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Life Satisfaction and Healthcare Utilization Among Immigrants to the United States

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LIFE SATISFACTION AND HEALTHCARE UTILIZATION AMONG IMMIGRANTS TO THE UNITED STATES

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Abstract

Previous research suggests a relationship between life satisfaction and healthcare utilization or HCU (Habibov & Afandi, 2016; Kim, Park, Sun, Smith, & Peterson, 2014). However, no study was found that examined this relationship among elderly American immigrants. The purpose of this study was to determine whether life satisfaction is linked to HCU for this population. The researcher of the current study applied binary logistic regression to data taken from the Health and Retirement Survey to determine whether changes in life satisfaction could be linked to variance in HCU across seven domains, including hospitalization, overnight nursing home stays, doctors visits, dentist visits, use of prescription medications, use of home health, and outpatient surgery. Results of this analysis suggested that a significant relationship did exist between life satisfaction and each of these domains, although the relationships varied in direction and effect size.

Chapter 1. Introduction

As of 2015, the Americans age 65 and older accounted for 15% of the US population, according to Mather, Jacobsen, and Pollard (2015). Of these individuals, 12.5% or 5 million were immigrants to the US (Mather et al., 2015). Both the share of Americans over age 65 and sub-section of seniors that are immigrants are expected to grow exponentially in future decades (Mather et al., 2015). It is vital that social workers are prepared to meet the health needs of this growing population, a feat that cannot be accomplished without available research on current health outcomes within it (Brownell, Creswick- Fenley, & Kim, 2015).

Healthcare utilization (HCU) behaviors are directly linked to health outcomes according to the Andersen Model of Behavioral Health Service Use (Andersen, 1995). Literature suggests that higher levels of life satisfaction are linked to lower levels of HCU and greater overall health (Habibov & Afandi, 2016; Kim, Park, Sun, Smith, & Peterson, 2014). However, no previous literature found directly explores this relationship among the elderly immigrant population in the US. The purpose of this study is to fill this gap in literature by investigating the potential impact of life satisfaction on HCU among American immigrants age 65 and older.

Chapter 2. Literature Review

2.1. Conceptualization of Healthcare Utilization

Defining healthcare utilization. HCU is a commonly-used measurement of health in research. Arcaya, Arcaya, and Subramanian (2015) stated that concepts of and measurements for health must be considered in a complex context of interrelating factors including society, culture, and biology. According to The World Health Organization (1946), *health* can be defined in positive terms, as the presence of total physical, mental, and social wellness. Alternatively, health can be defined in terms of functionality, or an individual's ability to perform everyday tasks, including self-care (Huber et al., 2011). Lastly, health can be defined using negative terms, as the absence of physical, cognitive, or mental illnesses or disorders (Kleinman, 1973).

The term *illness* can refer to the social and cultural context within which a disease is experienced, not only to the disease itself (Kleinman, 1973). The terms disease and disorder refer to the biomedical components of an illness (Scully, 2004). Using HCU as a measurement of health reflects a negative perspective, in that health is defined as not requiring medical services. Individuals with higher levels of overall health are less likely to seek healthcare services (Phillips, Morrison, Andersen, & Aday, 1998). The main limitation of this approach is that it fails to capture unmet healthcare needs and often includes preventative healthcare visits, that would not necessarily be reflective of a negative healthcare outcome (Levesque et al., 2010).

Phillips et al. (1998) defined *HCU* as the use of medical services by individuals. According to Lee, Tsai, Tsai, and Kuo (2010), the term refers more specifically to the combination of outpatient clinic visits and emergency room visits made by and

hospitalization of an individual. Similarly Fenton, Jerant, and Bertakis (2012) defined HCU as emergency department visits and inpatient admissions. For the purpose of this study, self-reported HCU was used as a measurement of health outcomes and defined as the use of medical services including hospitalization, nursing home stays, doctors visits, home health, outpatient surgery and use of prescription drugs.

Attributes of HCU. Liew and Brooks (2017) identified attributes associated with HCU to include the location of service, type of service, length of stay, quality of service, and cost of service. While many people seek healthcare services within their locality, others must travel to larger cities for healthcare services (Liew & Brooks, 2017). Also, many individuals with chronic or terminal illnesses choose to seek alternative care outside of the United States (US) (Bishop, Yardley & Lewith, 2008). These authors stated that HCU could also broadly be considered to include alternative healthcare services within the country, including acupuncture, massage therapy, recreational therapy, and nutritional consultations (Bishop et al., 2008). The term *complementary and alternative medicine* (CAM) utilization is used to describe the use of these types of services (Bishop et al., 2008). HCU could also be considered to include dental and orthodontic care, but it is typically used only to refer to care provided under a licensed medical physician (Liew & Brooks, 2017).

Price, Shuchat, & Rothwell (2017) described types of services captured by traditional conceptions of HCU. These include visits to primary care physicians, gynecologists and other specialists, as well as occupational and physical therapy, inpatient and outpatient surgery, and rehabilitation health services (Price et al., 2017). Other types of HCU include inpatient and outpatient behavioral health, hospitalization,

and emergency department visits (Price et al., 2017). The authors also stated that HCU often includes respite care, hospice care, and residence at a nursing home facility (Price et al., 2017).

For participants in the Health and Retirement Survey (HRS), HCU was captured over the domains of hospitalization, nursing home and other long-term healthcare facility stays, visits to medical doctors and dentists, home-health visits, outpatient surveys, and use of prescription medications. (HRS, 2014). However, because the HRS is based on participant responses and understanding of the questions, it is possible that CAM utilization was captured in some of the responses.

Primary attributes across each of these domains within the HRS are nominal. Respondents have the option of answering most HCU questions with *yes, no,* or *I don't know* (HRS, 2014). However, length of inpatient stay and number of visits are also used within the HRS to characterize HCU (HRS, 2014). These are both open, ratio attributes and can be as low as 0. These do not include a maximum number of days of stay or number of visits. Another way to characterize HCU is by amount of time passed since last contact with a healthcare professional (HRS, 2014). The HRS (2014) uses six categories for this variable: six months or less since contact; more than six months but less than or equal to one year since contact; more than one year but not more than two years since contact; more than two years but less than or equal to five years since contact; more than five years since contact but at least one lifetime contact with a healthcare professional; and never had contact with a medical professional.

Healthcare cost is also captured by the HRS data relating to HCU (HRS, 2014). Healthcare costs are measured in dollars spent per year and can be as low as $0. There is

no maximum on the amount of money an individual can spend on healthcare. Attributes of HCU used in this study were those available from responses to questions on the HRS relating to whether or not patients have participated in outpatient visits to doctors or dentists, stayed in a hospital overnight, stayed in a nursing home over night, had outpatient surgery, received home healthcare, or used prescriptions regularly. These attributes were nominal.

Scope of HCU in the United States. In 2012, there were approximately 11,385 inpatient stays per 100,000 people in the US (Fingar, Barrett, Elixhauser, Stocks, & Steiner, 2015). This figure includes emergency department (ED) visits and inpatient hospitalization (Fingar et al., 2015). Lopez-Gonzalez, Pickens, Raynard, Washington, and Weiss (2014) estimated that approximately 36.5 million hospital inpatient stays occurred in 2012. In 2011, 29% of hospital stays included an operating room (OR) visit (Weiss, Elixhauser, & Andrews, 2014). Such stays comprised 48% of the $387 billion for hospital stay costs in the US that year (Weiss et al., 2014). Weiss and Elixhauser (2014) found that in 2012 each hospital stay lasted 4.5 days and costed $10,400 on average.

According to Carlson, Menegazzi, and Callaway (2013), 475 million ED visits were made in the US between 2006 and 2009. Other researchers found that 129 million and 131 million ED visits in occurred in 2010 and 2011 alone, respectively (Villaveces, Mutter, Owens, & Barrett, 2013; Weiss, Wier, Stocks, & Blanchard, 2014). Weiss et al. (2014) also found that individuals were five times as likely to be discharged from the ED than to be admitted to the same hospital. Kindermann, Mutter, and Pines (2013) found that only 1.5% of ED visits resulted in transfer to another acute care facility or hospital.

HCU does not end with hospitalization. Tian (2016) reported that in 2013, 22.3% of all hospital discharges were made to post-acute care (PAC). *PAC* is intended to foster recovery and functionality as well as to manage chronic illness (Tian, 2016). Medical services considered to be types of PAC include rehabilitation care, skilled nursing care, and palliative care (Tian, 2016).

Additionally, Hines, Barrett, Jiang, and Steiner (2014) reported 3.3 million adults were readmitted to hospitals within 30 days of discharge in 2011. Steiner, Barrett, and Hunter (2010) similarly found that 40% of patients who were hospitalized between 2006 and 2007 returned at least once within a two-year period. These authors also found that when ED visits were included, patients admitted between 2006 and 2007 made 2.1 hospital visits on average (Steiner et al., 2010). Costs associated with hospital readmission reached nearly $4.3 billion in 2011 (Hines et al., 2014). Qasim and Andrews (2012) found that readmission rates tended to be higher for individuals residing in the poorest communities than those in the wealthiest communities.

