (Kumar et al., 2012).

Based on the SEM, health behaviors of KIW were shaped through multiple levels of health determinants. The CDC (2017) adapted the SEM to recommend a health and prevention promotion strategy through the National Breast and Cervical Cancer Early Detection Program. The multilevel approach to understanding the health perceptions and health behaviors of KIW may help to develop appropriate health interventions to promote cervical cancer screening and prevention measures. KIW are family oriented and are often influenced by their individual level of self-efficacy, interpersonal social supports including family members and friends, and community perceptions of health and health expectations (Min et al., 2015), as shown in Figure 2 and Table 3.

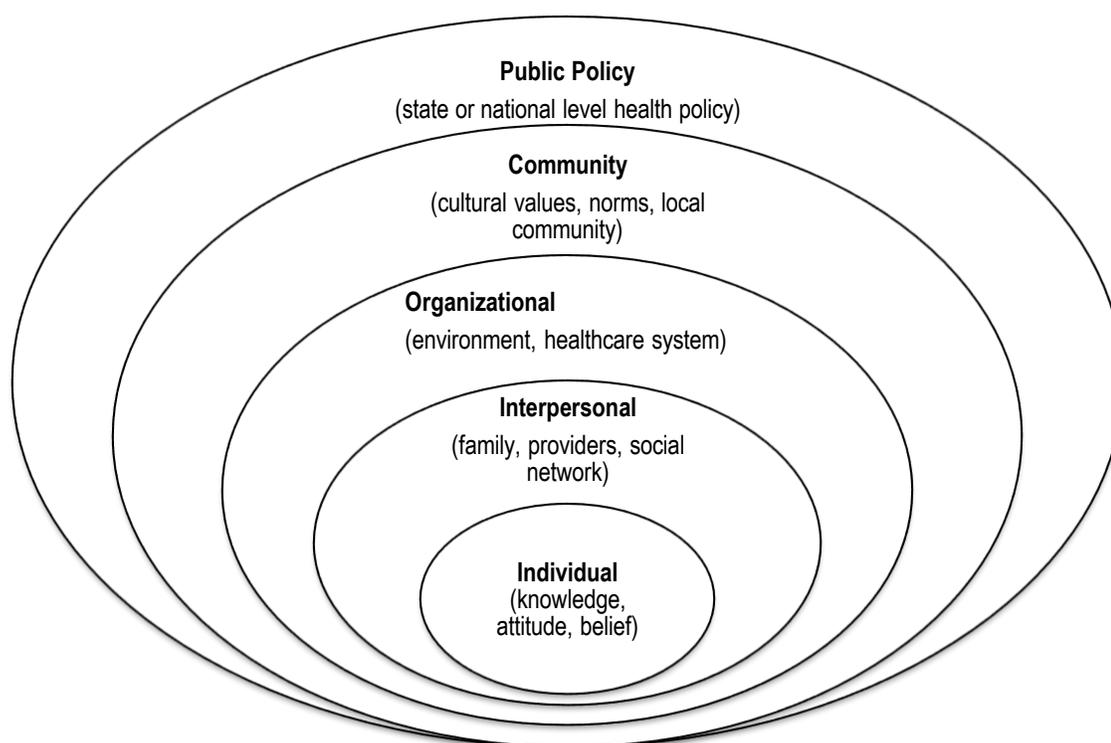


Figure 2 Social ecological model for health behavior change

Table 3

Description of SEM Levels Related to Cervical Cancer Screening and Preventive measures

Key Constructs	Cervical Cancer Screening	Prevention Measures
Public Policy	KIW interprets current health policy and engages with local, state, and federal levels of health promotion strategy of the cervical cancer screening	KIW collaborates and communicates policy decisions regarding cervical cancer prevention measures including routine pap smear test and HPV vaccination with other KIW
Community	KIW collaborates to promote cervical cancer screening and expands community resources	KIW engages public awareness and educational campaign of cervical cancer prevention

Organizational	KIW utilizes screening health reminder systems from websites and local health departments	KIW adopts preventive care measures through websites and local health departments
Interpersonal	Family members and friends affected by cervical cancer. Received screening recommendation from health providers	Family members and friends share information about cervical cancer prevention measures. Received reminders about pap smear test and HPV vaccination schedule
Individual	Individual KIW's knowledge, attitude, and beliefs about cervical cancer risks and benefits of screening	Individual KIW's knowledge of and access to affordable cervical cancer preventive methods such as pap smear test and HPV vaccination

Nature of the Study

A qualitative study with an ethnographic approach was used to explore the health perceptions of cervical cancer screening and to identify health behaviors regarding preventive care approaches among KIW in Hawaii. An ethnographic design is used to explore the meaning of a phenomenon through in-depth exploration of cultural dimensions (Creswell, 2009). I examined meaningful health concepts that may facilitate understanding and comprehension of the personal experiences of KIW.

Ethnography in qualitative research provides a rich and detailed description of everyday life (Creswell, 2009). Ethnographic researchers aim for cultural interpretation and go beyond details of experience through cultural construction (Goberman-Hill, 2015). An ethnographic understanding of KIW's health perceptions and behaviors may be used to develop a foundational understanding of their health behaviors. In this study, ethnographic interview methods with open-ended questions enabled the collection of rich

data to capture internal connections and insights of participants. The physical, social, and cultural contexts of KIW were explored to prompt social and cultural change related to cervical cancer prevention among KIW in Hawaii.

Definitions

Awareness: Knowledge or perception of a situation or fact (American Cancer Society, 2017).

Cervical cancer: Squamous cell carcinoma and adenocarcinoma on the cervix area (American Cancer Society, 2017).

Cervical cancer screening: Early detection of cervical cancer through tests such as the Pap smear test (CDC, 2017).

Health outcomes: A change in the health status of an individual, family, or population that is influenced by the planned intervention (J. Y. Choi, 2013).

Human papillomavirus (HPV) vaccination: The vaccination to prevent HPV infection. The CDC (2016) recommended the HPV vaccine for preteen boys and girls as young as 11 or 12.

Pap smear test: The Pap smear test or Pap test is recommended for women between 21 and 65 years of age. Physicians or clinicians use a metal or plastic instrument to widen the vagina to collect a few sample cells and mucus from the cervix and the area around it, looking for precancerous cells on the cervix (American Cancer Society, 2017).

Perceived barriers: Belief that a particular health decision will have negative results (Gulten, Aygul, & Cengiz Han, 2011).

Perceived benefits: Perception of the positive consequences that are caused by a specific action (Gulten, Aygul, & Cengiz Han, 2011).

Perceived severity: Belief that a condition will have life-threatening consequences (Gulten, Aygul, & Cengiz Han, 2011).

Perceived susceptibility: Belief in the vulnerability to a disease or condition (Gulten, Aygul, & Cengiz Han, 2011).

Self-efficacy: Belief that a person has the power to perform what is required to achieve an outcome (Gulten, Aygul, & Cengiz Han, 2011).

Assumptions

The study was based on several assumptions. I assumed that interview participants understood the study purpose and interview questions and were able to provide their responses on a standardized research questionnaire. I assumed that interview participants could read, speak, and write in English. The interview, however, was conducted in Korean. I also assumed that my Korean language proficiency would not affect the results of the interviews and questionnaire. Finally, I assumed that using Korean to interview KIW would be the most effective to assess study participants' health perceptions and health behaviors regarding cervical cancer screening.

Scope and Delimitations

The study addressed the research questions and included only ethnic minority immigrant women who were of recommended age for routine Pap smear test and a series of HPV vaccination injections according to CDC (2016) recommendations. I included the study objectives, research questions, and theoretical objectives that I have adopted for

KIW of the study. I clearly informed and explained the purpose of the study to the participants that I would like to improve the cervical cancer screening rate among KIW in Hawaii. I also explained that the study findings would be utilized by health care professionals who develop the cancer preventive strategy for Korean Americans. Interpretation of the interview data based on HBM and SEM through qualitative study design delimited the study findings.

Limitations

The study participants included a sample of KIW living in the state of Hawaii who were recommended to receive routine cervical cancer screening and prevention measures. The size of the subject sample was limited; only a small number of KIW volunteered to be participate. The convenience sampling method was used to recruit participants due to time and financial constraints; therefore, the study results may not be generalized to the larger Korean American population in the United States. Even though the sample was relatively small, the in-depth insight of individual KIW's experience may provide valuable data for studying hidden or hard-to-access populations in Hawaii. The result of this study may also provide rich data based on the qualitative analysis of the relevant themes of KIW's health perceptions, health behaviors, and barriers regarding cervical cancer screening and prevention measures.

Significance

The study included multilevel constructs that were effective strategies for influencing health behavior change regarding cervical cancer screening and prevention measures. Promoting awareness of cervical cancer screening and cervical cancer

prevention through the HPV vaccination series may positively impact the health outcomes of KIW in Hawaii. Another outcome of the study was the influence it could have on policymakers and stakeholders in understanding cultural health perceptions and barriers for the KIW population when developing appropriate population-based cervical cancer prevention services. The study findings could also provide greater understanding among health care professionals and providers for population-specific health approaches to prevent and manage cervical cancer for KIW. This study may also show the importance of collaborating with Korean American community leaders to develop multilevel interventions aimed at KIW health promotion.

Cervical cancer screening, such as the Pap smear test and the series of HPV vaccinations, are accepted and proven as effective preventive measures for detecting and preventing the early onset of cervical cancer and preventable cancer complications. Furthermore, these measures can motivate high-risk women to take ownership in maintaining their health. I investigated and analyzed specific health perceptions and health behaviors of KIW based on cultural beliefs and norms. Understanding the health challenges and barriers of KIW may help in developing population-specific health promotion approaches to increase cervical cancer screening and HPV vaccination rates among KIW in Hawaii.

Summary

Cervical cancer is one of the most treatable cancers in populations with effective health promotion strategies. This qualitative study addressed the health perceptions, behaviors, and barriers to cervical cancer screening among KIW ages 21 to 65. The goal

of this study was to integrate research findings with the analysis of individual health beliefs and interpersonal, organizational, and socioenvironmental health determinants that impact health behaviors regarding cervical cancer screening and prevention measures. This study was conducted to bridge the knowledge gap in current literature regarding health perceptions, behaviors, and barriers to cervical cancer screening among KIW in Hawaii, while also encouraging culturally appropriate cervical cancer prevention strategies. In Chapter 2, I provide a comprehensive literature review to identify individual and external factors for improving the overall health of vulnerable minority populations and reducing cancer-related death rates.

Chapter 2: Literature Review

The purpose of this study was to understand Korean immigrant women's (KIW's) health perceptions of the cervical cancer screening and the HPV vaccination that might influence their health behaviors to engage in routine screening and preventive measures. The study also addressed participants' barriers and challenges that led them to avoid the follow-up health management of cervical cancer screening. Identifying health behaviors and barriers based on cultural aspects, particularly health behaviors and barriers to reduce cervical cancer screening, might improve the compliance of screening and follow-up management of preventive measures.

For many decades, federal and state health policies have not directly addressed the barriers to quality health services for millions of immigrants in the United States (Derose et al., 2007). Disproportionate health care benefits negatively influence the health outcomes of society's most vulnerable female populations, including women of color, low-income households, and Asian immigrants (National Asian Pacific American Women's Forum, 2015). When compared to native born U.S. citizens, immigrants tend to delay seeking professional health care and underutilize available health services (Singh, Rodriguez-Lainz, & Kogan, 2013).

Korean women are noted for having the third longest life expectancy, with an average lifespan of 85.48 years, just behind Japanese (86.8) and Spanish (85.5) women (Seo, Bae, & Dickerson, 2016). Due to the high standards of health and physical appearance, South Korea is known as a nation of slim people who naturally take advantage of annual preventive care services and traditional medicine practices (S. K.

Kim & Chu, 2015). Korean women who migrated to United States, however, find themselves at increased risk for metabolic imbalance, cancer-related death, and preventable diseases, as their access to quality health care resources and services is limited (Jacobs et al., 2014).

The limited knowledge of health perceptions and health behaviors among Korean minority population continues to influence health disparities in many ways (Tran, Do, & Baccaglini, 2016). Ethnicity and the concept of cultural health practices have been proposed as a better explanation of minority populations' health behavior and health outcomes (Carter, Lau, Johnson, & Kirkinis, 2017). Studies showed racial and ethnic minorities tend to receive a poorer quality of health care services than nonminorities, signaling that racial and ethnic disparities in health care continue to exist (Karliner, Marks, & Mutha, 2016).

Previous research on KAIs in the United States indicated that more than 90% of first generation KAIs speak only Korean, and 70% of these KAIs have difficulty understanding medical information and terminology (H. Y. Lee & Choi, 2012). In 2015, nearly 61% of over 1.7 million KAIs attained U.S. citizenship through naturalization (Department of Homeland Security, 2016). There is a need to partner with state and local health agencies to implement strategies for improving health equity and equality for Korean American populations (Mayeno et al., 2011).

Following major immigration waves from Asian countries such as Japan, China, and others, Koreans arrived in Hawaii as plantation workers at the beginning of the 20th century and have continued to reside there as family immigrants, students, and

occupational professionals (Heo, 2014). For many years thereafter, Hawaii experienced a steady increase of Korean immigrants. In 2010, the census report identified 48,699 individuals of Korean descent living in Hawaii, which is the sixth largest non-English speaking population out of 28 population groups in Hawaii (Hawaii State Data Center Report, 2012). As a sub-minority population, KAIs are not completely integrated into the social, cultural, and occupational opportunities in Hawaii.

The SOH DOH (2013) has developed a variety of health programs and health education strategies to improve the health status of Hawaiian residents, including its minority populations such as Korean Americans. For example, the Hawaii Comprehensive Cancer Control Coalition, which is developing the state's first Comprehensive Cancer Control Plan for residents in Hawaii, suggested a 5-year strategic plan to reduce cancer rates and improve individual, family, and community health (SOH DOH, 2013). Understanding culturally specific health perceptions, health behaviors, and health barriers of a particular ethnic group is essential to developing local, state, and national strategies for improving health equity and equality among minority populations, particularly underserved Asian immigrants such as Koreans (S. Y. Choi, 2013). A better understanding of these perceptions may influence Korean Americans to develop a sense of community empowerment to support their health needs.

According to Yedjou (2017), national health initiatives continue to focus on reducing cancer mortality and improving health disparities among minority populations in the United States, including Asian Americans. Healthy People 2020 (2015) suggested that improving health care access by including comprehensive quality health care

services can diminish current and potential health disparities among minority populations. The SOH DOH OHE (2015) also announced its health goals for promoting the health and self-sufficiency of vulnerable minority populations. It is vital to identify the distinct physical, social, and cultural risk factors affecting Korean Americans to support national and state health initiatives (S. K. Kim & Chu, 2015).

In Korea, individuals have access to low-cost compulsory national health insurance for all medical treatments, prescription drugs (including traditional medicine), and ongoing preventive services (Lim et al., 2014). Korean American immigrants arrive in the United States in a healthier condition than most Americans, but their health status steadily deteriorates over time due to the changes and challenges associated with assimilating to a new culture (J. H. Kim & Menon, 2009). Individual-level challenges include cultural and linguistic barriers, adoption of American diets and sedentary lifestyle, and learning to navigate system-level health care challenges (Hou, Sealy, & Kabiru, 2011). With respect to health care challenges, Korean Americans, like many other Asian subgroups in the United States, have difficulty adjusting to the high-cost, limited medical services offered through the U.S. health care system (Shoemaker & White, 2016).

Literature Search Strategy

I used multiple databases locate literature relevant to the study, including PubMed, Medline, ProQuest, and CINAHL, through the Walden University library. I also used the Google Scholar search engine. The key word search terms included *cervical cancer screening*, *cervical cancer prevention measures*, *health of Korean American*

women, health perception of cancer screening, and cancer screening barriers. Only recent relevant literature was used in this study; the articles and materials used were published between 2010 and 2017. This chapter presents general information about cervical cancer screening, particularly among the KIW population, and the cancer prevention behaviors that are based on their cultural health perception and health practices. In addition to common cervical cancer screening methods such as the Pap smear test, I described the HPV vaccination series as an effective prevention measure.

Theoretical Foundation

According to Creswell (2009), qualitative researchers employ theory to identify and describe broad concepts in their research inquiries. Theories are often useful in explaining health-seeking behaviors and prevention behaviors in promoting cancer screening (Di et al., 2015). In the current study, the health belief model (HBM) and social ecological model (SEM) provided theoretical insight and support for the development of the research questions. Both the HBM and SEM were used to describe KIW's health beliefs, perceptions, attitudes, and behaviors regarding cervical cancer screening including HPV vaccination options, follow-up management, and prevention measures to promote a cervical cancer-free health status.

Health Belief Model

Health-related perceptions and beliefs are influenced and shaped over time by culture and cultural practices from generation to generation. J. Kim, M. Kim, Han, and Chin (2015) stated "culturally meaningful activity is beneficial for immigrants' health and well-being, yet older Korean immigrants struggle with accepting new cultural

perspectives, which can negatively affect their health and well-being” (p. 12). The HBM is a popular health behavior model, particularly for explaining individuals’ health beliefs and attitudes (Umezawa et al., 2012). It is also used for prevention-focused health programs and the assessment of individuals’ compliance and health-related behavioral practices (Shirazi Zadeh Mehraban, Namdar, & Naghizadeh, 2018). The HBM is used to explain preventive health behaviors such as engaging in cervical cancer screening and receiving the HPV vaccination series rather than behaviors in time of illness, such as when a person is diagnosed with cervical cancer (Shapiro et al., 2018). The HBM contains several key concepts to predict why people behave certain ways to control diseases conditions. The HBM assumes that people’s health behaviors are modified by six elements.

Perceived susceptibility. The individual’s personal perceived susceptibility is his or her belief about the likelihood of getting a certain disease. For example, KIW believe there is a possibility of getting cervical cancer even before they express interest in participating in the Pap smear screening program. The HBM predicts that women, such as KIW, will be more likely to accept the recommendation for routine cervical cancer screening if they feel that they are susceptible to cervical cancer (J. Y. Choi, 2013b). Individuals who are aware of and believe that they are at risk of contracting cervical cancer are more likely to take the action to prevent or reduce cancer complications (Cullerton et al., 2016). A common misconception among KIW is that cervical cancer screening is unnecessary when participating in a pelvic exam for a Pap smear test (H.

Kim et al., 2004). Most KIW also feel that cervical cancer represents a loss of femininity and value of womanhood (Fang et al., 2017).

Perceived severity. The perceived severity of disease is the individual's assessment of the severity of a disease or health problem. This key element refers to understanding the seriousness of contracting cervical cancer or of leaving it untreated (Babazadeh et al., 2018). KIW who perceive the severity of cervical cancer tend to evaluate medical and clinical consequences such as cancer-related death, cancer-related complications, pain, negative impact on the role and value of women, and its impact on social relations. For example, if KIW understand that cervical cancer is a serious disease responsible for serious medical, social, and economic consequences, they are more likely to participate in routine Pap smear tests. There is strong evidence that women with an accurate understanding of the importance of Pap smear tests and HPV vaccinations are more likely to take preventive measures against cervical cancer (K. Kim et al., 2015).

According to Acar and Pinar (2015), 75% of the women at typical obstetrics and gynecology outpatient clinics reported that they heard of the Pap smear test before, and 48% of them reported that they had received one. The psychological distress or the anxiety related to cervical cancer screening tests and the perceived seriousness do not vary by age group or level of education (Isaka, Inada, Hiranuma, & Ichikawa, 2017). Although most women perceive cervical cancer as a serious disease, the belief that there is no effective medical treatment for cervical cancer influences them against partaking in the pap smear test (Ibekwe, Hoque, & Ntuli-Ngcobo, 2010). Randall and Ghebre (2016) recommend further research should be continued to explore the reasons why at-risk

women such as racial minorities, low-income, and vulnerable female population show higher cancer mortality rate and lower cancer screening participation rate.

Perceived benefits. Although a person might perceive themselves as susceptible to a serious disease condition, it requires that person's strong belief in perceived benefits before making behavioral change (Shobeiri et al., 2016). For example, KIW must believe that routine Pap smear tests and HPV vaccination series would be beneficial in reducing the potential health risks of contracting cervical cancer or cancer complications. It is essential that individuals exhibit optimal beliefs – regarding their susceptibility and the severity of the disease- and believe in potential benefits (Pedersen et al., 2015). This combination of factors ensures an individual's likelihood to accept the recommendation of prevention measures. At-risk women would likely agree that the cancer screening action gives them peace of mind by detecting any potential health problems before it is too late (Moore de Peralta et al., 2015).

According to Bazargan and his colleague (2015), early detection of abnormal cervical cells that can be potentially diagnosed as cervical carcinoma are easily cured. Generally speaking, all socio-demographic populations - including minority populations - are aware of the health benefits of cervical cancer screening (Townsend et al., 2016). Continued health education aimed at rectifying the misconceptions of vulnerable minority women and high-risk populations is essential to encouraging active cancer screening participation (Bebis et al., 2012).

Perceived barriers. The perceived barriers are any negative aspects relating to health action, or any conflicts that make people avoid taking health action (Tatar et al.,

2018). It influences, for example, impediments to undertaking cervical cancer screening recommendations. People often weigh the benefits of taking action such as peace of mind after the screening, or the negative impacts from the action, such as cost, negative side effects, unpleasant feelings, inconvenient procedures, and time consumption. The combination of perceived susceptibility and severity creates the energy to act in order to capitalize on the benefits, while the perceived barriers inhibit such action (Fleming et al., 2018). Even though women believe in the susceptibility and severity of cervical cancer and understand the benefits from cervical cancer screening, they have no intent to participate in screening tests when they are unable to outweigh the barriers (Robison et al., 2014). If minority women such as KIW, for example, previously experienced and perceived the pap smear test as an embarrassing or painful procedure done by a male healthcare provider, they would be less inclined to continue the routine cervical cancer screening (Nguyen-Truong et al., 2012).

Ersin and Bahar (2013) suggested the “lack of sensitivity-negligence, forgetting, fear, inadequacy of health insurance and transportation, financial problems, inability to get an appointment, lack of female doctors, embarrassment, and fatalist approach” are frequent barriers for many minority women to get cervical cancer screening. Many indigenous women who live in isolated rural areas reported the lack of transportation to travel to distant health-care clinics as a barrier to receiving cervical cancer screening (Ferris et al., 2015). For KIW, the inability to speak English, fear of misunderstanding the screening procedure or its impact on their health are frequently interfering factors to obtaining health information or talking with health professionals (H. Y. Lee, Rhee, & N.

K. Kim, 2015). According to Williams and colleagues (2013), the development of culturally relevant cervical cancer education and intervention programs help to address psychological barriers such as common myths, misconceptions of screening, cultural taboos, and social stigma attached to cervical cancer screening.

Cues to action. The readiness of health action based on perceived susceptibility and perceived benefits can be initiated by a trigger or cue. It is true that many women would be more likely to participate in a pap smear test if they were reminded by healthcare providers or their friends and family. Ackerson (2010) emphasized the importance for healthcare providers to disseminate information regarding screening tests and distribute reminders; in essence, they are influential cues to at-risk women to get pap smear test routinely. Studies also show that language-specific news dissemination regarding cancer prevention education motivates minority women (King et al., 2017), but written information may not be effective to all minority women due to low levels of literacy (Sentell et al., 2015).

Physicians play a major role in informing at-risk women of the benefits associated with cervical cancer screening. Culturally, Koreans respect the authority of physician, and this cultural health practice influences the health decision among KIW (K. Kim et al., 2016). Many young Korean women who communicate with others through social media, personal blogs, instant messages, or group chats are at risk of obtaining inaccurate health information (J. Y. Choi, 2013a). Researchers and health professionals agree that culture – and language-specific health education through community outreach strategies are the most effective at promoting health among minority populations (Riesch et al., 2013). The

community health education outreach programs initiated through faith-based organizations, for example, can be an effective to promote early detection of cervical cancer (Fernandez, DeBor, Candreia, & Flores, 2010). In order to maximize pap smear testing and HPV vaccination rates, the cues to action need to be culturally meaningful and sensitive to KIW.

Perceived self-efficacy. Perceived self-efficacy is the conviction through which, a person successfully executes health behaviors to produce expected health outcomes (Tung, Lu, Smith-Gagen, & Yao, 2016). When people feel threatened by risky behaviors that cause negative health outcomes, they change their behavioral pattern in order to maximize valued health outcomes under acceptable cost and circumstances. Then, they consider themselves as competent to overcome health challenges and barriers. KIW, for example, feel confident when they proactively manage routine pap smear test schedules and HPV vaccination series.

Individuals' health values, beliefs, and socio-demographic factors influence health perceptions and trigger health related behaviors (Brewer, DeFrank, & Gilkey, 2016). Compared to other ethnic minority women, KIW are generally healthier and have a higher life expectancy. However, KIW report their lack of understanding of cervical cancer, risk factors, screening procedure, and prevention measures (H.Y. Lee & M.H. Lee, 2016). Some KIW also reported fatalistic attitudes that cancer is associated with bad gene or punishment by God (E. E. Lee, Eun, S. Y. Lee, & Nandy, 2012). Overcoming the embarrassment of discussing one's personal history of sexual activity or talking about

private body parts can be resolved when health education and cervical cancer screening interventions are conducted by female providers (E. E. Lee et al., 2007).

Social Ecological Model

Cervical cancer prevalence and the mortality rate have declined over the past few decades in the United States (Musa et al, 2017). In indigenous minority populations, however, the high rates of cervical cancer and cancer-related complications still exist due to under-utilization of screening tests and inadequate follow-up health management (Daley et al., 2011). The SEM was introduced as a conceptual model for understanding human development by Urie developed by Bronfenbrenner and McLeroy in the late 1970s and has articulated a framework to understand the interrelationships between individuals and multiple levels of social behavior determinants (Kilanowski, 2017).

Individual level. The individual level of approach to influencing the health status of at-risk people is based on a person's knowledge, health attitude, health behaviors, developmental history, and demographical characteristics such as race/ethnicity, gender, and socio-economic status. Individual health belief and behaviors due to the burdens of poverty hinder vulnerable women's ability to access cancer screening care (Daley et al., 2011). Health literacy for non-English speaking or English as a second language minorities coupled with lower educational levels are important factors when considering one's likelihood to comply with recommendations made by healthcare providers (Ramondetta et al., 2015). H. Y. Lee, Rhee, and N. K. Kim (2015) stated that cancer literacy played a significant role in predicting cancer prevention behavior for Koreans. They also suggested recommended community-based cancer education programs and

training clinical practitioners to inform KIW about routine cancer screening (H. Y. Lee, Rhee, & N. K. Kim, 2015).

Interpersonal level. The interpersonal level of approach to influencing the health status of vulnerable people is to utilize social networks and support systems that include family members, friends, neighbors, and co-workers. Yoon and Lee (2010) suggested that “social connectedness in ethnic and mainstream society is a stronger predictor of well-being to immigrants” (p. 96). KIW are a family-oriented and socially connected ethnic subgroup that shares cultural behaviors and common thoughts, opinions, advice, and recommendations (S. Y. Lee, 2015). They also share medical advice and suggestions among themselves to overcome their health literacy and practice socially acceptable health actions together (K. Kim & Han, 2015).

Organizational/institutional level. Organizational- and institutional-levels of approach are characterized by operational rules and social institutions regulations which affects a person’s behavior changes. Many KIW are familiar with organizational- or institutional- levels of approach; in Korea, for example, it is common for employers to offer annual health check-ups with full screening tests including common cancer screening tests such as pap smear, mammogram, gastroscopy and colonoscopy. According to Nyambe, Van Hal, and Kampen (2016), adopting worksite regulations and policies to support preventive measures should be continued for minority populations to decrease cancer death rate. For KIW, organizational approach by collaborating among healthcare providers to disseminate the cancer prevention information can be one of effective health approach.

Community level. The community-level approach involves relationships among community organizations, institutions, and social informational networks. An example of such an activity might include the leveraging of community resources and programs. J. Lee and Carvallo (2014) stated that community-based programs offering cervical cancer prevention and screening education support KIW and encourage them to share health information. Disseminating information regarding Pap smear tests and HPV vaccinations through community organizations such as Korean faith-based and social leisure institutions could inspire KIW to obtain health information as a group without making them feel targeted.

Policy level. The policy level of approach pertains to local, state, national and global policies and laws that influence the health status of people (Robert, & Booske, 2011). Policies that provide coverage for cancer screening and HPV vaccination are effective population-level facilitators for cancer prevention. Offering a free consultation or affordable screening test, for example, to address the health demands of KIW would be effective. The population-based and policy-driven cancer screening programs showed effectiveness in reducing income disparity in cancer screening and cancer care among Koreans (Jung, Lee, Lairson, & Y. Kim, 2015).

Methodologies Used in Previous Studies

Few studies have attempted to identify the unique health perceptions, cultural health behaviors, and barriers to care for Korean immigrants in Hawaii (Kaholokula et al, 2018). The health perceptions, cultural health behaviors, and barriers regarding cervical cancer screening, for example, have not been fully explored. In a 2015 study on cervical

cancer among Korean immigrants, S. Y. Lee confirmed the theory that in-depth factors why the cervical cancer screening rate was lower among female Korean immigrants in the U.S. have not been adequately documented in literature. Similarly, there is a lack of Hawaii-based research on Korean immigrant women's health perceptions, attitudes, and behaviors toward cervical cancer screening (Braun et al., 2015). Although cervical cancer prevention through routine screening is a priority of medical and nursing practices, limited literature and data exists on cancer screening and prevention measures for KIW - such as Korean immigrant vaccination against HPV (Townsend et al., 2016).

Cervical cancer is the third leading cause of cancer among Korean females and the fifth leading cause of cancer death in Korea (S. Kim et al., 2016). Traditionally, older Koreans believe that illness is the result of misconduct, or a form of punishment inflicted by spiritual beings (J. Kim, M. Kim, Han, & Chin, 2015). This cultural belief affects female health behaviors, as many older females believe it is unnecessary to seek screening (E. E. Lee, Eun, S. Y. Lee, & Nandy, 2012). Younger generations, on the other hand, tend to seek medical advice or information from internet sources or blogs which prevents them from reaching out to health care professionals (Song et al., 2016). Even though HPV is the greatest risk factor for developing cervical cancer, many Korean females are still unfamiliar with the HPV vaccination (Burdette, Webb, Hill, & Jokinen-Gordon, 2017). Through the National Cancer Screening Program, the Korea Health Department has recently started educating parents of teenage girls regarding the HPV vaccination (J. Kim et al, 2012).

The Korean American adult female population in Hawaii is made up mostly by first generation immigrants (Danico, 2004, p. 27). These women obtain health insurance through spousal employment or via their own employers. Many of them own small businesses or work in private employment settings because of limited English proficiency and unfamiliarity with American work culture. Korean American working females tend to disengage in cancer preventive screenings; not because of lack of health insurance, but because of their busy work schedules, language barriers, lack of female gynecologists, distrust of American physicians, and discomfort with screening procedures (Seo, Bae, & Dickerson, 2016). Young Korean American females tend to be reluctant in revealing their sexual preferences and practices to American physicians (K. Kim, S. Kim et al., 2017). They may resist HPV vaccination for fear of admitting they are sexually active (J. Kim, B.K. Kim et al., 2012). In order to establish culturally effective and appropriate health interventions for cervical cancer screening, it is vital to explore the unique health perceptions, health behaviors, and barriers to screening practices among Korean immigrant women in Hawaii.

Literature Review Related to Key Concepts

Globally, cervical cancer is one of the most common gynecological cancers and the leading cause of death among women (Gomez et al., 2013). Although the pap smear test is an effective screening method for identifying potential cancerous cells, rates of screening use remains poor in many developing countries. In many developed countries, however, early detection efforts through screening have improved cervical cancer survival rates (Unger-Saldana, 2014). Unfortunately, minority populations living in

developed countries such as the United States continue to under-utilize screening measures (Terada et al., 2016). Minority women who have their own unique cultural health beliefs, language barriers, and lack of social resources remain at risk for contracting cervical cancer (Smith et al., 2016).

Etiology of Cervical Cancer

As most cancers start when body cells grow abnormally and out of control, cervical cancer often starts when the lining of cells in the cervix grow abnormally. These abnormal cells gradually transform from pre-cancerous cells into cervical cancer. It often takes years to develop the most common forms of cervical cancer -squamous cell carcinomas or adenocarcinomas (Li, Wu, & Cheng, 2016). Although the early stages of cervical cancer are generally asymptomatic, the more advanced stages of cervical cancer show vaginal bleeding after intercourse, between menstrual periods, or after menopause (H. Han et al., 2014). Other signs of cervical cancer include bloody or watery vaginal discharge that may have foul odor, and general or pelvic pain or pain during intercourse (American Cancer Society, 2017b). Risk factors for cervical cancer include multiple sexual partners, early sexual activity, sexually transmitted infections (STIs), poor immune system, and cigarette smoking (Mayo Clinic, 2017). Cervical cancer are two types of metastasis: hematogenous and lymphatic (Ferlay et al., 2012). The outcome of patients with metastatic cervical cancer is poor that the 5-year survival rate for metastatic cervical cancer is 16.5% compared to 91.5% for other localized cancer (Ferlay et al., 2012).

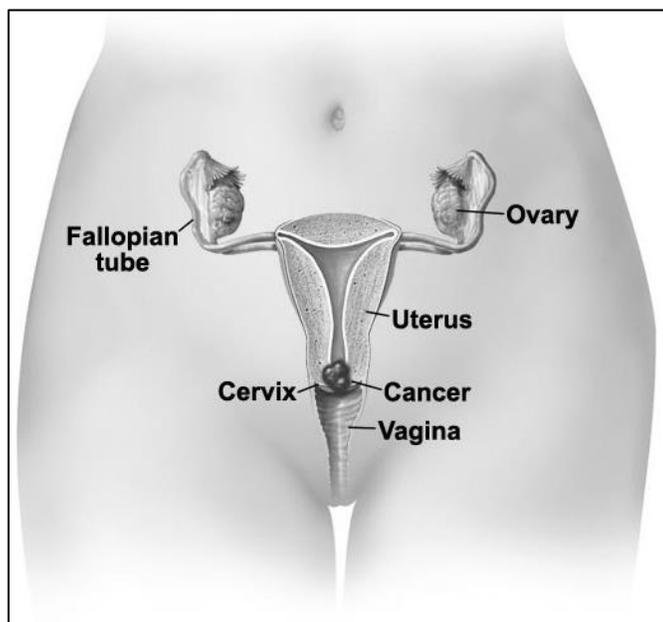


Figure 3. The position of cervical cancer

Prevalence and Mortality Rates for Cervical Cancer

Cervical cancer is a common type of cancer among sexually active women between the ages of 20-39 (Miller et al, 2014). Previously, cervical cancer was one of the leading causes of cancer deaths in United States. However, the death rate has decreased over the decades due to increased pap smear testing, leading to earlier detection of abnormal cancer cells (Karuri et al., 2017). The American Cancer Society (ACS) estimates about 12,820 new cases of invasive cervical cancer will be responsible for the death of 4,210 women in 2017 (ACS, 2017a). In the United States, Hispanic women have the highest risk of contracting cervical cancer, followed by African Americans, Asians and Pacific Islanders, and Caucasians (Sigfrid et al., 2017). Native Americans and Alaskan Natives have the lowest risk of cervical cancer (Levano et al., 2014).

Prevalence in Hawaii

Emerging public health problems such as obesity, diabetes, chronic cardiovascular conditions, and cancer are common in Hawaii. According to Moore and researchers (2011), the breast and either cervical or lung cancer are common among Pacific Islanders including Native Hawaiians and Micronesians, even though the cervical cancer screening strategy is prevalent among this population. Samoan women accounting for who are the eighth largest ethnic group of Hawaii's population also present cervical cancer at earlier stages and need collaborative evidence-based approaches for treatment plans and prevention strategies (Wu et al., 2010). The risk of contracting cervical HPV increases with one's number of sexual partners, use of hormonal creams, alcohol drinking, and lack of condom use, and decreases with age, income, and long-term use of oral contraceptives (Goodman et al., 2008).

Guidelines for Cervical Screening

The study showed that the Pap smear test is a powerful and effective screening measure to detect the premalignant stage of cervical cancer, which is fully curable if identified early-on. According to the American Society for Colposcopy and Cervical Pathology (ASCCP), the major contributing factor to most cervical cancer deaths is being rarely or never screened (Rojanapremsuk, Clarke, & Liu, 2015). In 2012, the American Cancer Society (ACS), American Society for Colposcopy and Cervical Pathology (ASCCP), and American Society for Clinical Pathology (ASCP) published a recommendation that cervical cancer screening should begin at age 21, except among special women populations with a history of cervical cancer or immunocompromised

persons (Saslow et al., 2012). The guidelines recommend age-appropriate screening strategies, HPV testing, and follow-up management for positive screening results and screening interval management for negative screening results (M. C. Lim, M. Lee, S. H. Shim et al., 2017).

Table 4

Summary of Pap Smear Recommendations

Risk Population	Recommended Screening Method	Management of Screening Result
< 21 years	No screening	
21 -29 years	Pap smear every 3 years	
30 -65 years Interpersonal	Pap smear with HPV every 5 years (preferred)	Positive HPV result & negative pap smear → 12-month follow-up with contesting
Perceived Barriers	Pap smear every 3 years (acceptable)	Negative pap smear → re-screen in 3 years
> 65 years	No screening	Women with history of cervical cancer or more severe diagnosis → continue routine screening for at least 20 years
After Hysterectomy	No screening for women without a cervix	Women without history of cervical cancer in the past 20 years
HPV Vaccinated	Continue age-specific recommendation	

The Pap smear test, which is an invasive procedure, is not recommended for adolescent populations (Hans et al, 2007). However, sexual health education regarding using of contraception and sexually transmitted infection (STI) screening or treatment

must continue. To minimize discomfort and prevent unnecessary complications, STI testing for adolescents can be done through urine tests. For women between the age of 21-29, HPV testing alone should not be used to screen for cervical cancer because it is not a primary stand-alone screening to diagnose the cervical cancer (Dodd et al., 2014). The new recommendation also verifies that after multiple negative pap smear tests, a longer check-up interval -increasing from two to three years- is acceptable because the risk of having cancer is not significantly higher with frequent testing (Trope et al., 2012).

For women between the ages of 30-65, the combining the pap smear test with HPV testing in concert with cervical cytology (HPV co-testing) are not recommended for all women (Campos, Tsu, Jeronimo, Myundura, & J. Kim, 2017). Some communities may lack access to HPV testing due to financial and logistical constraints and potential harm without benefits. Routine pap smear test –conducted every 1 to 3 years- as a cervical cancer screening measure is effective after becoming sexually active through the age of 65, depending on previous test results (Saslow et al, 2012).

In many developed countries, the decline of cervical cancer cases is attributed to comprehensive cervical cancer screening efforts including advanced cancer treatments and follow-up medical management. Low participation in routine cancer screening and low follow-up management coincided with high mortality rates among particularly risky subpopulations in the United States (Schoofs et al., 2015). At-risk subpopulations include ethnic minorities, people from low socio-economic statuses, foreign born or living in the United States for less than 10 years, and unusual or no sources of health care. Although the overall cervical survival rate of Asian-American women is higher than Caucasian

women –except those of Japanese, or Korean origin –the majority of Asian-American women have less access to screening tests, and routine pap smear test than is highly recommended (Nghiem et al, 2016).

HPV Vaccination as a Prevention Option

The communicable infection caused by genital human papillomavirus (HPV) is commonly transferred from one person to another during sexual activity. Oftentimes, HPV is asymptomatic and goes away on its own, but certain strains of HPV can cause the cancer of the cervix, vulva, vagina, penis, or anus (CDC, 2018). The CDC (2018) recommends adolescent girls between the ages of 11 to 12 get two doses of the HPV vaccination to protect against cervical cancer caused by HPV. Although the HPV vaccine is highly effective, persistent health disparities among ethnic minorities and foreign-born people still exist (Karuri et al, 2017). According to De and Budhwani (2017), health insurance coverage and the presence of a medical home for the patient were significant factors that were associated with administering the HPV vaccination. They also suggest that policies requiring school-based HPV vaccinations boost health outcomes across all populations including foreign-born persons, ethnic minorities, and boys (De, & Budhwani, 2017).

Recent studies suggested HPV vaccination is recommended for adolescent males and females and across all racial and ethnic populations (Burdette et al., 2017). Low-income and minority adolescents are equally, if not more likely to start the HPV vaccination series than Caucasians, but the completion of all series of vaccination is lower than Caucasian adolescents (Jeudin et al., 2014). Although the HPV vaccination

series completion rate increased between 2008 and 2009 (Niccolai, Mehta, & Hadler, 2011), it is important to note that ethnic differences and poverty disparities are significant factors impacting the completion of all series of the vaccination. Parents voicing “no-intent” for their adolescents to receive HPV vaccination should be redirected to targeted educational tools aimed at providing a clear overview of the purpose, safety, and efficacy of the HPV vaccination (Cheruvu, Bhatta, & Drinkard, 2017). For minority parents, ensuring routine healthcare visits and following-up on provider recommendations are key to completing the HPV vaccination series. In accordance with Relter and researchers’ findings (2014), healthcare providers who are able to discuss the benefits of HPV vaccination in the clients’ preferred language are incredibly effective at increasing HPV vaccination and minimizing potential barriers to vaccination.

Cervical Cancer Screening to KIW

Current cervical cancer screening programs frequented by ethnic minorities often face obstacles such as limited available services, inadequately trained health care providers, insufficient testing supplies, and inferior patient follow-up health management systems. In many Korean American communities in the United States, the lack of appropriate screening programs, culturally-trained healthcare providers, and female healthcare providers, are associated with low participation in cervical cancer screening (S. Lee, Chen et al, 2014). In turn, this is often linked to higher risk for cancer mortality and poor prognosis of treatment due to delayed diagnosis. Socially, the inappropriate allocation of health funds and human resources in health care systems that serve ethnic

minorities may lead to a deficiency in early detection of cervical cancer among KIW (S. Y. Lee, & E. E. Lee, 2016).

As an at-risk subpopulation, KIW are vulnerable to possible harm associated with screening such as anxiety over a positive test, stigma of an STI, pain or bleeding from procedures, or treatment-related pregnancy complications (E. E. Lee, Tripp-Reimer et al., 2007). KIW also have lack of adequate knowledge regarding cervical cancer screening and socio-cultural barriers such as the embarrassment associated with a pelvic exam, which might be the major factors hindering participation in available screening programs (J. Lee & Carvalio, 2014).

Barriers to Cervical Cancer Screening

Socioeconomic and ethnical health disparities in cervical cancer screening continue to persist in the United States. Studies among one of the major minority populations, Hispanic women, reported that fear of being diagnosed with cancer, the embarrassment of testing, and limited English fluency were perceived barriers as major barriers to accessing cervical cancer screening (Falk et al., 2016). African American and Latina women reported that health literacy and lack of providers' recommendations regarding pap smear tests contributed to their reduced participation in screening programs (Roman et al., 2014). Another ethnic minority, Taiwanese women, consider themselves generally healthy but report their perceived barriers as feelings of discomfort caused by limited English fluency, lack of health insurance coverage, limited medical resources, and screening cost (Wu et al., 2010).

Although KIW make their own health decisions regarding cervical cancer screening and prevention measures, some KIW prefer that others, including significant others make decisions in collaboration with their providers (J. Kim, M. Kim, A. Han, & Chin, 2015). H. Y. Lee and H. Im (2013) stated that major barriers among KIW include limited knowledge about cervical cancer and prevention measures, barriers caused by culture differences toward prevention measures, and limited accessibility to health care services.

Korean parents who have adolescent daughters are mostly unprepared for the HPV vaccination series as a preventive measure of cervical cancers due to a lack of knowledge about the HPV infection and HPV vaccination, unmandated health policies, and poor collaboration among governmental agencies such as the Department of Health and the Department of Education (H. W. Kim, & D. H. Kim, 2015). Health education regarding the pap smear test and the efficacy of the HPV vaccination influence positive encouragement for minority women to access routine cervical cancer screening (Miyagi et al., 2014).

Summary and Conclusions

The concepts of the Health Belief Model and Social Ecological Model can be applied to describe specific health perceptions and behaviors as well as multiple levels of external factors that influence health decisions regarding cervical cancer prevention and action. An extensive literature reviews supports the concepts of KIW's health behaviors and suggests strategies regarding to overcome this population's unique barriers. Evidence of KIW health beliefs and attitudes regarding cervical cancer screening are also

described. Specific details of the KIW culture and associated health and socio-ecological barriers highlighted in the literature review indicate that cervical cancer screening, follow-up management, and prevention measures should be addressed through multiple levels of health approaches tailored to the population's culturally-specific needs.

Chapter 3: Research Method

This chapter presents the methodology that was used to identify the health perceptions, health behaviors, and barriers to cervical cancer screening and prevention measures among KIW in Hawaii. Understanding culturally specific health perceptions and health behaviors of a minority population may provide the foundation for appropriate public health strategies. The goal was to empower this ethnic group to overcome unique barriers and to engage in ongoing cancer preventive practices. This study provided a foundation for understanding the target population to improve cervical cancer screening rates and decrease cancer-related deaths. The research design and approach are discussed in this chapter, in addition to the sample population and research process, such as details regarding informed consent, qualitative survey methodology, data collection, data analysis, and ethical research considerations.

Research Design and Rationale

A qualitative study with an ethnographic approach was used to explore the social interaction, health behavior, and health perceptions associated with cervical cancer screening and preventive care approaches among KIW in Hawaii. The central aim of the ethnographic approach was to provide rich and holistic insights into KIW's views and actions through structured observation and interviews. An ethnographic research design takes a cultural lens to the study of people's lives to explore the meaning of a phenomenon through in-depth exploration of cultural dimensions (Creswell, 2009). This approach was used to identify meaningful health concepts to explain the personal experiences and individual views of the participants.

Qualitative data were collected and processed using an open-ended semi-structured interview protocol, which was designed using the six dimensions of HBM. The collected data were coded and analyzed using NVivo software. Analytic software assists researchers in interpreting and uncovering the meaning or themes from the participants' responses (Garrett, 2016). Software also helps researchers to identify potential biases and to avoid overanalyzing data. I analyzed coded themes for effectiveness of quality in relation to the content of this study.

Ethnography in qualitative research provides a rich detailed description of everyday life and practice of people (Creswell, 2009). I aimed for cultural interpretation by exploring details beyond the superficial experience and by focusing on cultural construction. An ethnographic understanding of KIW's health perceptions and behaviors could provide a foundational understanding of the reasons behind their actions. To capture these data, I used an ethnographic interview method with open-ended questions. The interviews enabled me to collect rich data to capture internal connections and insights of participants. The value of ethnographic qualitative research is that it can be used to explore the physical, social, and cultural contexts of KIW, opening possibilities for further social and cultural change among KIW in Hawaii.