In 2006, approximately 53.3 million surgical and nonsurgical procedures occurred during 34.7 million ambulatory surgery visits (Cullen, Hall, & Golosinskly, 2009). Nearly 20 million of these visits took place in a hospital, while 14.9 million visits occurred in ambulatory surgery centers. Russo, Elixhauser, Steiner, and Wier (2007) found that nearly 5,600 ambulatory surgery (AS) or outpatient surgical visits occurred per 100,000 persons in 2007. The authors found that there were only 4,100 inpatient surgical visits per 100,000 in comparison (Russo et al., 2007).

Squires (2012) stated that in 2009, 2.4 physicians were practicing for every 1,000 people in the US and that Americans made 3.9 doctor visits per capita. According to the

Price, Schuchat, and Rothwell (2017) 75% of Americans over the age of 18 made at least one visit to a doctor or other healthcare professional in 2016. Almost 26% of adults made 2-3 office visits during that year, while 24% visited a healthcare professional between four and nine times. Nearly 13% of that population made 10 or more visits (Price et al., 2017).

The HRS also uses costs as a measure of HCU. US healthcare spending in 2009 was approximately $8,000 per capita (Squires, 2012). Moore, Levit, and Elixhauser (2014) found that the costs for inpatient hospital care in 2012 was $377.5 billion for the civilian, non-institutionalized population of the US. In 2013, costs for the 35.6 million hospital stays in the US totaled $381.4 billion (Torio & Moore, 2016). According to Squire (2012) 17% of the gross domestic product (GDP) was dedicated to healthcare in the US in 2009. *GDP* represents the market worth of goods and services produced by a country within a certain time period (Coyle, 2015; Philipsen, 2015).

The significant difference between healthcare spending in the US and other industrialized countries, which spend no more than 12% of their GDP on healthcare, is often attributed to the aging population of the US, lifestyle choices in the US such as smoking, or over-utilization of services in the US (Squires, 2012). However, the author demonstrated that the US actually has a smaller elderly population than other developed countries, incident rates for smoking are lower in the US than the average for developed nations, and utilization of healthcare services is lower in the US than in other countries in terms of physicians per capita, number of outpatient visits, length of hospital stays and number of discharges from hospitals (Squires, 2012).

Variations in HCU between ethnic and racial groups. Russo, Andrews, and Coffey (2006) found ethnic disparities in rates of preventable hospitalizations caused by complications of conditions such as diabetes, asthma, or urinary tract infections. Hospitalizations related to preventable conditions or complications occurred more frequently in black populations than in populations of Hispanic individuals or non-Hispanic white individuals (Russo et al., 2006). Hispanic Americans also were hospitalized due to preventable causes at higher rates than their non-Hispanic white counterparts (Russo et al., 2006). The greatest magnitude in difference between levels of HCU among these populations was for complications related to chronic conditions like diabetes, high blood pressure, and asthma (Russo et al., 2006). Similarly, Stranges, Coffey, and Andrews (2008) demonstrated that the disparity between Hispanic and non-Hispanic individuals for preventable hospitalization due to complications of a chronic condition is as high as 42%. The authors also found that, although the gap is contracted with income, Hispanic individuals living in high income communities experienced approximately twice the rate of potentially preventable hospitalizations than non-Hispanic white people (Stranges et al., 2008).

Ai, Appel, Huang, and Lee (2012) found that among Latino American women, Puerto Rican American women were more likely to have sought mental healthcare in the past year than other groups of Latinas while Cuban American women were more likely to have seen a specialist within the past year.

Variations in HCU by immigrant status. Guo and Cheng (2017) found that in the US, immigrants used mental healthcare services at significantly lower rates than native-born citizens even when language was controlled for. However, these researchers

along with Chen and Vargas-Bustamante (2011) found that primary language, country of origin, and documentation status impacted the magnitude of this difference (Guo and Cheng, 2017).

Sarría-Santamera, Hijas-Gómez, Carmona, and Gimeno-Feliú (2016) found that, while differences in healthcare use existed among immigrant and native-born citizens in other parts of the world, the difference among these groups was more significant in the US than in Western European countries and Canada.

Vargas-Bustamante et al. (2012) reported that among undocumented Latinx immigrants to the US, overall HCU is lower than not only that of the majority of the US population, but also that of the Latinx population in the US specifically. *Latinx* is a gender neutral term utilized in place of Latino and Latina; it signifies that not all individuals of Latin descent identify with the binary terms (Salinas & Lozano, 2017). Additionally, the usage of public health programs, such as county health units and free vaccinations, was significantly lower for this group than the overall US population (Vargas-Bustamante et al., 2012). However, the authors found that there is no significant difference between hospitalization rates for undocumented Latinx immigrants and the larger US population as a whole, except for hospitalizations due to childbirth (Vargas-Bustamante et al., 2012). The pregnancy-related hospitalization rate for undocumented Latinas was nearly double that of the US population at large (Vargas-Bustamante et al., 2012).

Similarly, Pourat, Wallace, Hadler, and Ponce (2014) found that undocumented immigrants in California accessed primary care and preventative services at lower rates than the overall population of California, but had similar numbers of ED visits per capita

to the larger population. Nandi, Galea, Lopez, Nandi, Strongarone, and Ompad (2008) found that healthcare services that were obtained by immigrants tended to be more expensive on average than those obtained by US-born individuals, because the services rendered were more likely to be related to acute or emergency care rather than preventative care.

Similarly, Derose, Escarce, and Lurie (2007) demonstrated that immigrants use health services at lower rates than the overall US population and receive lower quality care on average than native-born citizens. However, the authors also reported that there were variations in HCU among sub-groups of immigrants based on legal status, socioeconomic status, and proficiency with English (Derose et al., 2007). On the other hand, certain types of HCU are actually higher for some immigrant groups than for US-born citizens, according to Song et al. (2010). For instance, the authors found that hospitalization rates were higher for Korean immigrants than their white, native-born counterparts (Song et al., 2010).

Variations in HCU between age groups. Witt, Weiss, and Elixhauser (2014) reported that there were nearly 5.9 million hospital stays for children under the age of 18, meaning that children comprised one of every 6 discharges. Nearly 4 million of these hospitalizations were for infants and 104,700 stays were for teen mothers (Witt et al., 2014). Wier, Yu, Owens, and Washington (2013) found that 25.5 million ED visits were for children under the age of 18.

Nagamine, Jiang, and Merrill (2006) found that while individuals age 65 and older comprised approximately 12% of the US population between 1997 and 2004, this age group represented 35% of hospitalizations annually. Owens and Mutter (2010) also

found that ED utilization was highest for adults 65 and older with 550 visits per 1,000 people compared to 444 visits per 1,000 for adults age 18-44 and 345 visits per 1,000 for those age 45-64 years old. Similarly, Goto, Yoshida, Tsugawa, Camargo, and Hasegawa (2016) found that there were 3.1 million total ED visits for adults 65 and older in 2012. Approximately 1.8 million of these ED visits resulted in hospitalization (Goto et al.,2016). Adults age 65 and older comprised 19.7% of acute injuries in between 2009 and 2010, including those treated in ED as well as in outpatient settings (Betz, Ginde, Southerland, & Caterino, 2014).

Stranges and Friedman (2009) reported that potentially preventable hospitalization rates were also higher for adults age 65 and older than other age groups, especially with respect to conditions including diabetes, chronic respiratory conditions, chronic cardiac conditions, and acute incidents. Stranges and Stocks (2010) found that adults 65 and older comprise as much as 60% of preventable hospital stays. Price et al. (2017) found that primary HCU was higher for this age group as well, with this population comprising over 61% of all office visits in 2016.

Russo and Elixhauser (2006) reported that the burden of costs related to HCU was higher for adults age 65 and older as well, reaching approximately $329 billion or 43.6% of the national cost for hospital stays in 2003. However, Pfunter, Levit, and Elixhauser (2012) determined that in 2009 hospital costs for individuals 65 and older were approximately $153.9 billion while costs for adults 18-64 were 207.9 billion.

Wier, Pfunter, and Steiner (2010) demonstrated that adults age 75-84 accounted for 13.8% of hospital discharges while making up only 4.3% of the US population (Wier et al., 2010). The authors also found that, although adults 85 and older comprised only

1.8% of the US population, this group comprised 8% of all discharges. Thus, oldest adults were hospitalized at rates nearly twice those of adults age 75-84 (Wier et al., 2010).

Wolf, Gazmararian, and Baker (2007) reported that elderly immigrants specifically receive fewer preventative healthcare services than their native-born cohorts, linking this behavior to higher hospitalization rates. Bennett, Jing, Soroui, and White (2009), determined that 39% of elderly immigrants with past preventable hospitalizations had not received recommended preventative health services in the year prior to the study.

Ailinger and Causey (1993); Damron-Rodriguez, Wallace, and Kington (1995); and Leclere, Jensen, and Biddlecom (1994) each exhibited that HCU was lower among elderly immigrants than US-born elders after controlling for age and health status. The importance of these studies is that they occurred prior to the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA), which, as reported by Viladrich (2012), imposed limitations to public assistance for healthcare access for immigrants. These studies suggest that HCU is impacted by factors other than publically-funded healthcare coverage.

In summary, for the adult US population, HCU is highest among those 65 and older (Nagamine, Jiang, & Merrill, 2006; Stranges & Friedman, 2009), while HCU is lower for immigrants than for native-born citizens (Derose, Escarce, & Lurie, 2007; Guo & Cheng, 2017). Elderly immigrants utilize preventative health services and primary care at lower rates than their native-born counterparts, while their hospitalization rates are actually higher (Wolf, Gazmararian, & Baker, 2007). Varying trends emerge when specific groups are considered (Vargas-Bustamante et al., 2012; Song et al., 2010).