Source of Information and Data

As a bilingual Korean American who is an active public health nurse and a nurse educator, I was aware of the culturally acceptable processes that should be undertaken to recruit KIW. Official letters were sent to community leaders of the Korean American Association, religious associations, and community-based Korean business associations

requesting their permission to collect data from members of their associations.

Participating religious associations included the Hawaii Central Presbyterian Church, Christ United Methodist Church, Hawaii Muryangsa, and the United Korean Associates of Hawaii.

The standardized open-ended interviews addressed the value of health, health perceptions, health expectation, health behaviors, and barriers and challenges to obtain health services among KIW in Hawaii. This format of interviewing is commonly used because it allows study participants to fully explore and describe their viewpoints and personal experiences (Turner, 2010). The study participants were asked identical questions, but they had the freedom to respond in their own words.

The consent form of the study in English and Korean were prepared. The participants were able to read and ask questions about the consent form of the study and audiotaping of the interview. Audiotaping of the interview allows the interviewer to capture detailed responses and rich content as described by participants (Chu et al., 2017). Audiotaping the interview is a useful tool for a researcher to examine the participants' responses to more accurately dissect and analyze the data (Lasser et al, 2008). Given the nature of this study, interview participants may have had language barriers or limited English ability and may have needed a bilingual interpreter to explain the questions accurately in Korean. I explained to the study participants in Korean to reinforce the information, if necessary, and to clarify the questions during the recruitment and during the interview to avoid any confusion of the interview process and the interview questionnaires.

Role of the Researcher

Mann and researchers (2015) suggested that the researcher in a qualitative study is the main instrument for data collection and for analyzing themes from the collected data. My role in the study was to facilitate the interview process and to observe participants. This dual role allowed me to collect and analyze qualitative data. Because the qualitative research interview is used to identify and describe the meaning of major themes in the life of the subject, appropriate interviewing techniques are required to capture the meaning behind interviewees' responses (Vass, Rigby, & Payne, 2017). The techniques used included (a) providing a safe interview setting with minimal distractions; (b) providing important information to interviewees, such as purpose of the study, consent, and extenuating circumstances involved with the interview such as audio/video recording and taking notes; (c) providing a concrete understanding of the topic; (d) using clear, gentle, and structured questions; (e) using topics in questions to encourage subjects to respond regarding their behaviors, opinions/values, feelings, knowledge, and background; and (f) exhibiting respect and support toward the interviewees (Aggarwal, Nicasio, DeSilva, Boiler, & Lewis-Fernandez, 2013).

I did not have personal or professional relationships with my interviewees; therefore, preexisting relationships did not bias the research. I assumed that my Korean language skills would not create researcher bias during the interview, and that they would be helpful in building a trustworthy relationship with interviewees. I avoided potential bias that might stem from my experience with Pap smear tests and my knowledge about cervical cancer and the importance of cervical cancer screening by avoiding any medical

and nursing suggestions during the interview. The further cervical cancer-related health information including local referral services was provided upon request from the participants before ending the interview. I also ensured that the physical setting for the interview session was comfortable, quiet, convenient, and secure for confidentiality. The value of the interview was the ability to identify KIW's culturally specific health perceptions and health behaviors regarding cervical cancer screening and HPV vaccination, as well as barriers and challenges to improving cancer screening participation rates. Avoiding researcher bias was a concern because, as a registered nurse, I have worked many years to instruct patients to comply with certain norms that may, at times, conflict with what the patients want.

Methodology

The purpose of this study was to explore health perceptions, behaviors, and barriers regarding cervical cancer screening and HPV vaccination as a preventive measure. I aimed to identify health behaviors based on cultural aspects, and to identify barriers to cervical cancer screening and compliance with follow-up medical management. An ethnographic design including in-depth interviews with a small group of Korean immigrant women was used to explore their personal experiences and social interaction regarding cervical cancer screening.

I used purposeful sampling to recruit 20 Korean immigrant women, ages 21 to 65, in Hawaii to participate in this study. Purposeful sampling is a widely used research technique in qualitative research studies because of its emphasis on identification and selection of information-rich cases related to a particular phenomenon (Palinkas et al.,

2015). Desired interviewees had experience with the phenomenon of interest (cervical cancer screening and prevention), were willing to participate, and were able to communicate their experiences in an expressive, articulate, and reflective manner. The recruitment flyers were posted in Korean immigrant communities such as local Korean supermarkets, Korean churches and temples, Korean community associations, and local Korean radio and TV broadcasting companies. Official letters to community leaders were also sent out to recruit interview participants. I collected participants' contact numbers and e-mail addresses from those who responded to participate the study. Interviews were arranged based on convenient times for participants. The consent for audio/video recording was obtained and the interview instructions were given.

KIW in Hawaii were selected for the study because of the gap in the research literature on health perceptions, health behaviors, and barriers for cervical cancer screening and prevention with this population. The State of Hawaii is also significant to Korean immigrants because they first migrated to Hawaii approximately 110 years ago. Due to the racial and ethnic diversity of the state's residents, medical and social disparities among ethnic groups continue to exist in Hawaii (H.H. Heo, Sentell et al., 2015). Compared to local, state, and national benchmarks, study cite county's 2015 pap smear test data did not meet target goals. According to the results, 70.9% of women ages 18 years and older have had a pap smear in the past 3 years, compared to 74.0% in the State of Hawaii and 75.2% in the United States (Obel et al., 2015). The target goal of Healthy People 2020 for Pap smear test rates, which is 93%, has not been met (Hawaii Health Matters, 2017).

The demographic data of the interviewees were categorized by ethnicity, gender, age, zip code, educational level, and previous experiences of cervical cancer screening. I reviewed and sorted major themes and analyzed the outcomes regarding cervical cancer screening and prevention. The sample size was 20 interviewees who were qualified to join the interview were selected after reviewed all participation requests. The incentive for participation was a \$20 gift card which was given to each interview participant who agreed and signed the consent to participate the interview. The formal IRB was approved to conduct the human subject research was obtained based on the guideline of Walden University. To ensure the confidentiality and anonymity of the study participant, their names were hidden and labeled as a numeric code. The interview responses were stored and kept in secured area of the interviewer's house for 3 years based on the research guidelines at Walden University.

Issues of Trustworthiness

The four criteria for enhancing rigor in qualitative research such as credibility, conformability, dependability, and transferability were used to ensure trustworthiness of the research results. Credibility was guaranteed by using the member checking approach in which researchers referred back to 20 selected participants to verify the data and interpretation of the findings. The qualitative data were collected and validated to ensure conformability (Kue, 2014). Conformability was ensured through the process of bracketing whereby all previous knowledge, beliefs and common understanding about health seeking behaviors among women with cervical cancer were set aside.

Transferability was established through the collection of data including field notes, together with a rich mix of participants' narrations.

Permission to conduct the study was obtained from the Walden University Institutional Review Board (IRB #04-19-18-0056190). The faith-based community leaders were granted permission for the study to be conducted at their local Korean churches. An informed consent was obtained from every participant and interviews were initiated after the participants signed a consent form. Other ethical issues such as avoiding harm and maintaining confidentiality were strictly followed by the IRB guideline.

Summary

Current research literature findings to address the research questions to explore KIW's health perceptions, behaviors and barriers toward cervical cancer screening and prevention are discussed. Particularly current literature findings related to culturally specific approach related to cervical cancer screening and prevention measures show a gap to explain how KIW in Hawaii demonstrate their health behaviors. In-depth description of KIW's social interaction regarding cervical cancer screening and prevention were reviewed and categorized by key themes after the structured interview to explore cultural norm and cultural health attitude. In chapters four and five, the health perception and behaviors of KIW in Hawaii were explored and analyzed to fill the literature gap regarding cervical cancer screening and prevention.

Chapter 4: Results

The purpose of this study was to understand how Korean immigrant women's (KIW's) health perceptions of cervical cancer screening and HPV vaccination influence their health behaviors to engage in routine screening and preventive measures. I also explored participants' barriers and challenges to follow-up health management of cervical cancer screening. Identifying health behaviors and barriers based on cultural aspects, particularly health behaviors and barriers to reduce cervical cancer screening participation, may improve compliance with screening and follow-up management of preventive measures. Despite the effectiveness of early detection of cervical cancer, participation in cancer screening programs among young Korean women is low compared to other Asian American groups (Chang et al., 2017). This ethnographic study included in-depth interviews with a small group of KIW to explore their personal experiences and social interactions regarding cervical cancer screening.

Data were collected from 20 KIW ages 21 to 65 in Hawaii. Participants were recruited using purposeful sampling, a widely used research technique in a qualitative study (see Palinkas et al, 2015). Purposeful sampling is a technique in which a researcher uses his or her judgment to choose participants of the study. Participants' previous and current health perceptions, social influences, motivations, and experiences related to the Pap smear test were examined to identify factors that may have influenced noncompliance to engage in routine cervical cancer screening and medical follow-ups. Primary demographic data were collected using a simple questionnaire. Overarching

themes emerged during the one-on-one interview sessions in which participants were able to provide narrative responses.

Health perceptions and expectations regarding preventive care measures and cervical cancer screening tests such as the Pap smear test and HPV vaccination were explored to understand cultural perspectives on cancer preventive care and participants' awareness of cancer preventive services. Health behaviors and barriers and/or challenges associated with cultural factors were identified in the narrative summary to explain participants' health decisions and medical preferences.

Three research questions were used to guide this study:

1. What are the health perceptions regarding cervical cancer screening, follow-up health management, and prevention measures among KIW in Hawaii?
2. What are the health behaviors related to routine cervical cancer screening, follow-up health management, and prevention measure practices among KIW in Hawaii?
3. What are the barriers and challenges to cervical cancer screening, follow-up health management, and prevention measures among KIW in Hawaii?

Pilot Study

A small-scale pilot study was conducted in which KIW were asked to complete a qualitative questionnaire to identify cultural health perceptions and behaviors regarding cervical cancer screening and preventive measures. According to Janghorban, Roudsari, and Taghipour (2014), the pilot study allows “exercising epoch within the phenomenological research, increasing theoretical sensitivity in grounded theory, and

familiarity with fieldwork in ethnography.” (p. 4). The questionnaires administered in the pilot study included 30 questions in four categories to capture KIW’s health perceptions, behaviors, and challenges related to cervical cancer screening (Appendices C and D). Based on the research questions, the following interview questions were asked of the study participants:

1. Health Perceptions

- How much do you know about cervical cancer screening tests?
- Have you heard about the HPV vaccination?
- In your culture, what values do you have toward to health prevention?

2. Health Behavior

- Do you have health insurance?
- What is the payer source for your insurance?
- How often do you visit your primary care physician (PCP) or gynecologist?
- When was the last time you did the Pap smear test?
- Have you visited your PCP or gynecologist for follow-up after the Pap smear test?

3. Health Barriers and Challenges

- What restrictions do you have when you seek for doctors for routine cervical cancer screening test?
- What barriers do you have when you try to engage the routine cervical cancer screening test and/or follow-up management?

As described in the interview questionnaires (Appendices C and D), questions were organized to identify participants' demographics and health status, insurance status, language skills, and knowledge of the Pap smear test to encourage participants to analyze their health related to cervical cancer.

Setting

A letter of cooperation was distributed to the Korean community leaders and local Korean organizations, including pastors and leaders of faith-based organizations and Korean public markets, requesting approval to post an interview recruitment flyer. Because many Korean Americans are actively involved in faith-based organizations to interact socially and provide community services through the congregation, this served as a quality setting for purposeful sampling. Participating Korean community organizations included the following:

- The United Korean Association of Hawaii (1649 Kalakaua Ave. #202, Honolulu, HI 96826)
- Korean American Womens' Club (1561 Pensacola St. #1406, Honolulu, HI 96822)
- Christ United Methodist Church (1639 Keeaumoku St., Honolulu, HI 96822)
- Korean Eden Presbyterian Church (1053 6th Ave. Honolulu, HI 96816)
- Korean Catholic Church-Hawaii (2549 Kahawai St. Honolulu, HI 96822)
- Korean Christian Church (1832 Liliha St. Honolulu, HI 96817)
- MuRyangSa Temple (2420 Halelaau Pl. Honolulu, HI 96816)
- Palama Korean Market (1670 Makaloa St. Honolulu, HI 96814)

- Queens Korean Market (835 Keeaumoku St. Honolulu, HI 96814)

English- and Korean-language interview recruitment flyers (Appendices A and B) were posted to the public bulletin boards of consenting Korean community organizations. These flyers clearly indicated the eligibility criteria, and restrictions were reinforced during a prescreening phone conversation. Interested prospective interview participants contacted me via phone or e-mail for a prescreening. To be eligible for the study, participants needed to be Korean immigrant women between the ages of 21 and 65 living in Hawaii with English proficiency substantial enough to comprehend and sign the informed consent. International students, individuals with nonimmigrant status, and Korean immigrants with limited English-language abilities (measured by their ability to comprehend the consent form) were excluded from the study. Individuals who might have been mentally and emotionally disabled, and therefore unable to tolerate a 1-hour interview, were also excluded. KIW included in the sample with limited English proficiency received interview questionnaires in English and Korean. I am a fluent bilingual speaker, and I explained the questionnaire items, if needed, and encouraged the participants to expand on their narrative descriptions. The physical setting for the interview was my office. The interviews were conducted across 3 days to accommodate participants. The interview location provided a convenient, centrally located space offering free parking, minimal noise, and privacy. The break time between each interview was at least 15 to 20 minutes, and interviews did not overlap. A security guard was on duty near the interview location and was notified about the visit of participants for the one-on-one sessions. A first aid kit including a defibrillator as well as other emergency

equipment was available on the same floor of the office location is in the school of nursing building at the local university. The interview date was set on the weekend when minimal students or university faculty or staff were at the office.

Demographics

The purposeful sampling used for the selection of KIW participants provided this study with rich data directly related to the research goals. A total of twenty Korean Immigrant Women (KIW, N=20) participated in the study. These primary interview participants were between the ages of 21 and 65, living in Oahu island of Hawaii. The inclusion criteria narrowed the sample down to participants who: (a) self-identified as a first-generation KIW immigrant to Hawaii; (b) aged 21 through 65; (c) single, unmarried, or married; (d) able to understand and communicate in basic English and Korean to communicate; (e) able to participate in the study's one-on-one interview session for at least 30 minutes to one hour; and (f) able to comprehend the English or Korean informed consent (Appendices C and D). The rationale for this study's KIW target age group is that first generation immigrant Korean women have among the lowest rates of cervical cancer screening in U.S. (Nghiem et al., 2016).

The exclusion criteria include women who did not meet the interview participant criteria who had a hysterectomy or had been diagnosed with cervical cancer before the interview. Women who had physical, emotional, psychosocial, and financial difficulties that were unable to tolerate the duration of the interview and the physical setting of the session were excluded. One participant, however, reported after the interview that she

recently had a hysterectomy. This was problematic, as she had denied having an operation of this nature at the time of the recruitment phone pre-screening.

Table 5 displays the summary of demographic characteristics of the study participants. The distribution across each age group indicates that 20% of participants were between the ages of 21-29 years (n=4); 10% between 30-39 years (n=2); 30% between 40-49 years (n=6); 30% between 50-59 years (n=6); and 10% between 60-69 years (n=2). A majority of the participants have lived in the U.S (80%, n=16) and Hawaii (65%, n=13) longer than 10 years. 95% (n=19) of the participants obtained at least a high school degree, and 60% (n=12) of the participants obtained a college degree and postgraduate degree.

Table 5

Demographic Characteristics

Characteristics	Subtotal (n)	Percentage (%) N=20
Age (years)		
21-29	4	20
30-39	2	10
40-49	6	30
50-59	6	30
60-65	2	10
Years in U.S.		
< 1 year	1	5
1-5 years	2	10
6-10 years	1	5
> 10 years	16	80
Years in Hawaii		
< 1 year	2	10
1-5 years	4	20
6-10 years	1	5
> 10 years	13	65
Highest Educational Degree		
< High school	1	5
High school	4	20

Vocational training program	3	15
College	10	50
Graduate school	2	10
Annual Income		
< \$5,000	2	10
\$5,000 - \$19,000	3	15
\$20,000 - \$39,000	3	15
\$40,000 - \$59,000	5	25
> \$60,000	7	35
Employment Status		
Unemployed	5	25
Part-time	3	15
Full-time	6	30
Self-employed	5	25
Other	3	15

KIW who live in the United States and State of Hawaii longer than 10 years can be considered more Americanized in the respect that they are familiar with the U.S. healthcare system and speak some English. All participants have legal status for school and/or for work, affording them access to health insurance or at least the means to pay the medical costs. Data from the U.S. Census Bureau show that in 2014 more than 50% of the Korean American population aged 25 and above holds a bachelor's degree or higher postgraduate degree (U.S. Census, 2016), ranking Korean American as the highest percentage of higher education degree holders as compared to other Asian sub-ethnic groups. Compared to the total foreign-born U.S. population, Korean immigrants tend to have much higher educational attainment than the overall foreign- and native-born Americans; 53% of Korean immigrants aged 25 and above hold a bachelor's degree or higher, compared to the total U.S. foreign-born population (29%) and native-born population (31%) (Zong, & Batalova, 2017).

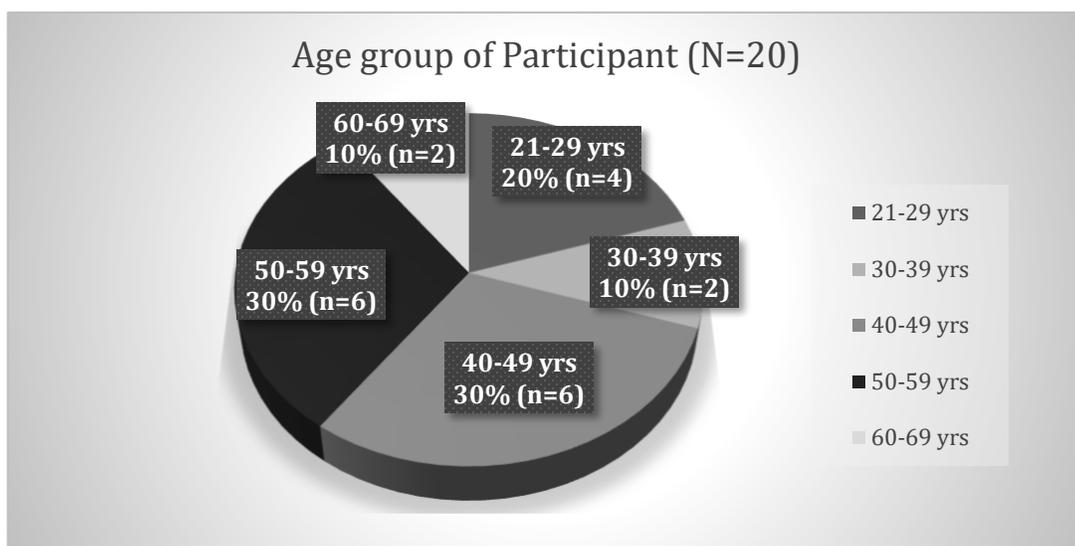


Figure 4. Age group of participants

60% of the participants' (n=12) annual income is above \$40,000. Participants are predominately employed (75%, n=15), however, 20% of participants were students (n=4) who are currently unemployed. In 2015, 77% of Korean immigrants living in the United States were of working ages 18 to 64, ranking slightly lower than the overall foreign-born population (80%) but higher than the native-born population (60%) (Zong & Batalova, 2017). The participants reported that they were employed in the travel, food, and real estate industries. A number worked in customer service within the travel industry, and others were self-employed business owners, while others held other positions across the industries. According to Zong and Batalova (2017), "Koreans Americans are much less likely to be employed in natural resources, construction, and maintenance occupation or production, transportation, and material moving occupation" (p. 3). The sample included in this study mirror Zong and Batalova's (2017) observation regarding Korean American occupational demographics.

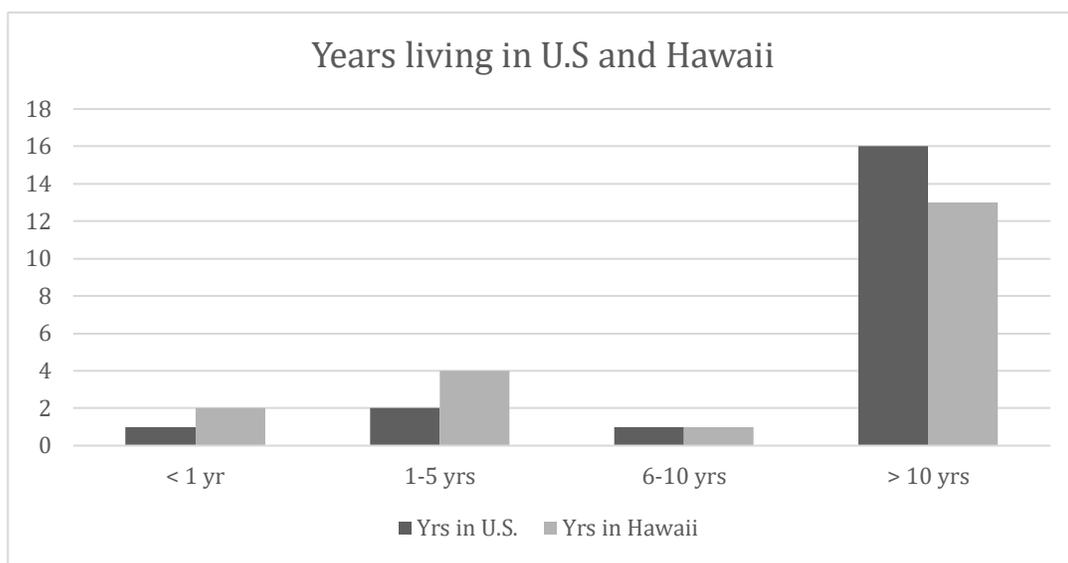


Figure 5. Years living in the United States and Hawaii

Data Collection

The minimum number of participants who were eligible for the one-on-one session were interviewed to achieve the outcome of the pilot study and purposive sampling. The goal of the initial analysis was to understand the experience of KIW who participated in cervical cancer screening and their current engagement in routine Pap smear testing in Hawaii. A total of 42 interested KIW responded to the recruitment announcement of the study and contacted the researcher for a phone pre-screening. Twenty eligible KIW (N=20) met the inclusion criteria and were selected for a single interview session-choosing from three possible interview dates- that suited their schedule.

Upon arrival for the interview session, the informed consent-which was written in both English and Korean language-was verbally explained in Korean, the participants' native language, by the researcher. Details of the study, follow-up contact phone number, privacy, and security of data collection were articulated to the participants. The interview

participants were then given the opportunity to withdraw from the interview or to continue, noting that they would be allowed to stop at any time if they felt uncomfortable. After the participant agreed to participate in the study, they signed the study consent form, and were provided a brief orientation including details such as the locations of the nearest restroom, emergency exit, and facility security guard.

Interviews were conducted in May 2018 after obtaining approval for the research involving human subjects from the Walden University Institutional Review Board. The three separate interview dates were conducted without variation or unusual circumstances in affecting the data collection process. Upon receipt of the signed study consent form, hard-copies of the demographic questionnaire were distributed in both Korean and English language. The participants chose either version of the form to fill out and were able to ask questions if they need more detailed instruction. Each interview was approximately 1 hour. The researcher took notes, and the conversation was recorded as the participants consented.

Supplemental cervical cancer preventive informational flyers-such as contact information for local gynecologists, free Pap smear community health clinics, HPV vaccination information, and affordable cervical cancer screening programs-were offered after the individual interview sessions and provided upon request at the end of interview session. Participants were provided a \$20 gift card upon conclusion of the interview as a token of appreciation. Follow-up telephone calls were made to thank the interviewees for their participation in the study.

Data Analysis

This study identified emerging themes in KIW perceptions, behaviors, and barriers to cervical cancer screening and the HPV vaccination as a cervical cancer prevention method among KIW in Hawaii. NVivo, a qualitative data analysis software, was used to organize, categorize, sort, and code data for emerging themes. Questionnaire and narrative responses were sorted to classify the data into codes based on the research questions regarding KIW's health perceptions, health behaviors, and barriers or challenges based on their cognitive appraisal, cultural health concept, and health approach to seeking cervical cancer health services. Responses to the interview questions and demographic questionnaires revealed study participants' fear and negative feeling toward the invasive cancer screening and cultural perceptions of humiliation toward the cervical cancer screening tests as well as HPV vaccination to reveal assumption of having multiple sexual partners or having sexually active status.

All 20 participants agreed on the importance of cancer preventive screening and admitted that they had been practicing positive non-medical activities such as healthy dieting, regular physical exercise, and maintaining a healthy body weight. All participants also agreed that cervical cancer screening such as the Pap smear test is necessary, but felt it was invasive and intrusive. They expressed a desire for a more comfortable service, rather than the typical delivery of these screening, which leaves them feeling rushed through the process without adequate explanation or support. Similar to a study by Steele, Townsend, Tai, & Thomas (2015), the participants- like many other Asian Americans- are more likely to receive blood pressure checks, the influenza vaccine, blood glucose

and cholesterol checks, and bone densitometry screenings more regularly than mammography and Pap smear screening. Responses to the research questions revealed the participants' previous Pap smear experiences of fear, discomfort, feeling of rushed, and perceptions of humiliation, invasion of privacy, and uneasiness with male gynecologist toward cervical cancer screening including HPV vaccination option.

Research Question 1: Health Perception

The participants revealed and explored their health beliefs through the lens of Korean culture. Culture is a powerful, comprehensive, dynamic, and multifaceted construct that influences people's beliefs, attitudes, and behaviors (Miyagi et al., 2014). Compared to Koreans living in Korea, the health risk of Korean-Americans living in Hawaii is influenced by different lifestyles, diets, work-related factors, and various family and social support systems. Based on their traditional perceptions of Korean women's health, the importance of blood and kin relationship are stressed (Ock, 2015). For example, the participants in this study assumed there were special health correlations between their mother, sisters, and aunts. One participant commented, "I do not worry about getting cancer because my mother has excellent health without any history of cancer" (age 24). Another participant commented, "I finally decided to go to see my doctor for a cancer screening because my sister had breast cancer before, and I should listen to her health advice to get cancer screening" (age 32).

Table 6

Summary of Health Perception

Category	Subtotal (n)	Percentage (%) <i>N=20</i>
----------	--------------	----------------------------

Health Condition		
Good	10	50
Fair	7	35
Poor	1	5
Not sure	2	10
Preferred a Korean Physician		
Yes	7	35
No	13	65
Preferred a MD who speaks Korean		
Yes	11	55
No	9	45
Preferred a female Gynecologist		
Yes	13	65
No	7	35
Health Insurance		
Yes	18	90
No	2	10
Healthcare Service Payer Source via health insurance		
Employer	6	30
Spouse's job	2	10
Self	6	30
Government	4	20
Parents	1	5
N/A	1	5
English Proficiency		
Basic	6	30
Short conversation	7	35
Fluent	7	35
Awareness of definition of Pap smear		
I know	13	65
Not know	6	30
N/A	1	5

The most important emerging themes in the interview data related to factors influencing participants' perceived susceptibility, perceived benefits, perceived barriers, and women's health knowledge. For example, one participant commented,

I did not want to have the Pap smear test for many years even though my health insurance covers the cost because I felt that I do not need it. When my healthy

sister was diagnosed with breast cancer last year, I was scared that anyone can have a cancer. I regretted that I have avoided the Pap smear test and the mammogram all this time. Now I do the tests routinely. These cancer screening were suggested by my doctor, and the cost was covered by the insurance (age 41).

Perceived susceptibility relates to participants' beliefs that they were not susceptible to cervical cancer due to their healthy lifestyles and diets, routine physical exercise, and good conduct. Those who perceived themselves as susceptible to cervical cancer were reluctant to express that their assumptions were related to unsafe sexual activity with multiple partners. Perceived benefits that arose when some of the participants visited Korea to receive a full health check-up including cervical cancer screening-with or without Korean government insurance- which is much more affordable than paying for U.S. health insurance coverage. There were a number of perceived barriers, including participants' unawareness of needs, widespread distrust of U.S. healthcare systems and doctors, unkind healthcare providers, limited English language proficiency, financial burdens, and personal discomfort when positioned for a cervical cancer test. Finally, limited knowledge of the cause of cervical cancer made participants more susceptible to accepting incorrect knowledge and cultural myths. This knowledge issue was amplified by the difficulty participants faced when attempting to access health information resources.

Korean women are more vulnerable to feel the stresses of adhering to social norms and avoiding stigma related to their body weight and shape (Brewis, Han, & SturtzSreetharan, 2017). According to Y.S. Yoon and Oh (2017), the increasing

prevalence of Body Mass Indexing (BMI) in Korea has identified changes in Korean women's obesity trends linked to lifestyle and dietary habits across 2003 and 2013. The BMI of Koreans, however, remains in the relatively low to acceptable ranges as compared to other developed countries. Interestingly, almost all of the interview participants who were without current medical problems appeared to be slim or within average body shape- certainly within what the BMI would consider an acceptable range- but only 50% of the participants (n=10) considered themselves to be in good health, as indicated in Figure 6.

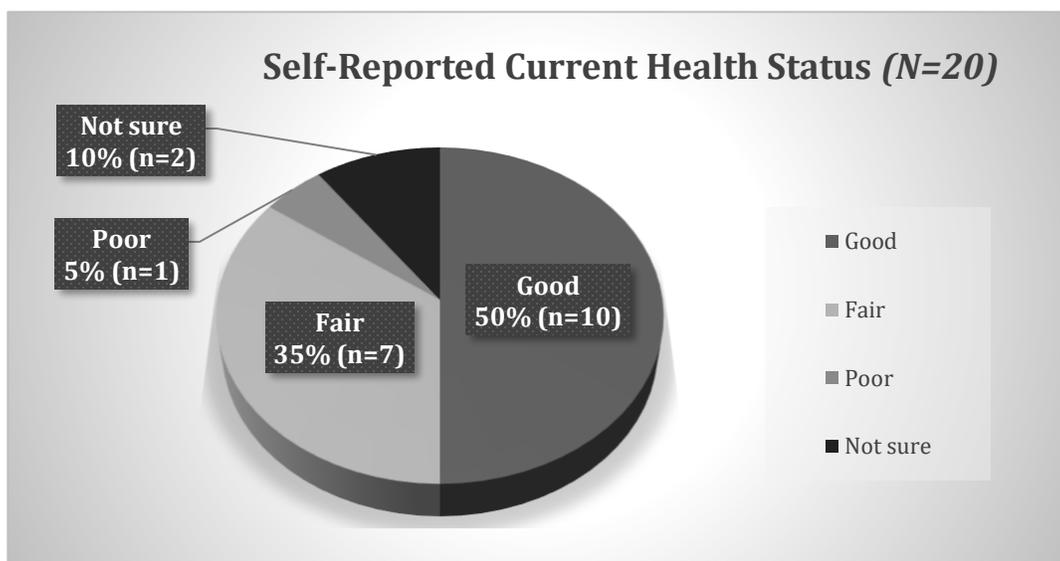


Figure 6. Self-reported current health status

Recently the health perception regarding women's cancer-preventive cares significantly well-discussed among close friends and relatives even though KIW's health expectations related to their physical appearance seems to be the important concern in their culture. Most of the participants alluded to their desire to lose weight, even when interview questions were not related to their physical appearance or the body weight. For

example, one participant exclaimed, “I need to lose weight, and I have been struggling to lose weight for years. I do not go to see the doctor because he might point out my weight” (age 36).

Significantly, 65% of the participants (n=13) prefer a female gynecologist, but only 35% of the participant (n=7) prefer Korean-speaking physicians for women’s health issue and the Pap smear test. The factor of having a female gynecologist for women’s health issue is more important than Korean-speaking physician. For example, one participant commented, “I feel very uncomfortable to discuss my gynecology issue with a male physician. I do not mind talking to American physician, but I prefer female gynecologist. Unfortunately, I do not find any female gynecologist here in Hawaii. It is the reason why I go to Korea to receive gynecology treatment” (age 52). Another participant also revealed that:

The Korean community in Hawaii is pretty small. We mostly know each other, and we have the only a handful of Korean doctors. I do not want to go to the Korean doctors for a Pap smear because it is an invasive procedure that makes me uncomfortable. I also do not want to answer confidential information like how many sexual partners I have had or whether I have multiple sex partners to Korean doctors who may know my family or me (age 47).

The study participants had varying levels of English language proficiency. 30% stated they speak English at a basic level; 35% are able to speak using short sentences; and 35% are able to speak English fluently. A participant reported:

I only speak a basic level of English and am afraid of going to the doctor's office. I usually bring my friend to go to doctor's office, but it is very inconvenient. It is a reason why I go to Korea during summer vacation to get the health checkup together. Even without the National health insurance, the medical cost is still affordable as a visitor. I also receive some medical treatment in Los Angeles where there are several Korean hospitals. I wish we have a Korean female doctor in Hawaii (age 55).

In 2015, approximately 52% of Korean immigrants reported limited English proficiency, compared to 49% of the overall foreign-born population (Zong, & Batalova, 2017). Korean and Chinese elders are especially vulnerable, as poor English proficiency is associated with poorer health outcomes such as non-compliance of medication regimen, mistrust of treatment plan, and missing follow-up appointment compared to the national norms (Mui, S. Y. Kang, D. Kang, & Domanski, 2007). 35% of the participants (n=7) reported that they did not know what a Pap smear test was, nor its purpose. A participant, for example, stated:

I have heard about the Pap smear test before, but it is difficult to understand the medical term both in English and in Korean. I was able to understand when my gynecologist explained what it is with a picture. I am glad that I have the gynecologist who speaks Korean (age 23).

65% of participants (n=13), however, reported that they had heard of the Pap smear test minimally or had previously received the screening without fully understanding the test. Cervical cancer screening literacy is a factor that contributes to

KIW avoidance of routine Pap smear testing (H.R. Han et al., 2017). Generally, KIW feels comfortable with male physician for general medical services that they perceive more authority and trust from male dominant medical field in Korea. For women's health issue, however, KIW prefer female physicians. As cultural- and gender-specific cancer screening intervention increases the cancer screening rate among KIW (H. Y. Lee, Ju, Vang, & Lundquist, 2010), KIW in Hawaii also need female gynecologist for the Pap smear test and the follow-up service of women's health issue.

Research Question 2: Health Behaviors

The cancer screening rates of KIW are far below the overall rates of U.S. citizen. Relatively speaking, KIW have lower breast and cervical cancer screening rates, higher breast and cervical cancer prevalence, and lower survival rates than other ethnic groups in the United States (Ma, Shive, Wang, & Tan, 2009). In many studies, KIW's cervical cancer screening compliance, such as the Pap smear test, is significantly lower than non-Hispanic white, Hispanic-Latino, and American Indian/Alaska Native (Wang, Carreon, Gomez, & Devesa, 2010).

Although almost all of the participants (85%, n=17) in this study perceived their health condition as fair to good and believe that the cancer screening is an essential preventive measure, they are concerned about language barriers and financial burdens. The desire for free or inexpensive screening services that are primary reasons KIW visit Korea to receive the cancer screening and other healthcare services. Notably, one of the participants reported that "I envy Koreans in California and New York where they can get the medical services through cash payment and kind customer services by Korean

staffs. There are many female providers and Korean gynecologists as well” (age 33).

Although obstetrician-gynecologists (OB-GYNs) are the fourth largest group of healthcare physicians dedicated solely to women’s health care (Tessmer-Tuck, & Rayburn, 2015), the number of available female OB-GYNs is limited in Hawaii.

Table 7

Summary of Health Behaviors

Category	Subtotal (n)	Percentage (%) <i>N=20</i>
A Recent visit to a Physician		
< 6 month	12	60
6 month – 1 yr	6	30
2 yrs – 5 yrs	1	5
> 5 yrs	1	5
A Recent visit to a Gynecologist		
< 6 month	8	40
6 month – 1 yr	7	35
2 yrs – 5 yrs	2	10
Not seen	3	15
Routine Check-up of General Health Screening		
Yes	11	55
No	5	25
No answer	4	20
Visit Korea for General Health Service		
Yes	4	20
I would	4	20
No	12	60
Access Health service in English		
By myself	13	65
Bring a friend	6	30
Request a translator	0	0
N/A	1	5
Primary Source of Health Information		
Mass media	6	30
Family/Friends	9	45
Local health clinics	5	25
Last Pap Smear Screening		
< 6 months	5	25
6 months – 1 yr	3	15
1 yr – 3 yrs	8	40

3 yrs – 5 yrs	1	5
Never Done	3	15
Routine Pap Smear Screening		
Yes	13	65
No	6	30
Never done	1	5
Awareness of HPV vaccination		
Yes	13	65
No	7	35

While cervical cancer prevention behaviors have been investigated in various studies, many people do not engage in cancer risk-reduction behaviors nor routine screening. According to Sentell and Braun (2012), cancer prevention beliefs and limited health literacy may undermine cancer prevention behaviors. Misguided cancer prevention beliefs are influenced by myths such as (a) the prevention is not possible; (b) cancer is fatal; (c) there are too many recommendations for cancer prevention; and (d) after all everything causes cancer (Sentell, & Braun, 2012). The interview participants shared similar problematic cancer prevention beliefs: this is dangerous because health perceptions influence health behaviors, as illustrated by the emerging patterns among KIW.

A majority of the participants reported that 60% of participants (n=12) visited their primary physician regularly and the recent visit was less than 6 month ago. 40% of the participants (n=8) visited gynecologist for general women's health issue less than 6 months ago. 65% of the participants (n=13) reported that they had received a Pap smear screening and are aware of the HPV vaccination. 15% of the participants (n=3), however, had the Pap smear test even though they were at risk age group for cervical cancer. 45% of the participants (n=9) had the Pap smear test more than a year ago that they did not

engage routine Pap smear test. A participant stated, “I go to the doctor whenever I need, but I do not want to go to see a doctor just for the Pap smear screening” (age 43). Despite cervical cancer being identified by the CDC (2017) as a highly preventable female cancer with regular screening tests and follow-up, there has been an overall small, decreasing trend in women who report having had a Pap smear test within the past three years (Klabende, Brown, & Ballard-Barbash, 2012).

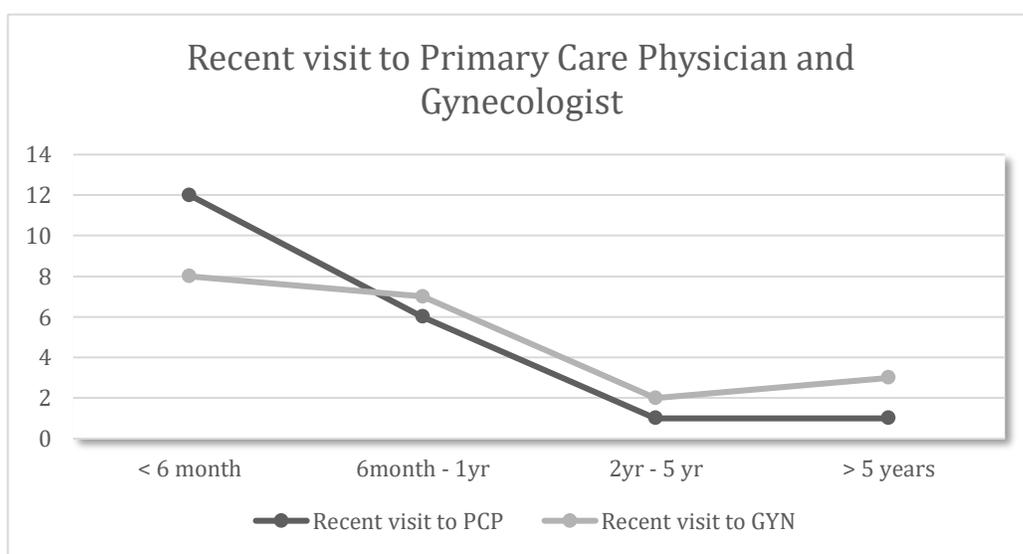


Figure 7. Recent visit to physician and gynecologist

A majority of the participants who lived in the U.S. and Hawaii longer than five years have received regular physician check-ups including gynecologist services. Language ability was a contributing factor, as these participants have English language proficiency, though their abilities range from excellent to little. This pattern aligned with the findings of Juon, Seo, and Kim (2002), who found that Korean American women who have excellent or low English ability are at 2.91 times greater odds of having a Pap smear than those with no English proficiency. Another study suggested that higher levels of

acculturation are associated with increased cervical cancer screening rates among Asian women population in the United States (Lee, Ju, Vang, & Lundquist, 2010). 40% of the participants reported that they go, or would prefer to go, to Korea to receive the Pap smear screening and wellness check-ups. They stated that they would like to take advantage of Korean National Health Insurance Services for wellness check-ups and preventive care services in Korea, which covers health care services through relatives' health insurance or are at affordable rates for visitors to Korea. A participant reported:

Especially I love to get dental services in Korea, particularly, dental surgery and implant services. The cost was much affordable in Korea than America. I also love to get all cancer screening in Korea that I can utilize my family and relatives' the Korean government health insurance (age 28).

A study by Carrasquillo and Pati (2004) showed that the relationship between acculturation and having a recent Pap smear screening with respect to U.S health insurance is complicated, which explains why the screening rate is significantly lower among uninsured foreign-born women as compared to their uninsured U.S.-born counterparts. In this study, however, the participants argued that the cost of health insurance was not as prominent of a barrier as other studies suggest. One participant explained:

I do have health insurance and money to pay for the Pap smear test. I have lived in Hawaii for more than ten years and spoke English well. The reason I avoid to go to the doctor for the Pap smear because my doctor is a male that I do not feel comfortable to have an invasive procedure by the male doctor (age 60).

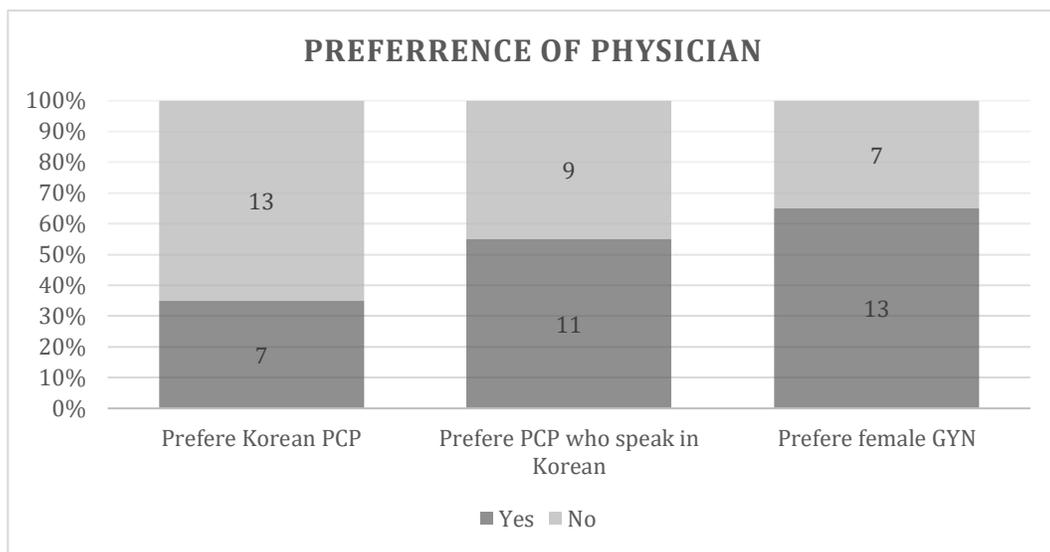


Figure 8. Preference of physician

Despite having U.S. health insurance, English proficiency, and longer years of living in Hawaii, 40% of the participants had not engaged with the routine Pap smear test, even when they understand the importance of cancer screening and prevention measures. Non-compliance of Pap smear testing appears to be strongly related to KIW perceptions and culture. The findings of Y. S. Lee and researchers' (2012) study, which reported an association between length of residency and cervical cancer among Korean Americans, appears to be insignificant in the context of this study.

Barriers and Challenges

Although Korean Americans represented only 9.2% of the Asian American and Pacific Islander population in 2010, the Korean American community constitutes one of the fastest growing Asian sub-ethnic populations in the United States (U.S. Census Bureau, 2012). Variation in educational level, annual income status, English proficiency, and health care access have been proposed as an explanation for cancer screening rates

among Asian American subgroups (Ma, Shive, Wang, & Tan, 2009). The low compliance rates of cervical cancer screening among KIW, however, can be explained by their cultural beliefs and attitudes toward the cancer screening and prevention measures. According to J. Kim, M. Kim, Han, and Chin (2015), cultural barriers and attitudes are factors that influence low rates of cancer screening among Korean Americans. Obviously, insurance, or lack of, is not a factor for KIW in Hawaii; however, the participants agreed on other factors such as language and financial barriers, lack of time, limited availability of female physicians, limited resources, and participants' unfamiliarity with U.S. healthcare system. A table illustrating the most pressing health barriers and challenges is included below.

Table 8

Summary of Health Barriers and Challenges

Category	Subtotal (n)	Percentage (%) N=20
Health Barriers (multi responses, relative ratio)		
Language barriers	8	27.5
Financial barriers	4	13.7
No time	6	20.6
Not available female doctors	5	17.2
Limited resources	2	6.8
No insurance	1	3.4
Not familiar with the US system	3	10.3
Reason to Avoid a Routine Pap Smear		
Not available a female GYN	6	30
Not available a Korean GYN	3	15
Done in Korea	2	10
Limited English	2	10
No insurance	1	5
Other	6	30

Learning Style		
Korean (video, flyer)	13	65
English (video, flyer)	5	25
Picture		
Routine Pap Smear		
Yes	13	65
No	5	25
Not sure	2	10
Health Needs Regarding Pap Smear (open responses)		
Korean female GYN	5	25
Easy access	3	15
Convenient location	2	10
More information	2	10
Language service	2	10
Reminder system	1	5
Health insurance	1	5
Not need at this time	4	20

Many studies have examined health disparities associated with demographic characteristics of Asian Americans and revealed inadequate data related to each Asian subgroup's cultural values, socio-interconnection, and health beliefs that may influence their cancer screening decisions (Daley et al., 2011). Discomfort, posture, and invasiveness of the Pap smear test did not seem to prevent the participants from scheduling the screening. Particularly, middle aged and older KIW reported sentiments like:

I prefer to go to Korea to get a medical package for head to toe check-up every other year. It costs to travel expenses, but I love to take advantage of cash services in Korea. Hospital staffs are extremely kind and nice, and they treat me like a VIP in the hospital. I also love to receive medical advice by not only regular doctors but also Korean traditional herb doctors. I can do travel and the medical service in Korea at the same time during my vacation trip (age 33).