Factors that contribute to variations in HCU between immigrant populations and native-born citizens in the US include fear of deportation and legal barriers to access based on immigration status (Stone, Viruell-Fuentes, & Acevedo-Garcia; 2007). Pourat et al. (2014) cite cultural differences as contributing to differences in HCU between immigrant and native groups. Other factors include language barriers, unfamiliarity with the US healthcare system and insurance, and lack of health insurance (Cristancho, Garces, Peters, & Mueller, 2008; Derose, Escarce, & Lurie, 2007).

This research suggests that elderly immigrants in the US represent a population vulnerable to disparities in HCU that impact their overall health and healthcare spending in the US. Gaps in available literature suggest that further research is necessary to better understand health behaviors of this population.

HCU and relevance to social work. HCU is an important indicator of health outcomes for a population (Ezeamama et al., 2016). Bainbridge and Wallhagen (2014) stated that understanding trends in HCU is essential to the ability to foster wellbeing within any community. Viruell-Fuentes, Miranda, and Abdulrahim (2012) proposed that understanding the relationship between health outcome indicators like HCU and social determinants such as a person's socioeconomic status, neighborhood, employment status, ethnicity, and immigration status is imperative in addressing health and social inequality.

These claims emphasize the importance of understanding HCU among immigrants to social work. According to code of ethics set forth by the National Association of Social Workers (NASW, 2008), the main goal of social work is to foster the wellbeing of humanity and attend to its basic needs, focusing especially on vulnerable and oppressed populations. Addressing the literature gap relating to these populations

will help social workers to meet this goal. Another factor of wellbeing relevant to social work is life satisfaction.

2.2. Conceptualization of Life Satisfaction

Defining life satisfaction. Life satisfaction is often used interchangeably with happiness (Plagnol, 2010). However, Gilbert (2009) described *happiness* as an ever-changing emotional state, while *life satisfaction* comprises the cognitive component of wellbeing, according to Andrew and Withey (1976). Shin and Johnson (1978) further described life satisfaction as an individual's subjective assessment of their quality of life. The authors also emphasized the role of each person's unique schemas and personal judgements in this evaluation (Shin & Johnson, 1978).

Similarly, Stones and Kozma (1980) defined life satisfaction as an approximation made by an individual of whether a reasonably expectable proportion of their needs and desires in life had been met. Diener (1984) clarified that the judgement of one's situation in life is imperfect.

Willis (2009) defined life satisfaction as the phenomena of self-fulfillment provided by contentment with one's personal and professional roles, suggesting that life satisfaction can exist without cognitive evaluation. Although much of the literature has described life satisfaction as both a subjective and psychological component of wellbeing interchangeably, Keyes, Shmotkin, and Ryff (2002) argued that satisfaction must be treated as a subjective evaluation of life, in terms of balance between positive and negative aspects. Satisfaction not only requires that one's goals in life are being met, but that negative circumstances do not and have not outweighed positive experiences, in the eyes of the individual (Keyes, Shmotkin, & Ryff, 2002). Psychological wellbeing, on the

other hand, comprises the process of interaction with obstacles, meaning-making, and actualization of self, as well as personal and occupational functioning (Ryff, 2014).

For the purposes of this study, *life satisfaction* was defined as an individual's approximation of whether the needs and desires in life that have been and are currently being met outweigh the impact of negative past or current experiences. It is important to note, however, that responses to the Health and Retirement Survey depended upon the individual's understanding of what life satisfaction meant to them.

Attributes of life satisfaction. Due to the subjective nature of life satisfaction, Diener (1984) stressed the importance of evaluating life satisfaction along a generalized scale, rather than imposing potential proxies for life satisfaction informed by a researcher's personal experience and viewpoints. Diener, Emmons, Larson, and Griffin (1985) developed the Satisfaction with Life Scale (SWLS) comprised of five items to measure overall satisfaction with one's life. For each item, responses fall on a 7-point Likert scale ranging from 1 to 7 (Diener et al., 1985). A response of 1 indicates strong disagreement, while 7 represents strong agreement. (Diener et al, 1985). The possible scores range from 5 to 35, with higher scores displaying a high level life satisfaction (Diener et al., 1985).

However, Kennedy, Northcott, and Kinzel (1978) argued that global measurements of life satisfaction held little meaning without being supplemented by more detailed investigation into what being satisfied with one's life might mean to individual. Similarly, Kahneman and Krueger (2006) pointed out that responses to global questions depend on immediate context including internal factors such as mood and external factors such as temperature, as well as an individual's ability to recall with

accuracy past thoughts and feelings. The authors also suggested that the use of numerical scales itself is subjective, as there is no method of ensuring that everyone attributes the same meaning to variation along the scale (Kahneman & Krueger, 2006).

Kahneman and Krueger (2006) proposed a model referred to as the U-index that monitors attributes of unpleasant emotional states and undesirable events alongside the measurement of satisfaction, to account for the effect of changing emotional states. Attributes for the U-index are based on aggregates of negative and positive experiences reported by the participants (Kahneman & Krueger, 2006). The possible scores are 1, indicating an unpleasant or negative state for the participant or 0 indicating either a neutral or positive state (Kahneman & Krueger, 2006).

Scope of life satisfaction in the United States. In 2010, 49% of adults in the US reported being satisfied with life, while 44% reported being very satisfied, in response to an item on the Behavioral Risk Factor Surveillance System (Helliwell & Huang, 2014). Only 1% of Americans reported being very dissatisfied (Helliwell & Huang; 2014). Similarly, between 2008 and 2011, 76% of respondents to the Gallup-Healthways Well-being Index described their life as being within 4 rungs or fewer of their ideal life, when they imagined rung 0 of a ladder to represent their worst possible life and rung 10 to represent the best life they could imagine (Helliwell & Huang; 2014).

Research has produced conflicting evidence about the relationship between age and life satisfaction. Safi (2010) found a non-linear relationship between age and life satisfaction among European immigrants, with the highest rates of life satisfaction occurring among adults age 18-28 and age 55-65. Similarly, Blanchflower and Oswald (2008) found that subjective indicators for wellbeing including life satisfaction were

lowest in middle adulthood and highest among young adults without children and among older adults.

However, Hamarat, Thompson, Zabrucky, Steele, Matheny, and Aysan (2001) found that life satisfaction was greatest among older adults in the US. Similarly, Netuveli, Wiggins, Hildon, Montgomery, and Blane (2006) found that, among English adults, life satisfaction peaks during old age. However, the authors also found that life satisfaction declines steeply during the transition from *young old*, age 60-74, to *oldest old*, age 75 and older (Netuveli et al., 2006). Jivraj, Nazroo, Vanhoutte, and Chandola (2014) found that, when changes to health and marital status are controlled for, the oldest old actually have a higher level of life satisfaction on average than the young old.

Jivraj and Nazroo (2014) reported the average life satisfaction of elderly citizens of the US at several age groups, as measured by the SWLS. The average life satisfaction of adults age 55-59 was 25.6, as was that of adults age 60-64 (Jivraj & Nazroo, 2014). The average for adults age 65-69 was slightly higher at 26.3, while that of the group ranging in age from 70-74 was 26.7 (Jivraj & Nazroo, 2014). The authors found that the average life satisfaction for those age 75 and older was slightly lower at 26.2 (Jivraj & Nazroo, 2014). As stated earlier, the score range on the SWLS is 5-35 (Diener et al., 1985).

Few large-scale studies have examined life satisfaction among American immigrants, but several smaller studies have provided information about trends relating to life satisfaction among this group. Ando (2014) found that among Japanese immigrants to the US, life satisfaction rates were higher among women than men and that a higher level of education is linked to reports of greater life satisfaction. For a sample of first

generation immigrants from the Dominican Republic, Puerto Rico, and Mexico, Roy and Goodfrey (2016) found that relationships between life satisfaction and both family and neighborhood income vary depending upon region-of-origin.

Calvo, Carr, and Matz-Costa (2017) found that reports of life satisfaction specifically among older Hispanic immigrants were higher than those of both the elderly native-born Hispanic population of the US and their non-Hispanic white counterparts. Zhan, Wang, Fawcett, Li, and Fan (2017) found that among a group of 107 Chinese immigrants to the US aged 60 years and older, 81% either agreed or strongly agreed that they were satisfied with their lives. Park, Roh, and Yeo (2012) found that among a sample of 200 Korean immigrants, age 65-89, the average reported life satisfaction was 15.7. The authors utilized a Korean adaptation of the SWLS in which the possible score ranges from 5-25, with a score of 25 representing the highest level of satisfaction with life (Park et al., 2012).

This research suggests that both elderly adults and immigrant adults report higher levels of life satisfaction than their younger and native-born counterparts, respectively (Jivraj, Nazroo, Vanhoutte, & Chandola, 2014; Calvo, Carr, & Matz-Costa, 2017; Zhan, Wang, Fawcett, Li, & Fan, 2017; Park et al., 2012). However, the body of literature on life satisfaction among elderly immigrants to the US in nonexistent. Further research is needed to illuminate trends related to this important component of cognitive well-being among this population.