Another participant reported, “I prefer a female gynecologist because it is so embarrassing to lay down to open legs for the test by a male doctor” (age 29).

Living in a different country generally evokes a variety of different daily experiences which may prove both challenging and frustrating. Korean women typically do not visit gynecologists until they marry or are pregnant (K. Kim, S. Ahn et al., 2018). One study argued that fear of cancer and fatalism are believed to be higher in ethnic minorities and may contribute to lower engagement with cancer prevention and early detection interventions (Vrinten, Wardle, & Marlow, 2016). Cancer fear and fatalism are more prevalent among less acculturated KIW (M. Kim, J. A. Sim et al., 2016). In KIW living in Hawaii, a fear of cancer came from a lack of awareness. Emotional barriers such as fear, shame, and embarrassment and the practical barriers such as lack of time, financial limitations, and the limited availability of female gynecologists are issues that influence no-compliance of routine Pap smear testing among KIW. According to Marlow, Waller, and Wardle (2015), the emotional barriers seemed to be more prominent among Asian women, as well as the cultural belief and shame of having sex outside of marriage.

Most participants in the study were knowledgeable about the seriousness of cervical cancer and were confident that the Pap smear screening test and the HPV vaccination were essential. Another study showed, however, that typical cancer screening invitations may not be effective for populations of minority women, and that exploring ethnic minority women’s preferences for an authority of medical recommendation by the physician is needed (Marlow, Meisel, & Wardle, 2017). Based on the cultural beliefs of

KIW-who value family and kin- group interventions with family and friends (S. Y. Lee & E. E. Lee, 2018) could be an option to overcome some of the barriers. Another option included the use of various innovative information delivery methods. For example, offering educational information via participants' native language-including flyers, videos, and interactive activities- would fulfill the need of KIW's varying learning preferences.

Strategies for increasing participation in cervical cancer screening and engagement of medical follow-up in a cancer screening program are essential to reduce the cancer mortality rates. The low rates of cervical cancer screening among KIW in Hawaii, however, appeared to be strongly related to the limited availability of female gynecologists. Culturally responsive interventions should be employed to address the health needs and health-related factors of KIW. By tailoring healthcare to meet Hawaii's diverse population, it may be possible to improve KIW motivation and participation in cancer screening and prevention programs.

Evidence of Trustworthiness

To strengthen the evidence of trustworthiness, a careful review of this study was conducted by the Walden University Institutional Review Board (IRB) prior to data collection. Before an informed consent form was signed, written information in both English and Korean-with reinforced verbal explanations- provided in Korean, the sample's native language-was given to the participants about the purpose and procedures of the study, protection of privacy, and confidentiality. The interview participants reviewed the informed consent and signed if they agreed to follow the provided

instruction. A pre-screening of participants, to ensure that the prospective recruits met eligibility requirements, was conducted via a phone conversation when the interested participants contacted the researcher. There was a possibility of researcher bias due to the fact that many people in Hawaii's small local Korean community know one another; however, the researcher mitigated this possibility by excluding participants whom she personally knew. The purpose of this approach was to ensure an unbiased environment wherein the interview and interviewee relationships would not influence participant responses.

The data, including raw data (questionnaires and interviews) and electronic NVivo data, were kept in a double-locked area as described within the IRB proposal. The researcher's contact information was given to the participants for any follow-up comments or requests. The researcher explained that participants could refuse to answer any questions and were free to withdraw from the interview at any time if they felt uncomfortable. The researcher did not ask the participants' personal information beside demographic questions. To mitigate against researcher's bias, and thus enhance trustworthiness and credibility, the researcher anonymized the interview data by randomly assigning each participant to number before the interview audio recording were transcribed. This process enabled the researcher to approach the qualitative data analysis in as unbiased a way as possible. The researcher did not alter, modify, or falsify of any of the raw data.

Results

A total of 20 KIW study participants who were selected from a purposeful sample ranging across age, years living in the U.S. and in Hawaii, educational level, annual income, and employment status were invited to an individual interview session of the pilot study to learn more about their cervical cancer screening perceptions, behaviors, and barriers. The general characteristics of participants' demographic data are displayed in Table 4. The health perception of cervical cancer screening based on previous or current behavior as well as health decision on routine Pap smear related to Korean culture was examined. Ethnically- specific recommendations were made to improve KIW Pap smear screening rates and medical follow-ups.

Although mammogram is one of well-practiced cancer preventive screenings among Korean women, the main perception regarding cervical cancer screening, the Pap smear, was related to Korean culture closely that KIW participants of the study felt fear, discomfort, humiliation, and anxiety against painful invasive procedure. KIW, however, believed that they were not susceptible of cervical cancer because they have maintained healthy physical appearance, diet habit, and socially-accepted sexual activity.

The perception of cervical cancer influenced the health behaviors of KIW. KIW participants of the pilot study preferred a female gynecologist for women's health issue as well as invasive Pap smear test and preventive care screening. Due to limited female gynecologists available in Hawaii, KIW go or would go to Korea to receive women's health screening and check-ups. Lacking female health providers for women's health issues also caused avoidance or non-compliance of follow-ups cancer maintenance. Most

of KIW participants did not consider the health insurance or healthcare cost as barriers or challenges. They believed that lack of female gynecologist, unkind healthcare staff, lack of innovative resources were barriers and influenced non-compliance of Pap smear testing rates.

Summary

Cancer imposes one of the most significant health burdens in terms of morbidity and mortality among Korean Americans. A Pap smear screening test can reduce the risk of cervical cancer, yet cancer screening rates among KIW remain low. There was significant awareness of the purpose of Pap smear test and the HPV vaccination and yet hesitancy in attending for the screening. Through the lens of Health Belief Model, Koreans' cultural beliefs in low susceptibility to cervical cancer was a more prominent barriers than lack of health insurance and limited resources while other minority sub-ethnic population's low Pap smear testing rates are correlated with no health insurance or lack of limited resources. The significance of cultural influence on the health behavior influenced KIW participation in Pap smear testing and plays an important role in explaining cancer screening disparities across racial and ethnic groups. Social connections and blood-related relationship also appeared to affect KIW's health decisions, as they often share their personal experiences in healthcare services to suggest each other's choice. Because young Koreans tend to be early technology adopters, they are more receptive to innovative healthcare communication methods. Medical information, including follow-up medical checks, should be disseminated in innovative ways such as a web-based blogs, YouTube, Facebook, Instagram, and Twitter.

Further, despite the travel cost, KIW were willing to travel back to Korea for an annual medical checkup. Compared to the U.S., Korean healthcare is affordable to everyone, and has added benefits including greater quantities of female gynecologists and Korean speaking physicians. Offering greater number of female gynecologists or nurse practitioners in Hawaii's local clinics may encourage KIW to increasingly engage in routine Pap smear screening. Finally, a variety of multi-level socio-ecological intervention may improve Pap smear screening rates among KIW in Hawaii.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to understand how Korean immigrant women's (KIW's) health perceptions of cervical cancer screening and the HPV vaccination might influence their health behaviors to engage in routine screening and preventive measures. I also explored participants' barriers and challenges to follow-up health management of cervical cancer screening. Identifying health behaviors and barriers based on cultural aspects, particularly health behaviors and barriers to reduce cervical cancer screening participation, may improve compliance with screening and follow-up management preventive measures.

According to the American Cancer Society (2018), an estimated 13,240 new cases of invasive cervical cancer will be diagnosed in the United States in 2018. The Pap smear test is an effective screening method in detecting early stage precancerous cervical cells (National Cancer Institute, 2018), and its implementation has proven to significantly reduce cervical cancer deaths and promote cervical cancer prevention measures in the United States. Despite these favorable outcomes, the Pap smear screening test rate among KIW is significantly lower than other minority ethnic groups (L. A. Marlow, Meisel, & Wardle, 2017).

The purpose of this study was to identify the perceptions and experiences of KIW regarding cervical cancer screenings and barriers and challenges, with the goal of identifying culturally responsive interventions that may encourage KIW to participate in routine health checkups. Understanding the cultural backgrounds and social norms influencing health practices is critical to identifying how Pap smear screening programs

in Hawaii can be tailored to better serve diverse constituents and thereby reduce cervical cancer mortality rates among KIW in Hawaii.

Interpretation of the Findings

Findings from the study revealed that KIW (a) have a gender preference of physicians when it comes to women health issues; (b) were highly motivated to maintain physical health, including prevention; (c) preferred culturally appropriate community-based cancer prevention programs; and (d) expected innovative health maintenance approaches. Koreans tend to prefer older male physicians for their general medical services (Chee et al, 2016). For women's health issues, however, participants in the study revealed that they preferred a female gynecologist and Korean-speaking physicians. KIW participants reported feeling more supported by and close to female gynecologists when receiving medical advice including encouragement of cervical cancer screening. According to Levy and Janke (2016), acculturation and health literacy predicted health care access and compliance with follow-up health maintenance engagement in cancer screening behaviors. The study findings supported that KIW who have lived in Hawaii and/or United States longer than 5 years tend to engage more with cervical cancer preventive measures including the follow-up maintenance.

Generally, KIW face with similar physical risk factors compared to other Asian populations (T. D. Le et al., 2014). However, psychosocial risk factors such as cultural beliefs about cancer causation, including God's will, fate, or punishment as a result of conduct stemming from Korean culture and its associated health practices, may differ. KIW in Hawaii experience numerous challenges and barriers when accessing health care

services for preventive measures. Hawaii had one of the lowest uninsured rates at 3.53% (Mai, 2017) compared to the national average of 11.7% in the United States in 2017 (Gallup Report, 2017). Similar to the residents in Hawaii, most of the study participants were currently insured and revealed that health insurance was not a contributing factor to their avoidance of cervical cancer prevention measures. The study findings showed that KIW were prepared to pay for health services in cash if they are without health insurance, and they were willing to fly back to Korea to receive annual health checkups including various cancer screenings at an affordable price. Korea is emerging on the global health care market as the country that offers quality health care services including diagnostic tests with advanced medical technologies at relatively affordable costs (EU Gateway, 2016). Many Asian health care consumers visit Korea for plastic surgery. Korea holds a quarter of the world's market share in the plastic surgery industry, valued at 9 trillion Korean Won (EU Gateway, 2016).

For KIW, like other nonnative English speakers, the linguistic barriers negatively influenced access to health information, including awareness of the option for vaccines that protect against HPV infection. Almost all cervical cancers are caused by direct or indirect persistent infection with certain types of HPV even though HPV infections are common in healthy women and rarely advance to serious cervical cancer (Young, 2010). The ACS (2018) reported that regardless of whether a woman has one or multiple sex partners, there is a likelihood of being affected by HPV via various unknown causes. Increasing risk of persistent HPV infections and progression to cervical cancer may be related to suppression of the immune system, cigarette smoking, long-term use of oral

contraceptives, and multiple childbirth (ACS, 2018). The HPV causes almost 90% of cervical cancers, in addition to other diseases and cancers. Physicians recommend administering HPV vaccinations to teenagers between the ages of 11 and 12, though it is available for use in young teen and adults between the ages of 9 and 26 (Relter et al., 2014). The CDC (2016) recommended two doses of the HPV vaccination for individuals ages 9 to 14, and three doses for those ages 15 to 26.

The HPV vaccination rate is still low, particularly for the ethnic minority population (W. W. Williams et al, 2017). In 2016, only 36% of U.S. girls received the HPV vaccination by age 13 (Smulian, Mitchell, & Stokley, 2016). Most precancerous cervical cancer conditions develop slowly. Therefore, routine screening is essential to detect cervical cancer and to prevent further degradation of health. All women, regardless of whether they received the HPV vaccination, should engage in routine Pap smear testing as directed by cervical cancer screening guidelines (Cartmell et al., 2018).

In terms of culturally appropriate health care approaches, most studies indicated that a health care coordinator who assists with routine cancer screening, reminders, educational resources, and follow-up visits would be beneficial (Natale-Pereira, Enard, Nevarez, & Jones, 2011). The health care coordinators or community health workers who speak the same language as service recipients assist minority elders with culturally sensitive interventions (Verhagen, Steunenbergh, Wit, & Ros, 2014) and ensure health care service engagement. Typical linguistic services or interpreters are not sufficient because they are available only on an intermittent basis and do not include important factors of education and follow-ups. Community-based cervical cancer screenings at local

community health centers are effective for ethnically diverse women (Tiruneh, Chuang, Ntenda, & Chuang, 2017). A multicomponent intervention combining individual and community-based cancer prevention education with navigation services yielded significant increases in cervical cancer screening rates among Korean American women in the United States (C. Y. Fang et al., 2017).

Finally, using innovative Internet-based approaches, such as Korean web blogs, social networks, podcasts, and YouTube, to disseminate cancer prevention information may yield a greater response from KIW, especially in younger generations that are more adept at technology (Song et al., 2016). Jeong, Cha, and Lee's (2017) study showed the effectiveness of STI education and prevention education on Korean young adults using internet-based smartphone application. Another study showed that culturally competent Internet cancer support groups influence positive health outcomes and improve health compliance for Korean young adults (Chee et al., 2016).

Limitations of the Study

This study had several limitations. The research about KIW's health perceptions, health behaviors, and health barriers regarding cervical cancer screening and prevention measures was limited to a small sample of 20 interviewee data. The self-reported data analyzed for this study represented the perceptions and behaviors of KIW in Hawaii and may not represent all Korean Americans in other states. Furthermore, given the inclusion and exclusion criteria, findings may not reflect the health behaviors of all KIW across all Hawaiian Islands. The Korean community in the state of Hawaii is relatively small,

which is why this study included participants living on the main island of Oahu and did not include KIW living on other islands across Hawaii.

Some studies have shown that there may be discrepancies between self-reported data and the actual records of cancer screening tests (Dodou, 2014). The responses received from the participants regarding their cervical cancer screening behaviors may not have been accurate due to their lack of awareness of relevant health information or their preference to keep certain personal information private. For example, during the interview, some participants may not have been forthcoming about their actual health behaviors or may have responded to the interview questionnaire with what they considered a socially and culturally acceptable response. These response biases may have led to under- or overestimations of KIW's health behaviors of cervical cancer screening and prevention measures. The participant who did not disclose her hysterectomy during the prescreening phone conversation reported her hysterectomy at the end of the one-on-one interview. She responded to questions related to Pap smear test with "not applicable," "not sure," and "not need at this time" because she did not have risk factors to develop cervical cancer.

Language barriers may have also resulted in inaccurate interview data because participants may have acted as though they fully understood the interview questionnaires, including simple medical terms. According to Genoff and researchers (2016), bilingual Korean Americans may pretend to understand English fluently to meet social standards. This may result in significant deficiencies in health literacy. To mitigate this threat, I used materials and resources prepared in both Korean and English, including the informed

consent and interview questionnaire. I am bilingual, which enabled me to explain confusing concepts in Korean to the participants. Despite this advantage, it was possible that the participants may not have reported misunderstood interview questions. Despite these limitations, the participants' narrative descriptions of their health perceptions and health behaviors provided unique cultural insights regarding cervical cancer screening and prevention measures. The study offers a framework to inform health providers and policymakers on culturally responsive approaches for increasing cervical cancer screening rates among KIW.

Recommendations

I recommend that health care services implement community-accessible bilingual prevention programs to increase cervical cancer screening rates among KIW. Fang, Ma, & Tan (2011) recommend a multicomponent intervention. The goal of the intervention is to connect community cancer education with navigation services to promote increased rates of Pap smear testing and cervical cancer screening among KIW.

Another important element of any community-based prevention approach is emphasis on the targeted ethnic and cultural minority population. For example, in establishing such an intervention for KIW, the inclusion of community-based organizations and association such as Korean churches, Korean markets, Korean social clubs, and fellowship and community centers would be a culturally responsive way to reach the targeted population and both educate and to empower them to engage in a routine cancer prevention program and commit to long-term preventive measures.

Another important cultural consideration stems from KIW's preference for family healthcare providers –particularly for women's health issues -- Korean speaking providers for general medical services. As female Korean healthcare providers for women health issue are limited in Hawaii, Korean speaking healthcare navigators or care coordinators can be a feasible option to consider. Partnering with community-based organizations linguistically- and culturally appropriate healthcare staff may help to develop stronger provider-patient relationships, an essential for long-term commitment to cancer prevention behavior (Guvenc, Akyuz, & Acikei, 2011).

Lastly, I recommend that health information delivery methods be tailored to meet the needs and desire of our diverse constituents. Korean web blog, websites, Korean YouTube channels and social network services are innovative mediums through which healthcare providers can connect with KIW. This is especially relevant as many Koreans are early adopters of new technological trends and tend to value social connections on or off-line.

Implications

This study suggests that KIW tend to share healthcare information and alter their patterns of behavior regarding cervical cancer screening and preventive care measures to align with cultural norms and social expectations. To capitalize on these social implications, Hawaii could adopt culturally-responsive cervical cancer screening approaches across tis 14 Federally Qualified Healthcare Centers (FQHC). These local FQHC offer preventive screenings and follow-up services for minority populations with limited healthcare insurance, low socioeconomic status, and linguistic barriers; with

carefully planned interventions—including partnerships with cultural—and community-based organizations, the use of navigators, increased numbers of female and bilingual healthcare providers, and innovative communication approaches—it may be possible to better empower KIW and other minority immigrant women to increasingly engage in women's health practices in the U.S. In this regard, culturally- and ethnically-responsive prevention approaches may help Hawaii's State Department of Health to achieve its goals of improving the mortality and morbidity rate of diverse minority populations, including that of Native Hawaiians.

Conclusion

Significant health disparities in cervical cancer mortality and incidence rates exist among KIW. Asian American women have one of lowest cancer screening rates and the least attention given in cancer-related research, despite their being the fastest growing populations in the United States (Steele, Townsend, Tai, & Thomas, 2014). Cancer screening disparities among KIW in Hawaii have been attributed primarily to the population's lack of knowledge about the U.S healthcare system, lack of access, limited resources regarding cervical cancer screening in Korean, cultural and psychosocial beliefs, lack of female and Korean-speaking providers, and access barriers such as language and health insurance.

This pilot study suggests the new intervention—specifically those involving community-based cultural approach with bi-lingual intervention—can be developed to increase KIW cervical cancer screening rates and follow-up commitment to maintain routine testing. It is important to note, however, that providing educational interventions

without addressing access barriers may not yield sufficient results. Hence, public health interventions that emphasize the access to community-based facilities, community health navigators or community care coordinators (individuals including lay health workers with culturally and linguistically-appropriate approaches) may enhance effective cervical cancer screening rates and positive health outcomes. These important findings of the study should motivate more research for future interventions to increase Pap smear and HPV vaccination awareness and to address health disparities among minority population.

References

- Acar, G. B., & Pinar, G. (2015). Perspectives of women during reproductive years for cervical cancer scans and influencing factors. *Asian Pacific Journal of Cancer Prevention, 16*(16), 7171-7178. PMID: 26514508
- Ackerson, K. (2010). Personal influences that affect motivation in Pap smear testing among African American women. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 39*(2), 136-146. doi: 10.1111/j.1552-6909.2010.01104.x.
- Aggarwal, N. K., Nicasio, A. V., DeSilva, R., Boiler, M., & Lewis-Fernandez, R. (2013). Barriers to implementing the DSM-5 cultural formulation interview: a qualitative study. *Cultural Medical Psychiatry, 37*(3), 505-533. doi: 10.1007/s11013-013-9325-z.
- American Cancer Society. (2017a). Key statistics for cervical cancer. Retrieved from <https://www.cancer.org/cancer/cervical-cancer/about/key-statistics.html>
- American Cancer Society. (2017b). What is cervical cancer? Retrieved from <https://www.cancer.org/cancer/cervical-cancer/about/what-is-cervical-cancer.html>
- American Cancer Society. (2018). Cancer facts & figures 2018. Retrieved from <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2018/cancer-facts-and-figures-2018.pdf>
- Andreeva, V. A., & Pokhrel, P. (2013). Breast cancer screening utilization among Eastern European immigrant women worldwide: a systematic literature review and a focus on psychosocial barriers. *Psychooncology, 22*(12), 2664-2675. PMID: 23824626

- Babazadeh, T., Nadrian, H., Rezakhani Moghaddam, H., Ezzati, E., Sarkhosh, R., & Aghemiri, S. (2018). Cognitive determinants of cervical cancer screening behavior among housewife women in Iran: An application of health belief model. *Health Care for Women International, 39*(5), 555-570. doi: 10.1080/07399332.2018.1425873
- Bazargan, M., Lucas-Wright, A., Jones, L., Vargas, R., Vadgama, J.V., Evers-Manly, S., & Maxwell, A. E. (2015). Understanding perceived benefit of early cancer detection: community-partnered research with African American women in South Los Angeles. *Journal of Women's Health, 24*(9), 755-761. doi: 10.1089//jwh.2014.5049
- Bebis, H., Reis, N., Yavan, T., Bayrak, D., Unal, A., & Bodur, S. (2012). Effect of health education about cervical cancer and Papanicolaou testing on the behavior knowledge, and beliefs of Turkish women. *International Journal of Gynecological Cancer, 22*(8), 1407-1412. PMID: 22932261
- Braun, K. L., Thomas, W. L., Domingo, J. L., Allison, A. L., Ponce, A., Haunani Kamakana, P., Brazzei, S. S., Emmett, A. N., & Tsark, J. U. (2015). Reducing cancer screening disparities in Medicare beneficiaries through cancer patient navigation. *Journal of the American Geriatrics Society, 63*(2), 365-370. doi: 10.1111/jgs.13192
- Brewer, N. T., DeFrank, J. T., & Gilkey, M. B. (2016). Anticipated regret and health behavior: A meta-analysis. *Health Psychology, 35*(11), 1264-1275. doi: 10.1037/hea0000294

- Brewis, A. A., Han, S. Y., & SturtzSreetharan, C. L. (2017). Weight, gender, and depressive symptoms in South Korea. *American Journal of Human Biology*, 29(4). doi: 10.1002/ajhb22972
- Burdette, A. M., Webb, N. S., Hill, T. D., & Jokinen-Gordon, H. (2017). Race-specific trends in HPV vaccinations and provider recommendations: Persistent disparities or social progress? *Public Health*, 142, 167-176. doi: 10.1016/j.puhe.2016.07.009
- Campos, N. G., Tsu, V., Jeronimo, J., Myundura, M., & Kim, J. (2017). Estimating the value of point-of-care HPV testing in three low- and middle-income countries: a modeling study. *BioMed Central Cancer*, 17, 79-81. doi: 10.1186/s12885-0173786-3
- Carrasquillo, O., & Pati, S. (2004). The role of health insurance on Pap smear and mammography utilization by immigrants living in the United States. *Preventive Medicine*, 39(5), 943-950. doi: 10.1016/j.ypmed.2004.03.033
- Carter, R. T., Lau, M. Y., Johnson, V., & Kirkinis, K. (2017). Racial discrimination and health outcomes among racial/ethnic minorities: A meta-analytic review. *Journal of Multicultural Counseling and Development*. Retrieved from <https://doi.org/10.1002/jmcd.12076>
- Cartmell, K. B., Young-Pierce, J., McGue, S., Alberg, A. J., Luge, J., Zubizzrreta, M., & Brandt, H.M. (2018). Barriers, facilitators, and potential strategies for increasing HPV vaccination: A statewide assessment to inform action. *Papillomavirus Research*, 5, 21-31. doi: 10.1016/j.pvr.2017.11.003
- Centers for Disease Control and Prevention. (2011). CDC health disparities and

- inequalities report – United States. *Morbidity and Mortality Weekly Report*, 1-114. Retrieved from <https://www.cdc.gov/mmwr/pdf/other/su6001.pdf>
- Centers for Disease Control and Prevention. (2016). *HPV vaccines: Vaccinating your preteen or teen*. Retrieved from <https://www.cdc.gov/hpv/parents/vaccine.html>
- Centers for Disease Control and Prevention. (2017). *Social ecological model*. Retrieved from <https://www.cdc.gov/cancer/nbccedp/sem.htm>
- Centers for Disease Control and Prevention. (2018). *The link between HPV and cancer*. Retrieved from <https://www.cdc.gov/hpv/parents/cancer.html>
- Chang, H. K., Myong, J. P., Byun, S. W., Lee, S. J., Lee, Y. S., Lee, H. N., Lee, K. H., Park, D. C., Kim, C. J., Hur, S. Y., Park, J. S., & Park, T. C. (2017). Factors associated with participation in cervical cancer screening among young Koreans: A nationwide cross-sectional study. *The British Medical Journal Open*, 7(4), e013868. doi: 10.1136/bmjopen-2016-013868
- Chee, W., Lee, Y., Im, E. O., Chee, E., Tsai, H. M., Nishigaki, M., Yeo, S. A., Schapira, M. M., & Mao, J. J. (2016). A culturally tailored Internet cancer support group for Asian American breast cancer survivors: A randomized controlled pilot intervention study. *Journal of Telemedicine and Telecare*. 23(6), 618-626. <https://doi.org/10.1177/1357633X16658369>
- Cheruvu, V. K., Bhatta, M. P., & Drinkard, L. N. (2017). Factors associated with parental reasons for “no-intent” to vaccinate female adolescents with human papillomavirus vaccine: National Immunization Survey-Teen 2008-2012. *Bio Medical Central - Pediatrics*, 17(1), 52. doi: 10.1186/1471-2458-11-654

- Choi, J. Y. (2013a). Negotiating old and new ways: Contextualizing adapted health care-seeking behaviors of Korean Immigrants in Hawaii. *Ethnicity & Health, 18*(4), 350-366. doi: 10.1080/13557858-2012-734280
- Choi, J. Y. (2013b). Reconstruction of health-seeking behaviors: A comparative study of three Asian Pacific immigrant groups. *Qualitative Health Research, 23*(4), 517-530. Retrieved from <https://doi.org/10.1177/1049732312469731>
- Choi, S. Y. (2013). Development of an educational program to prevent cervical cancer among immigrants in Korea. *Asian Pacific Journal of Cancer, 14*(1), 333-340. Retrieved from <https://doi.org/10.7314/apjcp.2013.14.9.5345>
- Chu, H., Zeng, L., Fetters, M. D., Li, N., Tao, L., Shi, Y., Zhang, H., Wang, X., Li, F., & Zhao, Y. (2017). How novice, skilled and advanced clinical researchers include variables in a case report form for clinical research: a qualitative study. *The Bio Medical Journal - Open, 7*(9), e016760. doi: 10.1136/bmjopen-2017-016760
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Cullerton, K., Gallegos, D., Ashley, E., Do, H., Voloschenko, A., Fleming, M, Ramsey, R., & Gould, T. (2016). Cancer screening education: Can it change knowledge and attitudes among culturally and linguistically diverse communities in Queensland, Australia? *Health Promotion Journal of Australia, 27*(2), 140-147. doi:10.1071/HE15116
- Daley, E., Alio, A., Anstey, E. H., Chandler, R., Dyer, K., & Helmy, H. (2011). Examining barriers to cervical cancer screening and treatment in Florida through

a socio-ecological lens. *Journal of Community Health*, 36(1), 121-131. doi: 10.1007/s10900-010-9289-7

Danico, M. Y. (2004). *The 1.5 generation: Becoming Korean American in Hawaii*. University of Hawaii Press. Honolulu.

De, P., & Budhwani, H. (2017). Human papillomavirus (HPV) vaccine initiation in minority Americans. *Public Health*, 144, 86-91. doi: 10.1016/j.puhe.2016.11.005

Department of Homeland Security (DHS, 2016). *Office of immigration statistics: 2016 Yearbook of immigration statistics*. Washington, DC. Retrieved from <https://www.dhs.gov/immigration-statistics/yearbook/2015>

Derose, K. P., Escarce, J. J., & Lurie, N. (2007). Immigrants and health care: sources of vulnerability. *Health Affairs*, 26(5), 1258-1268. Retrieved from <https://doi.org/10.1377/hlthaff.26.51258>

Di, S. L., Ghezzi, V., Eastland, T. Y., Antonini, F., Sciaio, G., Zega, M., & Alvaro, R. (2015). Applying the theory of Planned Behavior to explain women's role in prostate cancer screening. *Research and Theory for Nursing Practice*, 29(3), 200-213. PMID: 26502556

Dodd, R. H., McCaffery, K. J., Marlow, L. A., Ostini, R., Zimet, G., & Waller, J. (2014). Knowledge of human papillomavirus (HPV) testing in the USA, the UK and Australia: an international survey. *Sexually Transmitted Infections*, 90(3), 201-207. PMID: 26502556

Dodou, D. (2014). Agreement between self-reported and registered colorectal cancer screening: a meta-analysis. *European Journal of Cancer Care*, 24(3), 286-298.

doi: 10.1111/ecc.12204

- East-West Center. (2012). Korean-American population data. Retrieved from <http://www.asiamattersforamerica.org/southkorea/data/koreanamericanpopulation>
- Ersin, F., & Bahar, Z. (2013). Barriers and facilitating factors perceived in Turkish women's behaviors towards early cervical cancer detection: a qualitative approach. *Asian Pacific Journal of Cancer Prevention, 14*(9), 4977-4982. Retrieved from <http://dx.doi.org/10.7314/APJCP2013.14.4977>
- EU Gateway. (2016). EU Gateway to Korea: Central management unit Korea market study December 2016. Healthcare & Medical Technologies – Korean Market Study, 1-81. Retrieved from <https://www.eu-gateway.eu/sites/default/files/document/file/Healthcare-Medical-Technologies-Korea-target-market-study-eu-gateway.pdf>
- Falk, D., Cubbin, C., Jones, B., Carrillo-Kappus, K., Crocker, A., & Rice, C. (2016). Increasing breast and cervical cancer screening in rural and border Texas with friend to friend plus patient navigation. *Journal of Cancer Education, 33*(4), 798-805. doi: 10.1007/s13187-016-1147-6
- Fang, C. Y., Ma, G. X., Handorf, E. A., Feng, Z., Tan, Y., Rhee, J., Miller, S. M., Kim, C., & Koh, H. S. (2017). Addressing multilevel barriers to cervical cancer screening in Korean American women: a randomized trial of a community-based intervention. *Cancer, 123*(6), 1018-1026. doi: 10.1002/cncr.30391
- Fang, C. Y., Ma, G. X., & Tan, Y. (2011). Overcoming barriers to cervical cancer screening among Asian American women. *American Journal of Medical Science,*

4(2), 77-83. PMID: 21687826

Fang, D. M., & Baker, D. L. (2013). Barriers and facilitators of cervical cancer screening among women of Hmong origin. *Journal of Health Care for Poor and Underserved*, 24(2), 540-555. doi: 10.1353/hpu.2013.0067

Ferlay, J., Seljarova-Foucher, E., Lortet-Tieulent, J., Rosso, S., Coebergh, J. W., & Comber, H. (2012). Cancer incidence and mortality patterns in Europe: estimates for 40 countries in 2012. *European Journal of Cancer*, 49, 1374-1403. doi: 10.1016/j.ejca.2009.12.04

Fernandez, M. E., DeBor, M., Candreia, M., & Flores, B. (2010). Dissemination of a breast and cervical cancer early detection program through a network of community-based organizations. *Health Promotion Practice*, 11(5), 654-664. doi: 10.1177/1524839908325064

Ferris, D. G., Shapiro, J., Fowler, C., Cutler, C., Waller, J., & Guevara Condorhuaman, W. S. (2015). The impact of accessible cervical cancer screening in Peru-The Dia del Mercado project. *Journal of Lower Genital Tract Disease*, 19(3), 229-233. doi: 10.1097/LGT.0000000000000112

Fleming, K., Simmons, V. N., Christy, S. M., Sutton, S. K., Romo, M., Luque, J. S., Wells, K. J., Gwede, C. K., & Meade, C. D. (2018). Educating Hispanic women about cervical cancer prevention: feasibility of a promotora-Led Charla intervention in a Farmworker community. *Ethnicity & Diseases*, 28(3), 169-176. doi: 10.18865/ed.28.3.169

Garrett, A. L. (2016). *Guidelines for interpretive interview fidelity in mixed methods*

research within the context of a randomized controlled trial. Public Access

Theses and Dissertation from the College of Education and Human Sciences, 276.

Retrieved from <http://digitalcommons.unl.edu/cehsdiss/276>

Gallup Report. (2017). U.S. uninsured rate rise to 11.7%. Retrieved from

<https://news.gallup.com/poll/213665/uninsured-rate-rises.aspx>

Genoff, M. C., Zaballa, A., Gany, F., Gonzalez, J., Ramirez, J., Jewell, S. T., & Diamond,

L. (2016). Navigating language barriers: a systematic review of patient

navigators' impact on cancer screening for limited English proficient patients.

Journal General Internal Medicine, 31(4), 426-434. doi: 10.107/s11606-015-

3572-3

Gomez, S. L., Noone, A., Lichtensztajn, D. Y., Scoppa, S., Gibson, J. T., Liu, L., Morris,

C., Kwong, S., Fish, K., Wilkens, L. R., Goodman, M. T., Deapen, D., & Miller,

B. A. (2013). Cancer incidence trends among Asian American populations in the

United States, 1990-2008. *Journal of the National Cancer Institute, 105*(15),

1096-1110. doi: 10.1093/jnci/dji157

Goberman-Hill, R. (2015). Ethnographies of pain: culture, context and complexity.

British Journal of Pain, 9(1), 32-35. doi: 10.1177/2049463714555439

Goodman, M. T., Shvetsov, Y. B., McDuffie, K., Wilkens, L. R., Zhu, X., Thompson, P.

J., Ning, L., Kileen, J., Kamemoto, L., & Hernandez, B. Y. (2008). Prevalence,

acquisition, and clearance of cervical human papillomavirus infection among

women with normal cytology: Hawaii Human Papillomavirus Cohort Study.

Cancer Research, 68(21), 8813-8824. doi: 10.1156/0008-5472.CAN-08-1380

- Gulten, G., Aygul, A., & Gengiz Han, A. (2011). Health Belief Model scale for cervical cancer and Pap smear test: psychometric testing: A scale for cervical cancer screening. *Journal of Advanced Nursing*, *67*(2), 428-437. Retrieved from <https://doi.org/10.1111/j.1365-2648.2010.05450.x>
- Han, H., Huh, B., Kim, M. T., Kim, J., & Nguyen, T. (2014). Development and validation of the assessment of health literacy in breast and cervical cancer screening. *Journal of Health Communication*, *19*, 267-284. doi: 10.1080/10810730.2014.936569
- Han, H. R., Song, Y., Kim, M., Hedlin, H. K., Kim, K., Ben Lee, H., & Roter, D. (2017). Breast and cervical cancer screening literacy among Korean American women: a community health worker-led intervention. *American Journal of Public Health*, *107*(1), 159-165. doi: 10.2105/A.JPH.2016.303522
- Hans, N., Cave, A. J., Szafran, O., Johnson, G., Glass, A., Spooner, G. R., Klemka, P. J., & Schipper, S. (2007). Papanicolaou smears. *Canadian Family Physician*, *53*(8), 1328-1329. PMID: 17872849
- Hawaii Health Matters. (2017). Pap test history in 2015. Retrieved from <http://www.hawaiihealthmatters.org/index.php?module=Indicators&controller=index&action=view&indicatorId=1276&localeId=599>
- Hawaii State Data Center Report. (2012). Korean population by county, island and census tract in the state of Hawaii: 2010. Retrieved from http://www.ohadatabook.com/HSDC2010-7_Korean.pdf
- Healthy People 2020. (2015). 2020 topics & objectives. Retrieved from

<http://www.healthypeople.gov/2020/topicsobjectives2020/default>

- Heo, H. H. (2014). Exploring chronic disease disparities in Korean Americans and interventions to reduce disparities. *University of Hawaii Manoa Press*. Retrieved from https://scholarspace.manoa.hawaii.edu/bitstream/10125/100326/1/Heo_Hyun%20Hee_r.pdf
- Heo, H. H., Sentell, T. L., Li, D., Ahn, H. J., Miyamura, J., & Braun, K. (2015). Disparities in potentially preventable hospitalizations for chronic conditions among Korean Americans, Hawaii, 2010-2012. *Preventing Chronic disease, 12*, E152. doi: 10.5888/pcd12.150057
- Heydari, E., & Noroozi, A. (2015). Comparison of two different educational methods for teachers' mammography based on the Health Belief Model. *Asian Pacific Journal of Cancer Prevention, 16*(16), 6981-6986. PMID: 26514478
- Hiom, S. C. (2015). Diagnosing cancer earlier: reviewing the evidence for improving cancer survival. *British Journal of Cancer, 112*(Suppl 1), S1-S5. doi: 10.1036/bjc.2015.23
- Hirth, J. M., Laz, T. H., Rahman, M., Berenson, A. B. (2016). Racial/ethnic differences affecting adherence to cancer screening guidelines among Women. *Journal of Women's Health, 25*(4), 371-380. doi: 10.1089/jwh.2015.5270
- Hou, S. I., Sealy, D. A., & Kabiru, C. W. (2011). Closing the disparity gap: cancer screening interventions among Asians – a systematic literature review. *Asian Pacific Journal of Cancer Prevention, 12*(11), 133-139. PMID: 22394003

- Ibekwe, C. M., Hoque, M. E., & Ntuli-Ngcobo, B. (2010). Perceived benefits of cervical cancer screening among women attending Mahalapye District Hospital, Botswana. *Asian Pacific Journal of Cancer Prevention, 11*(4), 1021-1027. PMID: 21133618
- Institute of International Education (2016). *Open Doors Report on International Educational Exchange*. Retrieved from <http://www.iie.org/Research-and-Publications/Open-Doors#.WKkKPRIrKjg>
- Isaka, Y., Inada, H., Hiranuma, Y., & Ichikawa, M. (2017). Psychological impact of positive cervical cancer screening results among Japanese women. *International Journal of Clinical Oncology, 22*(1), 102-106. doi: 10.1007/s10147-016-1023-8
- Jacobs, E. A., Rathouz, P. J., Karavolos, K., Everson-Rose, S. A., Janssen, I., Kravitz, H. M., Lewis, T. T., & Powell, L. H. (2014). Perceived discrimination is associated with reduced breast and cervical cancer screening: the Study of Women's Health Across the Nation (SWAN). *Journal of Women's Health, 23*(2), 138-145. doi: 10.1089/jwh.2013.4328
- Janghorban, R., Roudsari, R. L., & Taghipour, A. (2014). Pilot study in qualitative research: The roles and values. *Hayat Journal of School of Nursing and Midwifery, 19* (4), 1-5. Retrieved from http://hayat.tums.ac.ir/browse.php?a_id=666&sid=1&sic_lang=en
- Jeong, S., Cha, C., & Lee, J. (2017). The effects of STI education on Korean adolescents using smartphone applications. Retrieved from <https://doi.org/10.1177/0017896917714288>

- Jeudin, P., Liveright, E., Del Camen, M. G., & Perkins, R. B. (2014). Race, ethnicity, and income factors impacting human papillomavirus vaccination rates. *Clinical Therapeutics*, 36(1), 24-37. doi: 10.1026/jclinthera.2013.11.001
- Jung, H. M., Lee, J. S., Lairson, D. R., & Kim, Y. (2015). The effect of national cancer screening on disparity reduction in cancer stage at diagnosis by income level. *PloS One*, 10(8). doi: 10.1371/journal.pone.0136038
- Juon, H. S., Seo, Y. J., & Kim, M. T. (2002). Breast and cervical cancer screening among Korean American elderly women. *European Journal of Oncology Nursing*, 6(4), 228-235. doi: 10.1054/ejon.2002.0213
- Kaholokula, J. K., Ing, C. T., Look, M. A., Delafield, R., & Sinclair, K. (2018). Culturally responsive approaches to health promotion for Native Hawaiians and Pacific Islanders. *Annual Human Biology*, 45(3), 249-263. doi: 10.1080/03014460.2018.1465593
- Karliner, L., Marks, A., & Mutha, S. (2016). Reducing health care disparities for minority women in the era of the Affordable Care Act: Opportunities within primary care. *Journal of Health Care for the Poor and Underserved*, 27(2), 392-415. doi: 10.1353/hpu.2016.0098
- Karuri, A. R., Kashyap, V. K., Yallapu, M. M., Zafar, N., Kedia, S. K., Jaggi, M., & Chauhan, S. C. (2017). Disparity in rates of HPV infection and cervical cancer in deserved US populations. *Frontier Bioscience*, 9, 254-269. PMID: 28410118
- Kilanowski, J. (2017). Breadth of the socio-ecological model. *Journal of Agromedicine*, July, 295-297. doi: 10.1080/1059924X.2017.1358971

- Kim, H., Lee, K. J., Lee, S. O., & Kim, S. (2004). Cervical cancer screening in Korean American women: findings from focus group interviews. *Taehan Kanho Kakhoe Chi*, 34(4), 617-624. PMID: 15502427
- Kim, H.W., & Kim, D.H. (2015). Awareness of cervical cancer prevention among mothers of adolescent daughters in Korea: qualitative research. *British Medical Journal Open*, 5(5), e00695. doi: 10.1136/bmjopen-2014-0069115
- Kim, J., Kim, B. K., Lee, C. H., Seo, S. S., Park, S., & Roh, J. (2012). Human papillomavirus genotypes and cofactors causing cervical intraepithelial neoplasia and cervical cancer in Korean women. *International Journal of Gynecological Cancer*, 22(9), 1570-1576. doi: 10.1097/IGC.0b013e31826aa519
- Kim, J., Kim, M., Han, A., & Chin, S. (2015). The importance of culturally meaningful activity for health benefits among older Korean immigrant living in the United States. *International Journal of Qualitative Study on Health and Well-being*, 16, 12-27. doi: 10.3402/qhw.v10.27501
- Kim, J. H., & Menon, U. (2009). Pre- and post-intervention differences in acculturation, knowledge, beliefs, and stages of readiness for mammograms among Korean American women. *Oncology Nursing Forum*, 36(2), E80-92. doi: 10.118809.ONF.E80-E92
- Kim, K., Ahn, S., Lee, B., Lee, K., Yoo, S., Lee, K., Suh, D. H., No, J. H., & Kim, Y. B. (2018). Factors associated with patients' choice of physician in the Korean population: Database analyses of a tertiary hospital. *PLOS One: A Peer-Reviewed Open Access Journal*. 13(1), e190472. doi: 10.1371/journal.pone.0190472

- Kim, K., & Han, H. R. (2015). Potential links between health literacy and cervical cancer screening behaviors: a systematic review. *Psycho-Oncology*, 25(2), 122-130. doi: 10.1002/pon.3883
- Kim, K., Kim, B., Choi, E., Song, Y., & Han, H. R. (2015). Knowledge, perceptions, and decision making about human papillomavirus vaccination among Korean American women: a focus group study. *Women's Health Issue*, 25(2), 112-119. doi: 10.1016/j.whi.2014.11.005
- Kim, K., Kim, S., Gallo, J. J., Nolan, M. R., & Han, H. R. (2017). Decision making about pap test use among Korean immigrant women: a qualitative study. *Health Expectations: An International Journal of Public Participation in Health Care and Health Policy*, 20(4), 687-695. doi: 10.1111/hax.12507
- Kim, M., Sim, J. A., Yun, Y. H., Bae, D., Nam, J. H., Park, C. T., Cho, C., Lee, J., & Park, S. Y. (2016). Health-related quality of life and sociodemographic characteristics as prognostic indicators of long-term survival in disease-free cervical cancer survivors. *International Journal of Gynecological Cancer*, 26(4), 743-749. doi: 10.1097/IGC0000000000000665
- Kim, S.K., & Chu, I.S. (2015). A database of gene expression profiles of Korean cancer genome. *Genomics & Informatics*, 13(3), 86-89. doi: 10.5806/GI.2015.13.3.86
- Kim, S., Shin, D. W., Yang, H. K., Kim, S. Y., Ko, Y., Cho, B., Lee, Y. S., Lee, D., Park, K., & Park, J. H. (2016). Public perceptions on cancer incidence and survival: a nation-wide survey in Korea. *Cancer Research and Treatment: Official Journal of Korean Cancer Association*, 48(2), 775-788. doi: 10.4143/crt.2014.369

- Kim, W., & Keefe, R. (2010). Barriers to healthcare among Asian Americans. *Social Work in Public Health, 25*, 3-4. doi: 10.1080/19371910903240704
- King, A. J., Jensen, J. D., Guntzville, L. M., Perez Torres, D., & Krakow, M. (2017). Ethnic newspapers and low-income Spanish-speaking adults: influence of news consumption and health motivation on cancer prevention behaviors. *Ethnicity & Health, Jan 24*, doi: 10.1080/13557858.2017.1280133.
- Klabunde, C., Brown, M., & Ballard-Barbash, R. (2012). *Cancer screening – United States, 2010*. Centers for Disease Control and Prevention; Atlanta, GA 2012.
- Kue, J., Zukoshi, A., Keon, K.L., & Thorburn, S. (2014). Breast and cervical screening: exploring perceptions and barriers with Hmong women and men in Oregon. *Ethnicity and Health, 19*(3), 311-327. doi: 10.1080/13557858.2013.776013
- Kumar, S., Quinn, S. C., Kim, K. H., Musa, D., Hilyard, K. M., & Freimuth, V. S. (2012). The Social Ecological Model as a framework for determinants of 2009 H1N1 influenza vaccine uptake in the US. *Health Education Behavior, 39*(2), 229-243. doi: 10.1177/090198111415105
- Kweon, S. S. (2018). Updates on cancer epidemiology in Korea, 2018. *Chonnam Medical Journal, 54*(2), 90-100. doi: 10.4086/cmj.2018.54.2.90
- Lasser, K. E., Kelly, B., Maier, J., Murillo, J., Hoover, S., Isenberg, K., Osber, D., Pilkauskas, N., Willis, B. C., & Hersey, J. (2008). Discussions about preventive services: a qualitative study. *British Medical Journal - Family Practice, 9*, 49. doi: 10.1186/1471-2296-9-49