Importance of life satisfaction to social work. Life satisfaction has been used frequently as a measurement of psychological wellbeing. According to NASW (2008), at the core of the mission of social workers is improvement for the wellbeing of all people.

Historically, immigrant populations have not been the focus of research relating to life satisfaction. One of the standards for cultural competence in social work practice is the expectation that social workers work towards understanding the cultural context and values that impact various groups, including immigrants, as well as the systems of power and oppression that are enacted upon them (NASW, 2015).

Fisher-Borne, Cain, & Martin (2015) highlight the need to center the individual client within the context of their cultural identity and experiences to adequately empower them to improve emotional, social, and cognitive functioning. Understanding the potential role of life satisfaction as a determinant for health outcomes such as HCU within the context of an individual's immigrant identity, social workers will be better prepared to serve non-native clients.

2.3 Justification for Control Variables

Like most forms of human behavior, HCU is influenced by a variety of factors (Ye, Mack, Fry-Johnson, & Parker, 2012). For this reason it is important to take into account certain variables with evidenced relationships to HCU, to exclude potential spurious relationships between HCU and life satisfaction. Rubin and Babbie (2013) described a *spurious* relationship as one that appears to exist when external variables are not controlled for, but disappears when they are taken into account. These potential confounding variables are referred to as *control variables* (Rubin and Babbie, 2013).

Overall health. Sarría-Santamera et al. (2016) found that among both immigrant and native populations of fourteen countries including the US, self-reported health status had the most significant relationship to HCU out of common confounding variables, including age, gender, and education level. Similarly, Ye, Mack, Fry-Johnson, and Parker

(2012) found that Asian-Americans reporting lower health status were more likely to report higher levels of HCU that those reporting higher levels of health.

Income. Lin, Burgess, and Carey (2011) found that adults between the ages of 18 and 29 with income below the poverty level were 23% more likely to utilize emergency care than their counterparts with greater income level. Additionally, ED utilization rates for people living in the lowest income areas were approximately 90% higher than those of people living in the highest income areas with 543 and 286 per 1,000 adults, respectively (Owens & Mutter, 2010). Wier, Merrill, and Elixhauser (2009) found that the rate of hospitalization among people living in lowest income areas was 22% higher than people living in wealthier communities.

Weir et al. (2009) also showed that potentially preventable conditions such as urinary tract infections, skin infections, dehydration, and complications from asthma, diabetes, COPD, CHF, and pneumonia were significantly more common among lower income communities than higher income communities. Similarly, Weiss and Elixhauser (2014) found that the average length of stay was also higher for those living in the lowest income communities. However, this study utilized individual income as a control variable.

Age. Emergency department utilization among adults over age 18 is lowest among those age 45-64 and highest among those age 65 and older (Owens & Mutter, 2010). Similarly, Nagamine et al. (2006) found that those 65 and older also represented the largest portion of hospital discharges annually. Wier et al. (2010) further demonstrated that adults age 75-84, a group that makes up only 4.3% of the population, comprised 13.8% of hospital discharges. The authors also found that the oldest adults,

age 85 and over, were hospitalized at nearly twice the rate of adults age 75-84 (Wier et al., 2010). Stranges and Friedman (2009) found that potentially preventable hospitalization rates were also higher for adults age 65 and older than other age groups, especially with respect to conditions including diabetes, chronic respiratory conditions, chronic cardiac conditions, and acute incidents. Stranges and Stocks (2010) found that adults 65 and older comprise as much as 60% of preventable hospital stays. Russo (2006) reported that HCU costs were higher for elderly adults as well, when compared to the larger population, comprising 43.6% of the national expenses.

Gender. Owens (2008) found that women comprise a higher proportion of the HCU costs in the US than men. Pleis, Ward, and Lucas (2009) found that American women also were more likely to have visited more healthcare professionals in the past year than men. Similarly, Vaidya et al. (2012) found that women utilized preventative healthcare services at higher rates than men in the United States. Ye et al. (2012) found that, among both US-born and immigrant Asian Americans, women were more likely to have visited a doctor in the past year prior to the study than men. On an international level, Redondo-Sendino, Guallar-Castillon, Banegas, and Rodriguez-Artalejo (2006) found that among the elderly population of Spain, women utilized healthcare at higher rates than men.

However, some studies of smaller groups suggest different trends in HCU between genders. For instance, Kang and Deren (2009) found that among Puerto Ricans using drugs in New York, women utilized healthcare services at lower levels than men. Conversely, Brennan-Ing, Seidel, London, Cahill, and Karpiak (2014) found that there was a weak relationship between gender and HCU among elderly adults with HIV,

indicating that men utilized more services than women. However, the authors found that this relationship weakened further when overall health was controlled for (Brennan-Ing et al., 2014). Keto et al. (2017) found that among smokers in Finland, there is no significant gender difference in HCU.

Education. According to Lin et al. (2011), young adults with a high school education level or less were more likely to use emergency services than those with higher levels of education between 2006 and 2009.

However, Nandi et al. (2008) found that, among undocumented Mexican immigrants living in Mexico, individuals with at least some college had higher rates of emergency HCU than their counterparts with a high school diploma or less.

Marital Status. Nandi et al. (2008) found that there was no significant difference in HCU based on marital status among undocumented Mexican immigrants living in New York. However, Ye et al.(2012) found that while married individuals were more likely to have obtained preventative healthcare in the year prior to the study, non-married individuals were more likely to have received emergency healthcare. Vargas-Bustamante et al. (2012) also reported the existence of a relationship between marital status and HCU. Unmarried Mexican immigrants of varied documentation status living in California were less likely to utilize healthcare services than their married counterparts (Vargas Bustamante et al., 2012).

Race and ethnicity. Chen, Vargas-Bustamante, Mortensen, and Ortega (2016) found that non-white Latino individuals were more likely to seek care from a physician than non-Hispanic white people. According to Arnett, Thorpe, Gaskin, Bowie, and LaVeist (2016), white individuals are more likely than black individuals to see a

physician for primary care. Compared to their white counterparts, black individuals are also less likely to see outpatient specialists, according to Saadi, Himmelstein, Woolhandler, and Mejia (2017).

In summary, previous research has shown that relationships exist between HCU and overall health, income, age, gender, education, martial status, race, and ethnicity. Within the overall US population, individuals with greater levels of income and educationare less likely to be hospitalized than those demonstrating lower levels of these characteristics (Lin, Burgess, & Carey, 2012; Owens & Mutter, 2010; Wier, Merrill, & Elixhauser, 2009). Those with greater levels of overall health have lower levels of overall HCU (Sarría-Santamera et al., 2016; Ye, Mack, Fry-Johnson, & Parker, 2012). Age, as previously discussed has a significant impact on HCU, with HCU being higher for adults age 65 and older than their younger counterparts (Owens & Mutter, 2010; Nagamine et al., 2006; Stranges & Friedman; 2009). Past research supports mixed relationships between HCU and gender as well, as with marital status (Owens, 2008; Pleiss et al., 2009; Vaidya et al., 2012; Kang & Deren, 2009; Brennan-Ing et al., 2014; Nandi et al., 2008; Ye et al., 2012). This body of literature highlights the importance of controlling for these variables in any study exploring the relationship between HCU and other factors.

2.4 Theoretical Foundation: Anderson HCU Model

Explication of Andersen HCU model. Andersen and Newman (1973) proposed that patterns of behavior related to HCU and ultimately health outcomes depend upon three dynamic and interrelating factors: predisposing factors, enabling factors, and need. Andersen and Newman (1973) described *predisposing factors* as internal individual traits such as race, age, and beliefs about health and healthcare that influence the likelihood a

person will seek medical care. The authors described *enabling factors* as external forces such as access to healthcare and social support systems that impact an individual's ability or motivation to seek care (Andersen & Newman, 1973). Finally, Andersen and Newman (1973) utilized the term *need* to reflect both an individual's perceived and actual necessity for healthcare.

Andersen contributed to multiple re-workings of this model with the goal of providing a framework with which to study variations in HCU. (Aday & Andersen, 1974; Andersen, 1995; Gelberg, Andersen, & Leake, 2000; Andersen & Davidson, 2011; Andersen, 2008). Overall, the model identifies and maps the flow of influence of predisposing factors, enabling factors, and needs on health behaviors, and the impact of health behaviors health outcomes. Identifying enabling resources provides the *potential access* to healthcare, while observed and HCU indicates *realized access* (Andersen, 1995). Andersen (1995) described *inequitable access* as the state in which variations between groups can be accounted for not by predisposing or need factors, but by differences in the social, political, and economic structures that impact potential access. Gelberg, Andersen, and Leake (2000) emphasized the importance of the potential for feedback loops between health outcomes and other components of the model, indicating that the relationship between these components is multidirectional.

In later iterations of the model, authors stressed the importance of both contextual and individual determinants across each of the three domains of predisposition, enablement, and need (Andersen & Davidson, 2007; Andersen, 2008). The authors used the term *contextual* to refer to the environment in which healthcare access and utilization is being considered (Andersen & Davidson, 2007). Contextual factors are measured in

aggregate (Andersen & Davidson, 2007). *Individual* factors on the other hand are those that are specific to each person (Andersen & Davidson, 2007). Contextual predisposing factors include population demographics, cultural considerations, and social beliefs (Andersen & Davidson, 2007; Andersen, 2008). Some examples of individual predisposing factors are genetics and personally-held beliefs (Andersen & Davidson, 2007; Andersen, 2008). Contextual enabling factors include policies affecting healthcare access and insurance, financing options, and structure of healthcare systems (Andersen & Davidson, 2007; Andersen, 2008). Individual enabling factors include access to insurance and one's social network (Andersen & Davidson, 2007; Andersen, 2008). Finally, contextual needs include public health issues, environmental factors, and health indices for populations (Andersen & Davidson, 2007; Andersen, 2008). Individual determinants of need include both perceived and evaluated need of an individual (Andersen & Davidson, 2007; Andersen, 2008).