- Le, T. D., Camey, P. A., Lee-Lin F., Mori, M., Chen, Z., Leung, H., Lau, C., & Leberman, D. (2014). Differences in knowledge, attitudes, beliefs, and perceived risks regarding colorectal cancer screening among Chinese, Korean, and Vietnamese sub groups. *Journal of Community Health, 39*(2), 248-265. doi: 10.1007/s10900-013-9776-8
- Lee, E. E., Eun, Y., Lee, S. Y., & Nandy, K. (2012). Age-related differences in health beliefs regarding cervical cancer screening among Korean American women. *Journal of Transcultural Nursing, 23*(3), 237-245. doi: 10.1177/1043659612441015
- Lee, E. E., Tripp-Reimer, T., Miler, A. M., Sadler, G. R., & Lee, S. (2007). Korean American women's beliefs about breast and cervical cancer and associated symbolic meanings. *Oncology Nursing Forum, 34*(3), 713-720. doi: 10.1188/07.ONF.713-729
- Lee, H. Y., Kwon, M., Vang, S., DeWolfe, J., Kim, N. K., Lee, D. K., & Yeung, M. (2015). Disparities in Human Papilloma Virus vaccine literacy and vaccine completion among Asian American Pacific Islander undergraduates: implications for cancer health equity. *Journal of American College Health, 63*(5), 316-323. doi: 10.1080/07448481.2015.1031237
- Lee, H. Y., & Choi, J. K. (2012). Pathway to health literacy in Korean American immigrants: the mediating role of English proficiency. *Journal of Human Behavior in the Social Environment, 22*(3), 255-269. doi: 10.1080/10911359.2012.655568

- Lee, H. Y., & Im, H. (2013). Colorectal cancer screening among Korean American immigrants: unraveling the influence of culture. *Journal of Health Care for Poor and Underserved, 24*(2), 579-598. doi: 10.1353/hpu.2013.0087
- Lee, H. Y., Ju, E., Vang, P. D., & Lundquist, M. (2010). Breast and cervical cancer screening among Asian American women and Latinas: does race/ethnicity matter? *Journal of Womens Health, 19*(10), 1877-1884. doi: 10.1089/jwh.2009.1763
- Lee, H. Y., & Lee, M. H. (2016). Barriers to cervical cancer screening and prevention in young Korean immigrant women: implications for intervention development. *Journal of Transcultural Nursing, May 18*. doi: 10.1177/1043659616649670.
- Lee, H. Y., Rhee, T. G., & Kim, N. K. (2015). Cancer literacy as a mediator for cancer screening behavior in Korean adults. *Health & Social Care in the Community, May 14*. doi: 10.1111/hsc.12243.
- Lee, J., & Carvallo, M. (2014). Socioecological perspectives on cervical cancer and cervical cancer screening among Asian American women. *Journal of Community Health, 39*(5), 863-871. doi: 10.1007/s10900-041-9887-x
- Lee, S., Chen, L., Jung, M. Y., Baezconde-Garbanti, L., & Juon, H. S. (2014). Acculturation and cancer screening among Asian Americans: Role of health insurance and having a regular physician. *Journal of Community Health, 39*(2), 201-212. doi: 10.1007/s10900-013-9763-0
- Lee, S. Y. (2015). Cultural factors associated with breast and cervical cancer screening in Korean American Women in the US: An integrative literature review. *Asian Nursing Research, 9*(2), 81-90. doi: 10.1016/j.anr.2015.05.003

- Lee, S. Y., & Lee, E. E. (2018). Cancer screening in Koreans: a focus group approach. *British Medical Journal of Public Health*. Retrieved from <https://bmcpublikealth.biomedcentral.com/track/pdf/10.1186/s12889-018-5147-9>
- Lee, Y. S., Hofstettler, R., Irvin, V. L., Kang, S., Chhay, D., Reyes, W. D., & Hovell, M. F. (2012). Korean American women's preventive health care practices: stratified samples in California, U.S. *Health Care of Women International*, 33(5), 422-439. doi: 10.1080/07399332.2011.603869
- Levano, W., Miller, J. W., Leonard, B., Bellick, L., Crane, B. E., Kennedy, S. K., Haslage, N. M., Hammond, W., & Tarpe, F. (2014). Public education and targeted outreach to underserved women through the national breast and cervical cancer early detection program. *Cancer*, August 15, 2591-2596. doi: 10.1002/cncr.28819
- Levy, H., & Janke, A. (2016). Health literacy and access to care. *Journal of Health Communication*, 21(Suppl.1), 43-50. doi: 10.1080/10810730.2015.1131776
- Li, H., Wu, X., & Cheng, X. (2016). Advances in diagnosis and treatment of metastatic cervical cancer. *Journal of Gynecologic Oncology*, 27(4), e43. doi: 10.3802/jgo.2016.27.e43
- Lim, M. C., Lee, J. S., Joo, J., Park, K., Yoo, H. J., Seo, S., Kang, S., Chung, S. H., & Park, S. (2014). Development and evaluation of the Korean version of the Gynecologic cancer lymphedema questionnaire in gynecologic cancer survivors. *Gynecologic Oncology*, 133(1), 111-116. doi: 10.1016/j.ygyno.2014.01.040
- Lim, M. C., Lee, M., Shim, S. H., Nam, E. J., Lee, J. Y., Kim, H. J., Lee, Y. Y., Lee, K. B., Park, J. Y., Kim, Y. H., Ki, K. D., Song, Y. J., Chung, H. H., Kim, S., Lee, J.

- W., Kim, J. W., Bae, D. S., & Lee, J. M. (2017). Practice guidelines for management of cervical cancer in Korea: a Korean Society of Gynecologic Oncology Consensus Statement. *Journal of Gynecologic Oncology*, 28(3), e22. doi: 10.3802/jgo.2017.28.e22
- Ma, G. X., Shive, S. E., Wang, M. Q., & Tan, T. (2009). Cancer screening behaviors and barriers in Asian American. *American Journal of Health Behaviors*, 33(6), 650-660. PMID: 19320614
- Maar, M., Wakewich, P., Wood, B., Severini, A., Little, J., Burchell, A. N., Ogilvie, G., & Zehbe, I. (2016). Strategies for increasing cervical cancer screening amongst first nations communities in northwest Ontario, Canada. *Health Care for Women International*, 37(4), 31-43. doi: 10.1080/07399332.2014.959168
- Mai, H. J. (2017). Hawaii, Honolulu rank high in terms of low uninsured rates, reports say. Pacific Business News. Retrieved from <https://www.bizjournals.com/pacific/news/2017/09/15/hawaii-honolulu-rank-high-in-terms-low-uninsured.html>
- Mann, L., Foley, K. L., Tanner, A. E., Sun, C. J., & Rhodes, S. D. (2015). Increasing cervical cancer screening among US Hispanics/Latinas: A qualitative systematic review. *Journal of Cancer Education*, 30(2), 374-387. doi: 10.1007/s13187-014-0716-9
- Marlow, L. A., Meisel, S. F., & Wardle, J. (2017). Ethnic minority women prefer strong recommendations to be screened for cancer. *BMC Public Health*, 17(1), 164. doi: 10.1186/s12889-017-4093-2

- Marlow, L. A., Waller, J., & Wardle, J. (2015). Barriers to cervical cancer screening among ethnic minority women: a qualitative study. *British Medical Journal*, *41*(4), 248-254. doi: 10.1136/jfprhc-2014-101082
- Mayeno, L., Kaholokula, J. K., Liu, D. M., Asato, L. Y., Tseng, W. (2011). Health equity for Asian American, Native Hawaiian, and Pacific Islander children and youth: what's racism got to do with it? *Poverty & Race*, *20*(4), 7-12.
- Mayo Clinic. (2017). Cervical cancer: symptoms and causes. Retrieved from <http://www.mayoclinic.org/diseases-conditions/cervical-cancer/symptoms-causes/dxc-20210892>
- Menard, J., Kobetz, E., Maldonado, J. C., Barton, B., Blanco, J., & Diem, J. (2010). Barriers to cervical cancer screening among Haitian immigrant women in Little Haiti, Miami. *Journal of Cancer Education*, *25*(4), 602-608. doi: 10.1007/s13187-010-0089-7
- Miller, J. W., Hanson, V., Johnson, G. D., Royalty, J. & Richardson, L. C. (2014). From cancer screening to treatment: service delivery and referral in the National Breast and Cervical Cancer Early Detection Program. *Cancer*, *120*(16), 2549-2556. doi: 10.1002/cncr.28823
- Min, K. J., Lee, Y. J., Suh, M., Yoo, C. W., Lim, M. C., Choi, J., Ki, M., Kim, Y. M., Kim, J. W., Kim, J. H., Park, E. W., Lee, H. Y., Lim, S. C., Cho, C. H., Hong, S. R., Dang, J. Y., Kim, S. Y., Kim, Y., Lee, W. C., & Lee, J. K. (2015). The Korean guideline for cervical cancer screening. *Journal of Gynecologic Oncology*, *26*(3), 232-239. doi: 10.3802/jgo.2015.26.3.232

- Miyagi, E., Sukegawa, A., Motoki, Y., Kaneko, T., Maruyama, Y., Asai-Sato, M., Numazaki, R., Mizushima, S., & Hirahara, F. (2014). Attitudes toward cervical cancer screening among women receiving human papillomavirus vaccination in a university-hospital-based community: interim 2-year follow-up results. *Journal of Obstetrics and Gynecology Research, 40*(4), 1105-1113. doi: 10.1111/jog.12288
- Moore, M. A., Baumann, F., Follaki, S., Goodman, M. T., Haddock, R., Koroivuetu, J., Roder, D., Vinit, T., Whippy, H. J., & Sobue, T. (2011). Cancer epidemiology in the Pacific islands – past, present, and future. *Asian Pacific Journal of Cancer Prevention, 11*(2), 99-106. PMID: 20553071
- Moore de Peralta, A., Holaday, B., & McDonnell, J. R. (2015). Factors affecting Hispanic women's participation in screening for cervical cancer. *Journal of Immigrant and Minority Health, 17*(3), 684-695. doi: 10.1007/s10903-014-9997-7
- Mui, A. C., Kang, S. Y., Kang, D., & Domanski, M. D. (2007). English language proficiency and health-related quality of life among Chinese and Korean immigrant elders. *Health & Social Work, 32*(2), 119-127. PMID: 17571645
- Musa, J., Achenbach, C. J., O'Dwyer, L. C., Evans, C. T., McHugh, M., Hou, L., Simon, M. A., Murphy, R. L., & Jordan, N. (2017). Effect of cervical cancer education and provider recommendation for screening on screening rates: A systematic review and meta-analysis. *PLoS One, 12*(9), e0183924. doi: 10.1371/journal.pone.0183924
- Natale-Pereira, A., Enard, K. R., Nevarez, L., & Jones, L. A. (2011). The role of patient navigators in eliminating health disparities. *Cancer, 117*(15), 3543-3552. doi:

10.1002/cncr.26264

National Asian Pacific American Women's Forum (2015). Ensuring health access and equity for immigrant Asian American and Pacific Islander women. Retrieved from https://napawf.org/wp-content/uploads/2009/10/AAPISWomenHealthAccessEquity_IssueBrief2015.pdf

National Cancer Institute. (2018). Pap and HPV testing. Retrieved from <https://www.cancer.gov/types/cervical/pap-hpv-testing-fact-sheet>

Nguyen-Truong, C. K., Lee-Lin, F., Leo, M. C., Gedaly-Duff, V., Nail, L. M., Wang, P., & Tran, T. (2012). A community-based participatory research approach to understanding pap testing adherence among Vietnamese American Immigrants. *Journal of Obstetric, Gynecologic, and Neonatal Nursing, 41*(6), E26-40. doi: 10.1111/j.1552-6909-2012.01414.x

Niccolai, L. M., Mehta, N. R., & Hadler, J. L. (2011). Racial/ethnic and poverty disparities in human papillomavirus vaccination completion. *American Journal of Preventive Medicine, 41*(4), 428-433. doi: 10.1016/j.amepre.2011.06.032

Nghiem, V. T., Davies, K. R., Chan, W., Mulla, Z. D., Cantor, S. B. (2016). Disparities in cervical cancer survival among Asian-American women. *Annals of Epidemiology, 26*(1), 28-35. doi: 10.1016/j.annepidem.2015.10.004

Nyambe, A., Van Hal, G., & Kampen, J. K. (2016). Screening and vaccination as determined by the Social Ecological Model and the Theory of Triadic Influence: a systematic review. *Bio Medical Central Public Health, 16*, 1166. doi: 10.1186/s12889-016-3802-6

- Obel, J., McKenzie, J., Buenconsejo-Lum, L. E., Durand, A. M., Ekeroma, A., Souares, Y., Hoy, D., Baravilala, W., Garland, S. M., Kjaer, S. K., & Roth, A. (2015). Mapping HPV vaccination and cervical cancer screening practice in the Pacific region-strengthening national and regional cervical cancer prevention. *Asian Pacific Journal of Cancer Prevention*. 16(8), 3435, 3442. PMID: 25921158
- Ock, H. J. (2015). *Koreans' changing perceptions on marriage*. Korea Herald. Retrieved from <https://tinyurl.com/y9hkyynw>.
- Ott, J. J., Ullrich, A., Mascarenhas, M., & Stevens, G. A. (2011). Global cancer incidence and mortality caused by behavior and infection. *Journal of Public Health*, 33(2), 223-233. doi: 10.1093/pubmed/fdq076
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental health*, 42(5), 533-544. doi: 10.1007/s10468-013-0528-y
- Pedersen, K., Sorbye, S. W., Burger, F. A., Lonnberg, S., & Kristiansen, I. S. (2015). Using decision-analytic modeling to isolate interventions that are feasible, efficient and optimal: An application from the Norwegian cervical cancer screening program. *Value in Health*, 18(8), 1088-1097. doi: 10.1066/j.jval.2015.08.003
- Randall, T. C., & Ghebre, R. (2016). Challenges in prevention and care delivery for women with cervical cancer in sub-Saharan Africa. *Frontiers in Oncology*. doi: 10.3389/fonc.2016.00160.

- Ramondetta, L. M., Meyer, L. A., Schmeler, K. M., Daheri, M. E., Gallegos, J., Scheurer, M., Montealegre, J. R., Milbourne, A., Anderson, M. L., & Sun, C. C. (2015). Avoidable tragedies: Disparities in healthcare access among medically underserved women diagnosed with cervical cancer. *Gynecologic Oncology*, *139*(3), 500-505. doi: 10.1016/j.ygymo.2015.10.017
- Relter, P. L., Brewer, N. T., Gilkey, M. B., Katz, M. L., Paskett, E. D., & Smith, J. S. (2014). Early adoption of the human papillomavirus vaccine among Hispanic adolescent males in the United States. *Cancer*, *120*(20), 3200-3207. doi: 10.1002/cncr.28871
- Riesch, S. K., Ngui, E., Ehlert, C., Miller, M. K., Cronk, C., Leuthener S., Strehlow, M., Hewitt, J., & Durkin, M. S. (2013). Community outreach and engagement strategies from the Wisconsin Study Center of the National Children's Study. *Public Health Nursing*, *33*(3), 254-265. doi: 10.1111/phn.12018
- Robert, S. A., & Booske, B. C. (2011). U.S. opinions on health determinants and social policy as health policy. *American Journal of Public Health*, *101*(9), 1655-1663. doi: 10.2105/AJPH.2011.300217
- Robison, K., Clark, L., Eng, W., Wu, L., Raker, C., Clark, M., Tejada-Berges, T., & Dizon, D. S. (2014). Cervical cancer prevention: Asian-American women's knowledge and participation in screening practices. *Women's Health Issue*, *24*(2), e231-236. doi: 10.1016/j.whi.2013.12.005
- Rojanapremsuk, T., Clarke, M., & Liu, L. (2015). The American Society for Colposcopy and Cervical Pathology Guidelines for unsatisfactory pap smears with high-risk

human papillomavirus co-testing: A quality assurance review. *American Journal of Clinical Pathology*, 144(2), A074. doi: 10.1093/ajcp/144.suppl2.074

Roman, L., Meghea, C., Ford, S., Penner, L., Hamade, H., Estes, T., & Williams, K. P. (2014). Individual, provider, and system risk factors for breast and cervical cancer screening among underserved Black, Latina, and Arab women. *Journal of Womens Health*, 23(1), 57-64. doi: 10.1089/jwh.2013.4397

Saslow, D., Solomon, D., Lawson, H. W., Killackey, M., Kulasingam, S., Cain, J., Garcia, F. A., Moriarty, A., Waxman, A., Wilbur, D., Wentzensen, N., Downs, L., Spitzer, M., Moscicki, A., Franco, E. L., Stoler, M. H., Schiffman, M., Castle, P. E., & Myers, E. R. (2012). American Cancer Society, American Society for Colposcopy and Cervical Pathology, and American Society for Clinical Pathology Screening Guidelines for the prevention and early detection of cervical cancer. *Cancer Journal for Clinicians*, 62(3), 147-172. doi: 10.1309/AJCPTGD94EVR SJCG

Schenck, A. D. (2013). Korea's "model minority": A case study of an American-Korean bilingual student's challenges of learning English in South Korea. *Journal of International Education and Leadership*, 3(3), 1-15. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1136020.pdf>

Schoofs, J., Krilger, K., Vandevoorde, J., Rossem, I. V., & Devroey, D. (2015). Health-related factors associated with the participation in cervical cancer screening. *Journal of Research in Health Sciences*, 15(1), 11-16. PMID: 25821019

Seo, J. Y., Bae, S., & Dickerson, S. S. (2016). Korean immigrant women's health care

- utilization in the United States: A systematic review of literature. *Asia Pacific Journal of Public Health*, 28(2), 107-133. doi: 10.1177/1010539515626266
- Sentell, T., & Braun, K. (2012). Low health literacy, limited English proficiency, and health status in Asians, Latinos, and other racial/ethnic groups in California. *Journal of Health Communication*, 17(Suppl 3), 82-99. doi: 10.1080/10810730.2012.712621
- Sentell, T., Braun, K. L., Davis, J., & Davis, T. (2015). Health literacy and meeting breast and cervical cancer screening guidelines among Asian and whites in California. *SpringerPlus*, 4, 432. doi: 10.1186/s40064-015-1225-y
- Senore, C., Giordano, L., Bellisario, C., Stefano, F. D., & Segnan, N. (2012). Population based cancer screening programmes as a teachable moment for primary prevention interventions. A review of the literature. *Frontiers in Oncology*. Retrieved from <https://www.frontiersin.org/articles/10.3389/fonc.2012.00045/full>
- Shapiro, G. K., Tatar, O., Amel, R., Prue, G., Zimer G. D., Knauper, B., & Rosberger, Z. (2018). Using an integrated conceptual framework to investigated parents' HPV vaccine decision for their daughters and sons. *Preventive Medicine*, 116, 203-210. doi: 10.1016/j.jpmed.2018.09.017
- Sherman, M. E., Wang, S. S., Carreon, J., & Devesa, S. S. (2005). Mortality trends for cervical squamous and adenocarcinoma in the United States: relation to incidence and survival. *Cancer*, 103(6), 1258-1264. doi: 10.1002/cncr.20877
- Shirazi Zadeh Mehraban, S., Namdar, A., & Naghizadeh, M. M. (2018). Assessment of preventive behavior for cervical cancer with the health belief model. *Asian Pacific*

Journal of Cancer Prevention, 19(8), 2155-2163. doi:

10.22034/APJCP.2018.19.8.2155

Shobeiri, F., Javad, M. T., Parsa, P., & Roshanaei, G. (2016). Effects of group training based on the Health Belief Model on knowledge and behavior regarding the pap smear test in Iranian Women: a quasi-experimental study. *Asian Pacific Journal of Cancer Prevention*, 17(6), 2871-2876. PMID: 27356705

Shoemaker, M. L., & White, M. C. (2016). Breast and cervical cancer screening among Asian subgroups in the USA: estimates from the National Health Interview Survey, 2008, 2010, and 2013. *Cancer Causes and Control*, 27(6), 825-829. doi: 10.1007/s10552-016-0750-5

Sigfrid, L., Murphy, G., Haldane, V., Chuah, F. L., Ong, S. E., Cervero-Liceras, F., Watt, N., Alvaro, A., Otero-Garcia L., Balabanova, D., Hogarth, S., Maimaris, W., Buse, K., McKee, M., Piot, P., Perel, P., & Legido-Quigley, H. (2017). Integrating cervical cancer with HIV healthcare services: A systematic review. *PLoS One*, 12(7), e0181156. doi: 10.1371/journal.pone.0181156

Singh, G. K., Rodriguez-Lainz, A., & Kogan, M. D. (2013). Immigrant health inequalities in the United States: Use of eight major national data systems. *The Scientific World Journal*, 2013, 21. doi: 10.1155/2013/512313

Smith, S. G., McGregor, L. M., Raine, R., Wardle, J., Von Wagner, C., & Robb, K. A. (2016). Inequalities in cancer screening participation: examine differences in perceived benefits and barriers. *Psycho-Oncology*, 25(10), 1168-1174. doi: 10.1002/pon.4195

- Smulian, E., Mitchell, K., & Stokley, S. (2016). Interventions to increase HPV vaccination coverage: A systematic review. *Human Vaccines & Immunotherapeutics, 12*(6), 1566-1588. doi: 10.1080/21645515.2015.1125055
- Son, M., & Yun, J. W. (2016). Cancer mortality projections in Korea up to 2032. *Journal of Korean Medical Science, 31*(6), 892-901. doi: 10.3346/jkms.2016.31.6.892
- Song, H., Omori, K., Kim, J., Tenzek, K. E., Hawkins, J. M., Lin, W. Y., Kim, Y. C., & Jung, J. Y. (2016). Trusting social media as a source of health information: online surveys comparing the United States, Korea, and Hong Kong. *Journal of Medical Internet Research, 18*(3), e25. doi: 10.2196/jmir.4193
- State of Hawaii, Department of Health Office of Health Equity. (2015). About OHE – our purpose/what we do. Retrieved from [http://health.hawaii.gov/healthequity/about/purpose/what we do](http://health.hawaii.gov/healthequity/about/purpose/what-we-do).
- State of Hawaii, Department of Health. (2013). *Hawaii cancer plan 2004-2009*. Retrieved from <http://health.hawaii.gov/cancer/files/2013/06/CancerPlan2004-2009.pdf>
- Steele, C. B., Townsend, J. S., Tai, E., & Thomas, C. C. (2014). Physician visits and preventive care among Asian American and Pacific Islander long-term survivors of colorectal cancer, USA, 1996-2006. *Journal of Cancer Survivor, 8*(1), 70-79. doi: 10.1007/s11764-013-0319-1
- Tatar, O., Thompson, E., Naz, A., Perez, S., Shapiro, G. K., Wade, K., Zimet, G., Gilca, V., Janda, M., Kahn, J., Daley, E., & Rosberger, Z. (2018). Factors associated with human papillomavirus (HPV) test acceptability in primary screening for cervical cancer: A mixed methods research synthesis. *Preventive Medicine, 116*,

40-50. doi: 10.1016/j.ypped.2018.08.034

Terada, K., Carney, M., Kim, R., Ahn, H. J., & Miyamura, J. (2016). Health disparities in Native Hawaiians and other Pacific Islanders following hysterectomy for endometrial cancer. *Hawaii Journal of Medicine & Public Health*, 75(5), 137-139. PMID: 27239393

Tessmer-Tuck, J. A., & Rayburn, W. F. (2015). Roles of obstetrician-gynecologist hospitalist with changes in the obstetrician-gynecologist workforce and practice. *Obstetrics and Gynecology Clinics of North America*, 42(3), 447-456. doi: 10.1016/j.ogc.2015.05.004

Tiruneh, F.N., Chuang, K.Y., Ntenda, P.A.M., & Chuang, Y.C. (2017). Individual-level and community-level determinants of cervical cancer screening among Kenyan women: a multilevel analysis of a Nationwide survey. *Bio Medical Central Womens Health*, 17, 109. doi: 10.1186/s12905-017-0469-9

Townsend, J. S., Stomo, A. R., Roland, K. B., Buenconsejo-Lum, L., White, S., & Saraiya, M. (2014). Current cervical cancer screening knowledge, awareness, and practices among U.S. affiliated Pacific island providers: opportunities and challenges. *The Oncologist*, 19(4), 383-393. doi: 10.1634/theoncologist.2013-0340

Tran, H., Do, V., & Baccaglini, L. (2016). Health care access, utilization, and management in adult Chinese, Koreans, and Vietnamese with cardiovascular disease and hypertension. *Journal of Racial and Ethnic Health Disparities*, 3(2), 340-348. doi: 10.1007/s40615-015-0155-2

- Trope, A., Sjoborg, K. D., Nygard, M., Roysland, K., Campbell, S., Alfsen, G. C., & Jonassen, C. M. (2012). Cytology and human papillomavirus testing 6 to 12 months after ASCUS or LSIL cytology in organized screening to predict high-grade cervical neoplasia between screening rounds. *Journal of Clinical Microbiology*, *50*(6), 1927-1935. doi: 10.1126/JCM.00265-12
- Tung, W. C., Lu, M., Smith-Gagen, J., & Yao, Y. (2016). Latina women and cervical cancer screening: decisional balance and self-efficacy. *Clinical Journal of Oncology Nursing*, *20*(3), E71-76. doi: 10.1188/16.CJON.E71-E76
- Turner, D. W. (2010). Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report*, *15*(3), 754-760. Retrieved from <https://nsuworks.nova.edu/tqr/vol15/iss3/19>
- Umezawa, Y., Lu, Q., You, J., Kagawa-Singer, M., Leake, B., & Maly, R. C. (2012). Belief in divine control, coping, and race/ethnicity among older women with breast cancer. *Annals of Behavioral Medicine*, *44*(1), 21-32. doi: 10.1007/s12160-012-9358-5
- Unger-Saldana, K. (2014). Challenges to the early diagnosis and treatment of breast cancer in developing countries. *World Journal of Clinical Oncology*, *5*(3), 455-466. doi: 10.5306/wjco.v5.i3.465
- U.S. Department of Health and Human Services. (2011). *HHS action plan to reduce racial and ethnic disparities: a nation free of disparities in health and healthcare*. Retrieved from http://minorityhealth.hhs.gov/npa/files/Plans/HHS/HHS_Plan_complete.pdf

- U.S. Census Bureau (2016a). *2014 American community survey*. Retrieved from <https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>
- U.S. Census Bureau (2016b). *FFF: Asian/Pacific American heritage month: May 2016*. Retrieved from <http://www.census.gov/newsroom/facts-for-features/2016/cb16-ff07.html>
- U.S. Census Bureau. (2012). *The Asian population: 2010*. Retrieved from <https://www.census.gov/prod/cen2010/briefs/c2010br-11.pdf>
- Vass, C., Rigby, D., & Payne, K. (2017). The role of qualitative research methods in discrete choice experiments. *Medical Decision Making, 37*(3), 298-313. doi: 10.1177/0272989X16683934
- Verhagen, I., Steunenberg, B., Wit, N. J., & Ros, W. J. (2014). Community health worker interventions to improve access to health care services for older adults from ethnic minorities: a systematic review. *Bio Medical Central Health Service Research, 14*, 497. doi: 10.1186/s12913-014-0497-1
- Vrinten, C., Wardle, J., & Marlow, L. A. (2016). Cancer fear and fatalism among ethnic minority women in the United Kingdom. *British Journal of Cancer, 114*(5), 597-604. doi: 10.1038/bjc.2016.15
- Wallington, S. F., Dash, C., Sheppard, V. B., Goode, T. D., Opong, B. A., Dodson, E. E., Hamilton, R. N., Adams-Campbell, L. L. (2016). Enrolling minority and underserved populations in cancer clinical research. *American Journal of Preventive Medicine, 50*(1), 111-117. doi: 10.1016/j.amepre.2015.07.036

- Wang, S. S., Carreon, J. D., Gomez, S. L., & Devesa S. S. (2010). Cervical cancer incidence among 6 Asian ethnic groups in the United States, 1996 through 2004. *Cancer*, *116*(4), 949-956. doi: 10.1002/cncr.24843
- Williams, M., Kuffour, G., Ekuadzi, E., Yeboah, M., EIDuah, M., & Tuffour, P. (2013). Assessment of psychological barriers to cervical cancer screening among women in Kumasi, Ghana using a mixed methods approach. *African Health Sciences*, *13*(4), 1054-1061. doi: 10.4314/ahs.v13i4.28
- Williams, W. W., Lu, P. J., O'Halloran, A., Kim D. K., Grohskopf, L. A., Pilishivlli, T., Skoff, T. H., Nelson, N. P., Harpaz, R., Markowitz, L. E., Rodriguez-Lainz, A., & Fiebelkorn, A. P. (2017). Surveillance of vaccination coverage among adult populations-United States, 2015. *Morbidity and Mortality Weekly Report-Surveillance Summaries*, *66*(11), 1-28. doi: 10.15585/mmwr.ss6611a1
- Wu, L., Colby, E., Long—Fillaga, A., & Maskarinec, G. G. (2010). American Samoan women's health: experiences and attitudes toward breast and cervical cancer screening. *Hawaii Medical Journal*, *69*(3), 17-20. PMID: 20539996
- Wu, S. J., Tsai S. H., Tseng, H. F., Huang, Y. Y., Wang, Y. H., & Lin, S. Y. (2010). Perceived barriers to taking a pap smear: predictors in immigrant women. *Hu Li Zap Zhi: The International Nursing Journal*, *57*(5), 36-46. PMID: 20878609
- Yedjou, C. G., Tchounwou, P. B., Payton, M., Miele, L., Fonseca, D., Lowe, L., & Alo, R. A. (2017). Assessing the racial and ethnic disparities in breast cancer mortality in the United States. *International Journal of Environmental Research and Public Health*, *14*(5), 486. doi: 10.3390/ijerph14050486

- Yeo, C., Fang, H., Thilagamangai, Koh, S.S., & Shorey, S. (2018). Factors affecting Pap smear uptake in a maternity hospital: A descriptive cross-sectional study. *Journal of Advanced Nursing*, 19. doi: 10111/jan.13769.
- Yoon, E., & Lee, R. M. (2010). Importance of social connectedness as a moderator in Korean immigrants' subjective well-being. *Asian American Journal of Psychology*, 1(2), 93-105. Retrieved from <https://psycnet.apa.org/buy/2010-13668-002>
- Yoon, Y. S., & Oh, S. W. (2017). Recent shift of body mass index distribution in Korea: a population-based Korea National Health Insurance Database, 2002-2013. *Journal of Korean Medical Science*, 32(3), 434-438. doi: 10.3346/jkms.2017.32.3.434
- Young, A. (2010). HPV vaccine acceptance among women in the Asian Pacific: a systemic review of the literature. *Asian Pacific Journal of Cancer Prevention*, 11(3), 641-649. PMID: 21039030
- Zong, J. & Batalova, J. (2017). Korean Immigrants in the United States. *The Online Journal of the Migration Policy Institute*. Retrieved from <http://www.migrationpolicy.org/article/korean-immigrants-united-states>

Appendix A: Interview Recruitment Flyer (English)



Research Opportunity for Korean Women

The purpose of this study is to identify the perception and behaviors of Korean immigrant women regarding **Cervical Cancer Screening** such as Pap smear test and the prevention measure such as Human Papilloma Virus (HPV) vaccine."

INVITATION

If you are:

1. Korean Immigrant Women (non-pregnant)
2. 21 years old or older & Less than 65
3. Live in State of Hawaii
4. Speak and Understand English

If you are interested to be in the study,
Please contact Eurina Cha at
(808) 990-9955 or email
eurina.cha@waldenu.edu

If interested, you will be asked some health related questions.
Either English or Korean speakers are welcome for the interview

Your name and identity will NOT be revealed

\$20 Grocery gift card for the 1:1 interview

Appendix B: Interview Recruitment Flyer (Korean)



자궁경부암 예방관련 연구참여

하와이 한인이민여성들의 자궁경부암 예방방법중 펩스미어 검사와
파필로마 백신과 관련한
사고방식과 행동에 관한 연구로 인터뷰 방식입니다.

연구참여 자격

1. 임신을 하지 않은 한인이민 여성
2. 21 살에서 65 세까지
3. 하와이 거주자
4. 영어를 읽고 이해하는 자

인터뷰가 가능한 분은 아래로 연락바람
Please contact Eurina Cha at
(808) 990-9955 or email
eurina.cha@waldenu.edu

인터뷰는 건강관련 질문을 포함하며, 한국어/영어 이중언어 포함

참여자의 이름과 개인신상자료는 보호됨

인터뷰후 \$20 선물권증정

Appendix C: Data Collection Tool (English)

1

Data Collection Tool

"Cervical Cancer Screening: Perceptions, Behaviors, and Barriers Among Korean Immigrant

Women in Hawaii

by

Eurina Yujin Cha

Walden University

Interview Questions

DEMOGRAPHICS AND HEALTH STATUS:

1. How would you describe your current health?
 - 1) Good
 - 2) Fair
 - 3) Poor
 - 4) Do not know

2. What is your age group?
 - 1) 21-29 years old
 - 2) 30-39 years old
 - 3) 40-49 years old
 - 4) 50-59 years old
 - 5) 60-65 years old

3. How many years have you been living in America?
 - 1) Less than 1 year
 - 2) 1-5years
 - 3) 6-10 years
 - 4) More than 10 years

4. How many years have you been living in Hawaii?
 - 1) Less than 1 year
 - 2) 1-5 years
 - 3) 6-10 years
 - 4) More than 10 years

5. What is your highest level of education?
 - 1) Did not complete high school
 - 2) High school
 - 3) Vocational training program
 - 4) Some college
 - 5) College degree
 - 6) Graduate school

6. What is your average annual household income?
 - 1) Less than \$5,000
 - 2) \$5,000-\$19,999
 - 3) \$20,000-\$39,999
 - 4) \$40,000-\$59,999
 - 5) \$60,000 or more

7. What is your current employment status?
 - 1) Full-time
 - 2) Part-time
 - 3) Self-employed
 - 4) Unemployed
 - 5) Retired
 - 6) Student
 - 7) Other _____

8. When was your last visit to a doctor?
 - 1) Less than 6 months ago
 - 2) 6 months to 1 year ago
 - 3) 2 to 5 years ago
 - 4) Over 5 years ago
 - 5) I have never seen a doctor

9. When was your last visit to a gynecologist?
 - 1) Less than 6 months ago
 - 2) 6 months to 1 year ago
 - 3) 2 to 5 years ago
 - 4) Over 5 years ago
 - 5) I have never seen a gynecologist in US including Hawaii

10. Which of the following screenings have you received in the last year?
 - 1) Blood pressure check
 - 2) Routine blood test
 - 3) Blood sugar check
 - 4) Cholesterol screening
 - 5) Stool/urine test
 - 6) Infectious disease test (e.g. Hepatitis B)
 - 7) Cancer screening (e.g. Pap smear, mammogram, colonoscopy)
 - 8) None

11. Have you received the above screenings described in #10 routinely?
 - 1) Yes, please specify _____
 - 2) No

12. Do you prefer to go to a Korean doctor?
 - 1) Yes
 - 2) No
 - 3) I do not have preference

13. Do you prefer to go to a doctor who speaks Korean?
 - 1) Yes
 - 2) No
 - 3) I do not have preference

14. Do you prefer to go to a female doctor for women's health issue?
 - 1) Yes
 - 2) No
 - 3) I do not have preference

15. Do you regularly go outside your residential area for health service (e.g. go to Korea)?
 - 1) Yes
 - 2) No
 - 3) I would if possible

16. What factors keep you away from seeing doctors when in need?
 - 1) Cannot afford co-pay and/or deductible
 - 2) Do not have health insurance
 - 3) Language barrier
 - 4) Concern about immigration status
 - 5) Female doctors are not available
 - 6) Do not have transportation
 - 7) Do not have time
 - 8) Do not understand the American medical system
 - 9) Lack of resouce for referrals
 - 10) Other _____

INSURANCE STATUS:

17. What kind of health insurance do you have?
- 1) Managed Care (e.g. HMO, PPO, etc.)
 - 2) Private Insurance (e.g. BCBS, Aetna, etc.)
 - 3) Medicaid
 - 4) Medicare
 - 5) Other Government insurance (e.g. CHIP, CHAMPUS, etc.)
 - 6) Other Private (e.g. Kaiser, etc.)
 - 7) I do not have health insurance. The reason for no insurance is _____

18. If you have health insurance, how do you pay for your health insurance?
- 1) Employer
 - 2) Spouse's employer
 - 3) I pay for my own costs of health insurance
 - 4) Government pays all the costs of health insurance
 - 5) Other _____
19. If you do not have health insurance, where do you seek healthcare services?
- 1) Hospital ER or Urgent care
 - 2) Community health clinics
 - 3) Government-provided healthcare centers
 - 4) Faith-based clinics
 - 5) Pay cash for the care at the doctor's office
 - 6) Use Korean or alternative/herbal medicine
 - 7) Visit Korea to receive medical treatments and services
 - 8) Other _____

LANGUAGE SKILLS:

20. What is your ability in speaking and understanding English?
- 1) I do not speak and understand English at all
 - 2) Basic words and simple phrases
 - 3) Short conversation
 - 4) I speak and understand English without any problem

21. When accessing health services provided by English-speakers, do you usually...

- 1) Go by myself
- 2) Bring a friend or relative to translate
- 3) Request a translator
- 4) Other _____

22. Who are your primary sources of health information?

- 1) Local health clinic
- 2) Family/friends
- 3) Mass media (e.g. TV, internet, web blog, etc.)
- 4) Korean community organizations
- 5) Other _____

PAP SMEAR TEST:

23. What is the Pap smear test is for? _____

24. When was the last time you receive the Pap smear test?

- 1) Less than 6 months ago
- 2) 6 months to 1 year
- 3) 1 year to 3 years
- 4) 3 year to 5 years
- 5) More than 5 years ago
- 6) Never had the test before

25. Do you receive the Pap smear routinely?

- 1) Yes
- 2) No
- 3) Never had the test before

26. If you have NOT engaged routine Pap smear test before, what is the main reason?

- 1) I do not have a health insurance
- 2) Language barriers
- 3) I prefer female provider for the test
- 4) I prefer Korean gynecologist
- 5) I prefer to go to Korea to get the test

27. Have you heard about the Human Paploma Virus (HPV) vaccination?

- 1) Yes
- 2) No

28. If you are not familiar with HPV vaccination, how would you like to receive the information?
- 1) Information flyer in English
 - 2) Information flyer in Korean
 - 3) Picture & diagram only
 - 4) Video clip in English
 - 5) Video clip in Korean
 - 6) Verbal explanation in English
 - 7) Verbal explanation in Korean
29. Would you plan to receive the Pap smear test within a year from now?
- 1) Yes
 - 2) No
 - 3) I am not sure for now
30. To engage the routine Pap smear every year including the follow-up appointment, what do you need? _____

This is the end of the interview questionnaire.
Thank you for taking the time to participate the interview. If you have any questions or concerns about this interview, please feel free to contact me.

Modified from Hsu, E., Atkinson, N., Gold, R., Billing, A., Li, J., Richardson, L., . . . Tian, J., 2005. Asian American health initiative - Community health needs assessment. Montgomery County, MD: Department of Health and Human Services.

Appendix D: Data Collection Tool (Korean)

1

Data Collection Tool

“Cervical Cancer Screening: Perceptions, Behaviors, and Barriers Among Korean Immigrant

Women in Hawaii

한글 번역본

by

Eurina Yujin Cha

Walden University

Interview Questions (인터뷰 질문)**DEMOGRAPHICS AND HEALTH STATUS (인적사항 및 건강상태):**

1. 본인의 현재 건강상태는 어떻습니까?

- 1) 좋음
- 2) 양호한편
- 3) 나쁨
- 4) 잘모름

2. 본인의 나이는 어느 그룹에 속합니까?

- 1) 21-29 살 사이
- 2) 30-39 살 사이
- 3) 40-49 살 사이
- 4) 50-59 살 사이
- 5) 60-65 살 사이

3. 미국에 얼마나 살고 계십니까?

- 1) 1년 미만
- 2) 1-5년
- 3) 6-10년
- 4) 10년 이상

4. 하와이에 얼마나 살고 계십니까?

- 1) 1년 미만
- 2) 1-5년
- 3) 6-10년
- 4) 10년 이상

5. 본인의 최종 학력은 무엇입니까?

- 1) 고등학교 중퇴
- 2) 고졸
- 3) 기술학교졸
- 4) 전문대 수료
- 5) 종합대졸
- 6) 대학원졸

6. 가정내 평균 연수입은 얼마입니까?
- 1) \$5,000 미만
 - 2) \$5,000-\$19,999
 - 3) \$20,000-\$39,999
 - 4) \$40,000-\$59,999
 - 5) \$60,000 이상
7. 본인의 현재 직장상태는 무엇입니까?
- 1) 풀타임
 - 2) 파트타임
 - 3) 자영업
 - 4) 무직
 - 5) 퇴직
 - 6) 학생
 - 7) 기타 _____
8. 최근 의사를 찾은건 언제입니까?
- 1) 6개월 이전
 - 2) 6개월에서 1년사이
 - 3) 2년에서 5년 사이
 - 4) 5년 이후
 - 5) 의사를 만난적이 없었음
9. 부인과 의사를 찾은건 언제입니까?
- 6) 6개월 이전
 - 7) 6개월에서 1년사이
 - 8) 2년에서 5년 사이
 - 9) 5년 이후
 - 10) 하와이 포함 미국살면서 부인과 의사를 만난적이 없었음
10. 작년에 아래보기중 어떤 예방의료서비스를 받았습니까?
- 1) 혈압체크
 - 2) 혈액검사
 - 3) 당뇨검사
 - 4) 콜레스테롤 검사
 - 5) 대변/소변 검사
 - 6) 감염성 질병 검사 (예 - B형 간염)
 - 7) 암검사 (예 - 자궁경부암 검사, 유방암검사, 대장내시경)
 - 8) 없음

11. 위의 10 번 보기에 있는 예방검사를 규칙적으로 받고 있습니까?
 1) 네 - 어떤검사입니까? _____
 2) 아니오
12. 한인 의사를 선호하십니까?
 1) 네
 2) 아니오
 3) 상관없습니다.
13. 한국말을 구사하는 의사를 선호하십니까?
 1) 네
 2) 아니오
 3) 상관없습니다
14. 여성건강관련 여자의사를 선호하십니까?
 1) 네
 2) 아니오
 3) 상관없습니다
15. 의료서비스를 받기 위해 꾸준히 거주지를 벗어나니까 (예 - 고국방문 의료행위)?
 1) 네
 2) 아니오
 3) 가능하다면 그러고 싶습니다
16. 의사를 찾아가기에 어려움이 있다면 이유가 무엇입니까?
 1) 기본의료비에 대한 부담
 2) 의료보험이 없음
 3) 언어소통에 불편
 4) 체류신분 문제
 5) 여성의를 찾기 힘들
 6) 교통편이 없음
 7) 시간이 없음
 8) 미국의료서비스 시스템을 잘 모르겠음
 9) 추천의사에 대한 정보부족
 10) 기타 _____

INSURANCE STATUS (의료보험 상태):

17. 어떤 의료보험을 가지고 계시나요?

- 1) 관리의료보험 (예 - HMO, PPO 등)
- 2) 민간의료보험 (예 - BCBS, Aetna 등)
- 3) 메디케이드
- 4) 메디케어
- 5) 기타 정부의료보험 (예 - CHIP, CHAMPUS 등)
- 6) 기타 민간의료보험 (예 - Kaiser 등)
- 7) 본인은 현재 의료보험이 없음, 그 이유는 _____

18. 의료보험이 있다면, 보험비는 누가 지불합니까?

- 1) 직장을 통해
- 2) 배우자의 직장을 통해
- 3) 본인이 직접 부담
- 4) 정부보조로 지불
- 5) 기타 _____

19. 의료보험이 없다면, 어디서 의료서비스를 받으시겠습니까?

- 1) 종합병원 응급실 혹은 응급진료소
- 2) 지역보건소
- 3) 정부보조 보건소
- 4) 종교기관 의료소
- 5) 현금으로 지불 가능한 의사오피스
- 6) 한방의료 혹은 민간요법
- 7) 의료서비스를 받으러 한국으로 귀국
- 8) 기타 _____

LANGUAGE SKILLS (언어능력):

20. 영어로 말하고 이해하는 수준이 어떻습니까?

- 1) 전혀 영어로 말하지 않고 이해하지도 않음
- 2) 간단한 단어와 문장정도
- 3) 간단한 대화가능
- 4) 영어로 말하고 이해하는데 불편함이 없음

21. 영어권 미국의사를 보러갈때, 본인은 보통 어떻게 합니까?

- 1) 혼자 간다
- 2) 통역해줄 친구나 친척과 동행한다
- 3) 통역서비스를 요청한다
- 4) 기타 _____

22. 의료정보를 어디서 얻습니까?

- 1) 지역 의료기관
- 2) 가족/친구들
- 3) 각종 미디어 (예 - 텔레비전, 인터넷, 웹블로그 등)
- 4) 각종 한인협회
- 5) 기타 _____

PAP SMEAR TEST (자궁경부암 검사):

23. 펩스미어 테스트가 무엇이라 생각하십니까? _____

24. 자궁경부암 펩스미어 검사를 언제 받으셨습니까?

- 1) 6개월 이전
- 2) 6개월에서 1년사이
- 3) 1년에서 3년 사이
- 4) 3년에서 5년 사이
- 5) 5년이상 이전
- 6) 테스트를 이전에 받은적 없음

25. 자궁경부암 펩스미어 검사를 규칙적으로 하십니까?

- 1) 네
- 2) 아니오
- 3) 검사를 이전에 받아본적 없음

26. 자궁경부암 펩스미어 검사를 규칙적으로 받지않았다면, 가장 큰 이유가 무엇입니까?

- 1) 의료보험이 없음
- 2) 언어문제
- 3) 여성 부인과 의사를 선호
- 4) 한국인 부인과 의사를 선호
- 5) 한국으로 귀국하여 검사를 선호

27. 휴먼파필로마 (HPV) 예방주사에 대해 들어본적이 있습니까?
 1) 네
 2) 아니오
28. 휴먼파필로마 (HPV) 예방접종에 대해 알고 싶다면, 어떻게 정보를 얻고 싶습니까?
 1) 영어로 된 의료전단지
 2) 한글로 된 의료전단지
 3) 사진과 그림 위주
 4) 영어 동영상
 5) 한글 동영상
 6) 영어로 설명
 7) 한글로 설명
29. 향후 1 년안에 자궁경부암 펍스미어 검사를 하실 예정입니까?
 1) 네
 2) 아니오
 3) 잘모름
30. 만약 자궁경부암 검사와 향후 꾸준한 검진을 위해서 본인에게 현재 가장 필요한 것이 무엇입니까? _____

인터뷰 질문이 끝났습니다.

인터뷰에 응해주셔서 감사드립니다. 인터뷰관련 질문이 있으시면, 언제든지 문의바랍니다.

<참고문헌>

Modified from Hsu, E., Atkinson, N., Gold, R., Billing, A., Li, J., Richardson, L., . . . Tian, J., 2005. Asian American health initiative - Community health needs assessment. Montgomery County, MD: Department of Health and Human Services.