Application of theory to current study. The dynamic nature of and feedback loops within the HCU model described by Gelberg et al. (2000) can be used to understand the connection between life satisfaction and HCU. Interactions between an individual and their environment that result in higher or lower levels of satisfaction with life can in turn, theoretically result in lower or higher use of healthcare services. Life satisfaction itself can be considered to be an individual predisposing factor.

The relationship between life satisfaction and health is supported by international literature. For instance, Habibov and Afandi (2016) found that higher levels of life satisfaction were linked to greater overall health across 28 countries in Europe and Central Asia. Strine, Chapman, Balluz, Moriarty, & Mokdad (2008) found that

individuals with higher levels of life satisfaction live longer on average than individuals with lower levels. Veenhoven (2008) similarly demonstrated that low levels of subjective wellbeing, including life satisfaction, impact longevity to the same extent that smoking does.

HCU has also been linked to life satisfaction. Kim et al. (2014) demonstrated that, among elderly adults in the US, higher life satisfaction is linked to a lower overall HCU. Kim, Kubzansky, and Smith (2015), however found that those with higher levels of life satisfaction were more likely to utilize preventative healthcare services. This research suggests the need to differentiate between the use of emergency and acute HCU and preventative services. However, for the purposes of this research, overall HCU was utilized, due to limitations in the available data.

Gelberg et al. (2000) adapted the Andersen model with vulnerable populations, such as immigrants, in mind. Saint Arnault (2018) built on their work, reporting that cultural beliefs about health and healthcare can interact with limited healthcare access, which contributes to HCU, to result in new beliefs regarding the lack of potential for mobility of one's cultural group. These new schemas can further impact HCU. Similarly, Nandi et al. (2008) demonstrated that relationships between HCU and established correlating factors such as education cannot be taken for granted to be present in the same way among immigrant groups to the US as native-born citizens.

In summary, while levels of life satisfaction have been shown to positively correlate with overall health , and overall health has been demonstrated to negatively correlate with HCU, the body of research supporting the negative correlation between life satisfaction and HCU is sparse (Habibov & Afandi, 2016; Strine et al., 2008; Kim et al.,

2014; Ye, Mack, Fry-Johnson, & Parker, 2012). Additionally, this relationship has not been explored among the elderly immigrant population of the US. Though the Andersen model supports a relationship between life satisfaction and health, the model also supports the possibility that this relationship might present differently between populations affected by different sets of contextual factors (Andersen, 2008; Gelberg et al., 2000; Saint Arnault, 2018). This paper seeks to fill a gap in the literature, for the purposes of further understanding the complex interactions of psychological wellbeing and HCU, and to better serve immigrant communities by reconciling potential and realized access to healthcare.

Chapter 3. Research Questions

The goal of this study was to determine whether a relationship exists between life satisfaction and any of the HCU domains included in the HRS.

Research Question (RQ) 1: Does a relationship exist between life satisfaction and utilization of hospital stays?

RQ 2: Does a relationship exist between life satisfaction and the utilization of nursing home stays?

RQ 3: Does a relationship exist between life satisfaction and the utilization of doctors visits?

RQ 4: Does a relationship exist between life satisfaction and the utilization of home health?

RQ 5: Does a relationship exist between life satisfaction and the utilization of outpatient surgery?

RQ 6: Does a relationship exist between life satisfaction and the utilization of prescription drugs?

RQ 7: Does a relationship exist between life satisfaction and the utilization of dental visits?

Chapter 4. Methods

4.1. Design

Because a thorough review of literature did not provide enough evidence to support a directional hypothesis, the current study was exploratory in nature. Secondary data analysis was performed using information already gathered by the core HRS. Although the HRS is a longitudinal study that investigates the behavior of older adults over time, the current study utilized a cross-sectional design. It used data collected at a single point in time during the 2014 wave of the HRS.

Originally the HRS was developed by the University of Michigan with the support of the National Institute on Aging to examine changes in behavior and circumstances that might occur as older adults pass from the workforce into retirement (HRS, 2008). A separate study called the Asset and Health Dynamics Among the Oldest Old (AHEAD) was created to explore the interplay between social, economic, physical, and emotional factors among those in post-retirement (HRS, 2008). As the studies were merged in 1998, so too were their goals (HRS, 2008). The HRS was not designed for clinical or standardized use, so no psychometric evaluations are available (Fisher & Ryan, 2017).

The core of the HRS was completed primarily through phone interviews, although some face-to-face interviewing was utilized when necessary (HRS, 2017). Supplementary portions of the HRS were also administered through written-response surveys (HRS, 2017). Utilizing the supplementary portion of the HRS limited the sample size of the current study.

4.2 Sampling

During the first wave of the HRS in 1992, the study included only adults born between 1931 and 1941 (HRS, 2017). Since then, the sample for the study has increased in size as new cohorts have been added (HRS, 2017). This expansion began the following year with the creation of the sister survey AHEAD, which targeted participants born before 1924 (HRS, 2017). In 1998, AHEAD was absorbed into the HRS, and two new cohorts were added, including those born between 1924 and 1930 as well as those born between 1942 and 1947 (HRS, 2017). Since then, the HRS has utilized steady-state sampling, adding a new cohort every six years to replenish the sampling base (HRS, 2017).

Recruiting methods for the HRS target community dwelling individuals over the age of 50 by using an area-clustered probability sample frame (Fisher & Ryan, 2017). This method separates geographic areas into different domains based on concentrations of white, black, and Hispanic individuals within the designated area. In areas in which at least 10% of the population consisted of African American or Hispanic individuals, race and ethnicity were utilized in the screening process to include a greater than proportional number of Hispanic or black individuals. By oversampling these populations, the HRS helps to ensure the representativeness of the study, even when issues of response and attrition rates are accounted for (HRS, 2008; Rubin and Babbie, 2013).

The current study includes only those HRS respondents who were born outside of the US. Of the 18,747 adults who completed the HRS, approximately 5,000 reported being born outside of the US. However, only 1100 of these individuals responded to the

life satisfaction component of the survey and were eligible to be included in the current study.

4.3. Measures

The current study includes seven outcome variables related to HCU including utilization of hospital stays, nursing home stays, and doctor visits, as well as the use of home health, outpatient surgery, prescription drugs, and dentist visits. For the purposes of this study, the following questions, taken from the HRS (2014), were used to encapsulate HCU: *In the last two years, have you been a patient in a hospital overnight? In the the last two years, have you been a patient overnight in a nursing home, convalescent home, or other long-term health care facility Do you think you have seen a medical doctor about your health at least once in the last two years? In the last two years, has any medically-trained person come to your home to help you, yourself? Not counting overnight hospital stays, in the past two years have you had outpatient surgery? Do you regularly take prescription medications? Do you think you have visited a dentist in the last two years?*

The level of measurement for each domain of HCU is nominal and nonparametric, meaning that statistical analysis for these values did not rely on numerical distribution (Cozby, 2015). The response options for each question were *yes, no, don't know*, and *refused* (HRS, 2014). For the purposes of this study, responses of *yes* were coded as 1 while responses of *no* were coded as 0. Responses of *don't know* and *refused* were disregarded.

The main independent variable of the current study was life satisfaction. Although there are many operationalizations of life satisfaction, the HRS utilized a singular life

satisfaction question: *Please think about your life as a whole. How satisfied are you with it? Are you completely satisfied, very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?*

The level of measurement for life satisfaction was ordinal (nonparametric). Responses included *don't know* and *refused,* as well as responses along a five-point Likert-type scale ranging from *completely satisfied* to *not at all satisfied* (HRS, 2014). Responses were coded from 4 to 0 with 4 representing complete satisfaction and 0 representing no satisfaction. Responses of *don't know* and *refused* were not included in the current study.

The study included eight control variables including overall health, individual income, age, gender, education, marital status, race, and ethnicity. For the purposes of this study, overall health was operationalized as self-rated health. The HRS (2014) used the following question to capture self-rated health: *Would you say your health is excellent, very good, good, fair, or poor?* Response options were ordinal (nonparametric) in nature and ranged from excellent to poor, as indicated by the question. They were coded from 4 to 0, with 4 indicating excellent health and 0 indicating poor health. The response options of *don't know* and *refused* were also provided, but were excluded from analyses of the current study.

The HRS used multiple questions to capture individual income including those related to earnings from self-employment, wages and salary, and commission; those recording income from unemployment, worker's comp claims, social security, and other social welfare resources; those capturing income from individual retirement accounts (IRA) or invested stocks, other savings accounts, and assets or equity from real estate,

rentals, business, or farms; and questions regarding income from pensions, annuities or trust funds, or sold stocks and bonds (HRS, 2014). The HRS (2014) provided a separate dataset reporting the total household income as a numerical value in dollars, calculated from the sum of each of these types of income for each household. The level of measurement for this data was ratio (parametric).

Participants' ages were captured by the survey through the following question: *In what month, day and year were you born?* Responses to these questions were computed by the HRS and published as a numeric value in years at the time of survey to protect the personal information of participants. This provided ratio (parametric) values.

The HRS (2014) used the following question to establish gender: *Is [respondent's first name] male or female?* This provided a nominal (nonparametric) level of measurement for gender. The responses available were *male* and *female*, which were coded as 0 and 1, respectively. Data related to education level was acquired by the following question: *What is the highest grade of school or year of college you completed?* Options for response included *no formal education, grades 1-11, high school, some college, college grad, post college, don't know,* and *refused* (HRS, 2014). The level of measurement was ordinal (nonparametric) for these responses.

Marital status was assigned to respondents using a series of questions that verified participants' understanding of legal marriage (HRS, 2014). The final response options include *married, annulled, separated, divorced, widowed, never married, other (specify), don't know*, and *refused*. The responses of *other, don't know,* and *refused* were excluded from analysis. The responses of *annulled, separated, divorced, widowed*, and *never*

married were combined into a single category of *not married*, which was coded as 0 while married was coded as one.

Response options for race were limited to *white, black*, *other, don't know,* and *refused.* A decision was made to both disregard all *don't know* and *refused* responses, as well as to combine the categories of *black* and *other* for the purpose of data analysis. *Not white* was coded as 0 while white was coded as 1.

Similarly, response options for ethnicity were dichotomous. Survey participants were asked, *do you identify as Hispanic of Latino?* Response options were *yes, no, don't know,* and *refused.* The last two options were disregarded. Responses of *yes* were coded as 0 and responses of *no* were coded as 1.

4.4. Analytic Plan

Seven separate binary logistic regression analyses were conducted exploring the potential relationship between life satisfaction and each of the seven HCU domains, while controlling for self-rated health, household income, age, gender, education, marital status, race, and ethnicity. This method was chosen due to the dichotomous nature (*yes* or *no)* of dependent variables. The analyses determined whether a relationship exists between life satisfaction and each component of HCU by producing six different models. Each model, A through G, analyzed the relationship between the independent variables and the odds of engaging in one of the types of HCU chosen for this study over a two year period prior to the administration of the HRS survey in 2014. Model A used the odds of visiting a hospital while Model B instead used the odd of visiting a nursing home. Model C, D, and E respectively relied on the odds of visiting a doctor, using home health

services, and having outpatient surgery. Model F utilized the odds of using prescription drugs, while Model G used that of visiting a dentist.

In addition, descriptive statistics were reported for parametric variables while frequency distributions and percentages were reported for nonparametric variables. Prior to logistic regression, frequencies were weighted to reflect overall population of American Immigrants age 65 and older in the US, 4.2 million in size at the time of survey (Population Reference Bureau, 2014).

For each of the seven models formed during analysis, unstandardized beta coefficients with their standard errors, as well as standardized beta coefficients or odds-ratio (*OR*) and their significance values for each independent variable were determined. The independent variables included life satisfaction as well as the control variables.

Beta coefficient were considered significant when its significance value (*p*) was less than 0.05. This indicated that the independent variable of life satisfaction was able to significantly predict whether an individual did or did not utilize a particular type of healthcare service.

Model summary statistics including chi-squared statistics, NR statistics, and Hosmer-Lemeshow goodness-of-fit tests were also be used to determine whether the combination of control variables and life satisfaction together accurately predict HCU. The NR values were utilized to indicate the improvement of each model when compared to a model with no predictors. Possible NR values range from 0 to 1. The higher the value, the greater the effect size was. To determine whether each model fits the data, the Hosmer-Lemeshow test was used. A significant value for this statistic would indicate that the model does not fit the data well.

Chapter 5. Results

5.1. Descriptive Statistics

Descriptive analyses of the sample yielded the frequencies, percentages and means described in Tables 1-7.

Table 1 shows that among respondents included in sample, 7.6% identified as not at all satisfied with life or not very satisfied, while 27.1% identified as somewhat satisfied with life, 41.5% as very satisfied, and 23.8% identified as completely satisfied with life.

Table 1. Frequency for Life Satisfaction

Attribute	Frequency	Valid% (Unweighted)	Valid % (Weighted)
Not at all satisfied	17	1.8	2.4
Not very satisfied	55	5.8	5.2
Somewhat satisfied	259	27.1	25.4
Very satisfied	396	41.5	42.4
Completely satisfied	227	23.8	24.6

As shown in Table 2, only 28.3% of respondents stayed in a hospital overnight in the previous two years. A mere 5.7% experienced an overnight stay in a nursing home in the same time interval. Less than 13% of individuals in sample had utilized home health services in the past two years, while 14.4% had undergone outpatient surgery during the same time. However, 78.9% and 87.1% of respondents had seen a doctor and regularly used prescription medications in the past two years, respectively. Over 55% of patients had seen a dentist within this time period.

Nearly 60% of respondents were female. Over 54 percent of respondents reported being married. Nearly 70% of of respondents identified as white, while under 10%

identified as black, and 21% identified as another race. The two smaller groups were combined for the purposes of the regression. Of respondents, 50.5% identified as Hispanic or Latino/a.

Table 2. Frequencies for dichotomous variables not including missing responses

Variable	N	Valid %(Unweighted)	Valid %(Weighted)
Sample Size	1101	100	100
Male	442	40.1	40.9
Married	598	54.3	56.8
Not white or Caucasian	342	31.1	29.4
Hispanic	555	50.5	43.6
Overnight Stay in the Hospital (Yes)	309	28.3	27.5
Overnight Nursing Home Stay (Yes)	62	5.7	3.3
Ever Visited Doctor (Yes)	663	78.9	81.1
Used Home Health Services (Yes)	138	12.7	11.9
Had Outpatient Surgery (Yes)	157	14.4	15.1
Take Rx Drugs Regularly (Yes)	959	87.2	86.5
Seen dentist (Yes)	603	55.2	60.9

Table 3 indicates that over 44% of individuals in response group rated their overall health as fair or poor, while nearly 30% of respondents rated their health as good. Just over 26% of individuals reported being in either very good or excellent health.

Table 3. Frequencies for Self-rated Health

Attribute	Frequency	Valid% (Unweighted)	Valid % (Weighted)
Poor	118	10.7	9.9
Fair	370	33.7	29.8
Good	324	29.5	31.7
Very Good	198	18.0	19.0
Excellent	89	8.1	9.6

Table 4 reveals that approximately 21% of respondents reported having a high school degree while 47% individuals had less than a high school degree. Over 13% of individuals reported having some college but no degree and 19% of individuals had at least one college degree.

Table 4. Frequency of education level

Attribute	Frequency	Valid% (Unweighted)	Valid % (Weighted)
No Formal Education	56	5.1	5.5
Less than Highschool	461	41.9	37.2
Highschool or GED	229	20.8	19.6
Some College	145	13.2	12.8
College Degree	82	7.4	9.1
Post College	126	11.4	15.7

The average age of respondents was 76 with a standard deviation of 7.5 and range from age 65 to 102, as exhibited by Table 5. The average income was $50,741.26 with a standard deviation of over $185,000. In addition, several individuals had no income. For this reason, the logarithm of the income + 1 was taken to facilitate the description of the skewed data for income. Table 6 shows the weighted descriptive statistics for both sets of

Table 5. Descriptive Statistics for Parametric Values (Unweighted)

Variable	N	Range	Min	Max	Mean	Standard Deviation
Age	1101	37	65	102	75.94	7.543
Income in dollars	1101	4040970.65	0.00	4040970.65	50741.2598	185190.30373
Log10 (income +1)	1101	6.61	0.00	6.61	4.3060	0.80476

Table 6. Descriptive Statistics for Parametric Values (Weighted)

Variable	N	Range	Min	Max	Mean	Standard Deviation
Age in years	4202626	37	65	102	75.08	7.722
Income in dollars	4202626	4040970.65	0.00	4040970.65	63399.4300	163869.84159
Log10 (income +1)	4202626	6.61	0.00	6.61	4.3965	0.79546

Note. Age is at the time of 2014 Interview

5.2. Logistic Regression Results

Results from Model A (see Table 7), including the control variables, life satisfaction, and hospital stays, suggest that individuals who were married (OR = 0.608, $p < .05$), identified as female (OR = .0759, $p < .05$) or identified with a racial group other than white or Caucasian (OR = 1.484, $p < .05$) had a higher odds of having stayed in the hospital over two years prior to the survey compared to their unmarried, male, or white counterparts. The model also suggested that the odds of staying in a hospital overnight

increased as life satisfaction (OR = 1.052, $p < .05$), income (OR = 1.002, $p < .05$), age (OR = 1.054, $p < .05$), and level of education (OR = 1.074, $p < .05$) increased. Individuals with higher self-rated health (OR = 0.616, $p < .05$) were also shown to have lower odds of having stayed overnight in a hospital than individuals with lower levels of self-rated health.

Table 7. Predictors of Hospital Stays— Model A

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	.050 (.001)	1.052	[1.049, 1.055]
Self-rated Health	-0.484 (.001)	0.616	[0.615, 0.618]
Log10(income+1)	.002 (.001)	1.002	[1.000, 1.003]
Age at 2014 interview	0.052 (.000)	1.054	[1.053, 1.054]
Male	-0.275 (.003)	0.759	[0.755, 0.763]
Number of Years in School	0.072 (.001)	1.074	[1.072, 1.076]
Unmarried	-0.497 (.003)	0.608	[0.605, 0.612]
Hispanic or Latinx	-0.006 (.003)	0.994	[0.989, 1.000]
Not white or Caucasian	0.395 (.003)	1.484	[1.476, 1.492]
Nagelkerke R^2		0.128	
X^2		58875.906	

Note. N = 1101. Hosmer-Lemeshow (X^2) significance $p < .001$.

For this model, there was no significant difference in the odds of having had an overnight hospital stay between Hispanic and non-Hispanic individuals ($p > .05$). The NR value suggests that approximately 13% of the variance observed was explained by the modeled relationship between life satisfaction and the odds of utilizing of hospital stays.

However, the significance of the value provided by the Hosmer and Lemeshow test for each of the models (p = .000) suggested that none of the models, including Model A were a good fit for the data.

Model B (see Table 8) showed that individuals who were married (0.615) or identified as Hispanic (OR = 1.149, p < .05), female (OR = 0.826, p < .05) or with a race other than white or Caucasian (OR = 2.523, p < .05) had greater odds of staying in a nursing home within the two year period prior to the survey than individuals who were unmarried, non-Hispanic, male, or white, respectively. In addition, the model suggested that as life satisfaction (OR = 0.834, p < .05) and self-rated health (OR = 0.311, p < .05) increased, the odds of having stayed in a nursing home decreased. Conversely, the odds of utilizing nursing home care increased as income (OR = 1.229, p < .05), age (OR = 1.098, p < .05) and number of years of education (OR = 1.197, p < .05) increased. Nearly 22% of this variance could be accounted for by the model, based on the NR value.

Results from Model C (see Table 9) demonstrated that the odds of having visited a doctor within the two years prior to the 2014 survey were higher for those who were married (*OR* = 1.147, *p* < .05) at the time of the survey, male (*OR* = 2.306, *p* < .05), non-white (*OR* = 1.525, *p* < .05), and non-Hispanic (*OR* = 0.300, *p* < .05) than for individuals who were unmarried, female, white, and Hispanic, respectively. The model also suggested that as levels of life satisfaction (*OR* = 0.939, *p* < .05) and self-rated health (*OR* = 0.933, *p* < .05) increased, the odds of visiting a doctor decreased. As income (*OR* = 1.136, *p* < .05), age (*OR* = 1.006, *p* < .05), and education (*OR* = 1.322, *p* < .05) increased, so did the odds of having utilized a doctor. The NR value suggested that about 22% of the observed differences in odds is related to the model.

Table 8. Predictors of Nursing Home Stays— Model B

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	-0.182 (0.003)	0.834	[0.828, 0.839]
Self-rated Health	-1.168 (0.005)	0.311	[0.308, 0.314]
Log10(income+1)	0.206 (0.004)	1.229	[1.219 , 1.238]
Age at 2014 interview	0.094 (0.000)	1.098	[1.097 , 1.099]
Male	-0.191 (0.008)	0.826	[0.813, 0.839]
Number of Years in School	0.180 (0.003)	1.197	[1.190, 1.205]
Unmarried	-.486 (0.009)	0.615	[0.604, 0.625]
Hispanic or Latinx	0.139 (0.009)	1.149	[1.128, 1.169]
Not white or Caucasian	0.925 (0.007)	2.523	[2.487,2.559]
Nagelkerke R^2		0.219	
X^2		26886.577	

Note. N = 1101. Hosmer-Lemeshow significance p < .001.

Model D (see Table 10), which related the odds of an individual utilizing home healthcare to the independent variables, suggested that people identifying as white (*OR* = .0936, $p < .05$) or Hispanic (*OR* = 1.065, $p < .05$) had a greater odds of doing so than those who identified as a race other than white and non-Hispanic, respectively. Based on this model, male (*OR* = 0.709, $p < .05$) and unmarried (*OR* = 0.913, $p < .05$) individuals also had higher odds of using home health services than those who were female and married, respectively. The model also demonstrated that as income (*OR* = 0.894, $p < .05$), self-rated health (*OR* = 0.565, $p < .05$), and life satisfaction increased (*OR* = 0.740, $p <$

.05), the odds of home HCU decreased. However, as age (*OR* = 1.080, $p < .05$) and education (*OR* = 1.025, $p < .05$) level increased, so did the odds of using these services. Over 17% of this variation was explained by the model, according to the NRvalue.

Table 9. Predictors of Doctor Visits— Model C

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	-0.063 (0.002)	0.939	[0.935, 0.942]
Self-rated Health	-0.069 (0.002)	0.933	[0.930, 0.942]
Log10(income+1)	0.128 (0.001)	1.134	[1.134, 1.138]
Age at 2014 interview	0.006 (0.000)	1.006	[1.005, 1.006]
Male	0.835 (0.004)	2.306	[2.290, 2.322]
Number of Years in School	0.280 (0.001)	1.322	[1.319, 1.326]
Unmarried	0.137 (0.004)	1.147	[1.138, 1.155]
Hispanic or Latinx	-1.204 (0.004)	0.300	[0.298, 0.302]
Not white or Caucasian	0.422 (0.004)	1.525	[1.514, 1.537]
Nagelkerke R^2		0.219	
X^2		23128.443	

Note. N = 1101. Hosmer-Lemeshow (X^2) significance $p < .001$.

Model E (see Table 11) suggested that the correlations between the odds of receiving outpatient surgery during the two-year time period and level of life satisfaction (*OR* = 1.062, $p < .05$) as well as age (*OR* = 1.005, $p < .05$) and education (*OR* = 1.379, $p < .05$) level were positive, while those between the odds of having outpatient surgery and level of self-rated health (*OR* = 0.885, $p < .05$) and amount of income (*OR* = 0.947, $p < .05$) were negative. The model also demonstrated that individuals who were male (*OR* = 1.544, $p < .05$) or married (*OR* = 1.126, $p < .05$) have greater odds of having had

outpatient surgery than those who were female or unmarried. Additionally, Hispanic (*OR* =1.065) and white individuals (0.936) had greater odds of doing so than their non-Hispanic and non-white counterparts. However, the model accounted for only 5.5% of this variance based upon the NRvalue.

Table 10. Predictors of Home HCU— Model D

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	-0.301 (0.002)	0.740	[0.0737, 0.0743]
Self-rated Health	-0.571 (0.002)	0.565	[0.563, 0.567]
Log10(income+1)	-0.112 (0.001)	0.894	[0.893, 0.896]
Age at 2014 interview	0.77 (0.000)	1.080	[1.079, 1.080]
Male	-0.343 (0.004)	0.709	[0.704, 0.715]
Number of Years in School	0.024 (0.002)	1.025	[1.021, 1.028]
Unmarried	-0.091 (0.004)	0.913	[0.906, 0.921]
Hispanic or Latinx	0.063 (0.005)	1.065	[1.056, 1.075]
Not white or Caucasian	-0.066 (0.004)	0.936	[0.929, 0.944]
Nagelkerke R^2		0.175	
X^2		49125.212	

Note. N = 1101. Hosmer-Lemeshow (X^2) significance $p < .001$.

The odds of regularly taking prescription medications were higher for male (*OR* = 1.225, $p < .05$) and unmarried (*OR* = 1.722, $p < .05$) individuals than female and married individuals, respectively, according to Model F (see Table 12). Hispanic (*OR* = 1.198, $p < .05$) individuals were also found to have greater odds of doing so than their non-Hispanic counterparts, while individuals identifying as white (*OR* = 1.203, $p < .05$) had higher

odds when compared to people identifying with a race other than white. People with higher levels of education (*OR* = 1.108, $p < .05$), life satisfaction (*OR* = 1.111, $p < .05$), and income (*OR* = 1.003, $p < .05$) were also found to have greater odds of taking prescriptions than those with lower levels, as were older adults (*OR* = 1.071, $p < .05$) participating in the survey than younger adults. The odds of taking prescriptions were found to decrease, however, as levels of self-rated health (*OR* = 0.419, $p < .05$) increased. The NR value suggested that approximately 18% of this variation was due to the model.

Table 11. Predictors of Outpatient Surgery— Model E

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	0.060 (0.002)	1.062	[1.059, 1.066]
Self-rated Health	-0.122 (0.002)	0.885	[0.882, 0.887]
Log10(income+1)	-0.055 (0.001)	0.947	[0.945, 0.948]
Age at 2014 interview	0.005 (0.000)	1.005	[1.005, 1.006]
Male	0.434 (0.003)	1.544	[1.534, 1.554]
Number of Years in School	0.321 (0.001)	1.379	[1.376, 1.382]
Unmarried	0.119 (0.003)	1.126	[1.118, 1.133]
Hispanic or Latinx	0.044 (0.004)	1.045	[1.038, 1.053]
Not white or Caucasian	0.136 (0.003)	1.146	[1.138, 1.153]
Nagelkerke R^2		0.055	
X^2		52799.015	

Note. N = 1101. Hosmer-Lemeshow (X^2) significance $p < .001$.

Table 12. Predictors of Rx Drug Use— Model F

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	0.105 (0.002)	1.111	[1.107, 1.116]
Self-rated Health	-0.869 (0.002)	0.419	[0.418, 0.421]
Log10(income+1)	0.003 (0.001)	1.003	[1.001, 1.006]
Age at 2014 interview	0.068 (0.000)	1.071	[1.070, 1.071]
Male	0.203 (0.003)	1.225	[1.217, 1.233]
Number of Years in School	0.102 (0.001)	1.108	[1.105, 1.111]
Unmarried	0.543 (0.004)	1.722	[1.709, 1.734]
Hispanic or Latinx	0.180 (0.004)	1.198	[1.188, 1.207]
Not white or Caucasian	0.185 (0.004)	1.203	[1.194, 1.212]
Nagelkerke R^2		0.182	
X^2		46563.419	

Note. N = 1101. Hosmer-Lemeshow (X^2) significance $p < .001$.

Model G (see Table 13) demonstrated that the odds of having been to a dentist during the specified time span were higher for white (*OR* = 0.849, $p < .05$), male (*OR* = 1.751, $p < .05$), and unmarried (*OR* = 1.151, $p < .05$) individuals than those who identified with a race other than white, were female, and were married, respectively. These odds were found to be lower for Hispanic (*OR* = 0.982, $p < .05$) individuals than those not identifying as Hispanic. The model also suggested that one's level of life satisfaction (*OR* = 1.078, $p < .05$), self-rated health (*OR* = 1.150, $p < .05$), income (*OR* = 1.282, $p < .05$), and education (*OR* = 1.419, $p < .05$), as well as one's age (*OR* = 1.002, $p < .05$), all positively correlated with the odds that one would have visited a dentist. Over

18% of this variance was explained by the model, according to the Nagelkerke R-squared value.

Table 13. Predictors of Dentist Visits— Model G

	β (S.E.)	Exp(β)	95% CI
Life Satisfaction	0.075 (0.001)	1.078	[1.075, 1.081]
Self-rated Health	0.140 (0.001)	1.150	[1.147, 1.153]
Log10(income+1)	0.249 (0.001)	1.282	[1.280, 1.284]
Age at 2014 interview	0.002 (0.000)	1.002	[1.001, 1.002]
Male	0.560 (0.002)	1.751	[1.742, 1.760]
Number of Years in School	0.350 (0.001)	1.419	[1.417, 1.422]
Unmarried	0.141 (0.003)	1.151	[1.145, 1.157]
Hispanic or Latinx	-0.018 (0.003)	0.982	[0.977, 0.987]
Not white or Caucasian	-0.164 (0.003)	0.849	[0.844, 0.853]
Nagelkerke R^2		0.185	
X^2		55869.551	

Note. N = 1101. Hosmer-Lemeshow (X^2) significance $p < .001$.

Chapter 6. Discussion

6.1. Application of Results

The results of the analyses conducted for each of the seven models of HCU suggested that a relationship does exist between life satisfaction and several types of HCU. In fact, the *OR* for all relationships explored except that of ethnicity and the odds of staying over night in a hospital were significant ($p < .05$). However, a consistent relationship between life satisfaction and overall HCU was not supported.

With respect to RQ 1, *does a relationship exist between life satisfaction and utilization of hospital stays?,* the study found that for each 1 point increase in life satisfaction, there was a 5.2% increase in the odds of having stayed in a hospital overnight. Model A explained 12.8% of the variation observed according to the NR value.

RQ 2 was *does a relationship exist between life satisfaction and the utilization of nursing home stays?* The current research found that for every 1 point increase in life satisfaction, there was a 16.6% decrease in the odds of staying at a nursing home. Approximately 22% of this variance could be attributed to the model.

In RQ 3, the researcher asked, *does a relationship exist between life satisfaction and the utilization of doctors visits?* The research suggested that for each 1 point increase in life satisfaction, there was a 6.1% decrease in odds that someone would visit a doctor. The model was responsible for nearly 22% of this variance.

RQ 4 was does a relationship exist between life satisfaction and the utilization of home health? Results suggested that the odds of home HCU decreased 26% for every 1

point increase in life satisfaction. Model D accounted for 17.5% of the suggested variance.

In RQ 5, the author of this study asked, *does a relationship exist between life satisfaction and the utilization of outpatient surgery?* Results indicated that for every 1 point increase in life satisfaction, there was a 6.2% increase in the odds of having had outpatient surgery. However, model E accounted for only 5.5% of this variance.

In RQ 6, the researcher *asked does a relationship exist between life satisfaction and the utilization of prescription drugs?* For each 1 point increase in life satisfaction, the odds of having regularly used Rx medications in the past two years rose by 11.1%, according to the regression results. Approximately 18% of this variation was due to the model.

In RQ 7, the researcher asked *does a relationship exist between life satisfaction and the utilization of dental visits?* For each 1 point increase in life satisfaction, there was a 7.8% increase in the odds of having seen a dentist in the past two years. Model G accounted for 18.5% of this variance.

In summary, these results suggest that life satisfaction does have a relationship to the odds of HCU in the domains of hospital stays, nursing home care, home healthcare, doctor visits, Rx drug use, and dentist visits, as well as, to a smaller extent, outpatient surgery. The directional differences in relationship were difficult to categorize, but can be understood within the Andersen behavioral health model (Andersen & Davidson, 2007; Andersen, 2008) to be representative of the multitude of contextual and individual factors that impact HCU with immigrants in ways that vary from native-born individuals.

6.2. Relevance of Results to Social Work

Although this was not a comparative study, the results of the current study varied from those of similar studies of life satisfaction which connected higher levels of life satisfaction with lower overall levels of HCU but higher levels of preventative services. (Kim et al., 2014; Kim, Kubsanzky, & Smith, 2015). Previous research suggested that immigrant Americans often have cultural values and schemas that vary from native-born Americans, in addition to facing legal and social barriers to healthcare, all of which can impact utilization of services (Cristancho, Garces, Peters, & Mueller, 2008; Derose, Escarce, & Lurie, 2007; Saint Arnault, 2018; Sarría-Santamera, 2016). Although the current research highlights the importance of developing a model that better addresses immigrant healthcare in the US, the results cannot be generalized to other areas of research with older immigrants.

It is impossible to improve the efficacy of social work interventions or to reduce any potential barriers to health among elderly immigrants without a body of research that supports the application of accepted social work theory to this population. The NASW Code of Ethics states that social workers are called to maintain competency in provision of culturally-sensitive services (NASW, 2008). This study serves as a starting point of exploration into the relationship between factors like life satisfaction and HCU among elderly American immigrants, making way for future research into how this population interacts with the healthcare system, vital to providing service.

6.3. Limitations

The current study had multiple limitations. Only responses made by elderly immigrants were included. Further conclusions could potentially be drawn from performing a comparative study between native and non-native citizens or residents of the US.

Although the Hosmer-Lemeshow tests produced significant values, suggesting that none of the models were a good fit with the data, the test is extremely sensitive to small changes. The decision to utilize data weighted to represent millions of people in a data set that actually contained 1100 people magnified any changes within the data set, effectively rendered this test inconclusive. Thus, only the *OR* and NR values could be relied on to interpret the results, weakening the strength of any conclusions that could be drawn from this research. For this reason, further research is needed to confirm the existence of a relationship between life satisfaction and healthcare utilization among American immigrants age 65 and older.

Another major limitation was the masking of diversity. Because only three responses were provided for race and these were condensed to two for the purposes of analysis, potential effects contributed to by race may have been lost. Similarly, only two categories were available for ethnicity country of origin was not included, further limiting the ability of the current study to be representative of cultural considerations.

It is also impossible to rule out the potential effects of the primary language spoken in the home, due to this variable being excluded from the current study. This decision was made due to the extreme restriction it would have had on the amount of

data. For these reasons, it is unlikely the sample was representative of the very diverse US population.

In addition, the study did not attempt to categorize and separate different types of HCU into preventive care, acute care, and other types of HCU. It is possible that doing so in future research would provide a clearer understanding of the multi-directional relationships between life satisfaction and the odds of engaging in HCU suggested by the results of this study.

6.4. Future Research

In spite of the limitations of this study, its results do support the idea that it is exclusive and unsustainable to continue to base American healthcare models, theories, and programs on research that is unrepresentative of prominent immigrant populations within the US. Future studies should take into account the region of origin, perceived social support, language of origin, current English proficiency, and documentation status of individuals, as well as race and ethnicity to a fuller extent, to ensure the representativeness and applicability of continued exploration into the factors that impact HCU.

Possible areas of exploration to better understand HCU among immigrants to the US includes social stigma of receiving care, availability of resources, and geographical, legal, and linguistic barriers to care.

6.5. Conclusion

In conclusion, findings weakly supported the existence of a relationship between life satisfaction and certain types of HCU, but not with HCU in general for elderly immigrants to the US. A potential positive relationship was found to exist between life

satisfaction and utilization of hospitals, outpatient surgery, prescriptions, and dental care for this population. The findings also supported the potential existence of a negative relationship between life satisfaction and utilization of nursing home stays, primary care physicians, and home health. Although this study is not comparative, none of these findings overlapped with relationships between life satisfaction and HCU supported by previous research for the overall US population and elderly US population. This apparent dissimilarity between the HCU experiences of elderly American immigrants and the larger US population highlights the need for further research focused on this growing community. Social workers must have access to quality information regarding the populations they serve to provide competent care.

References

Aday, L. A., & Andersen, R. (1974). A framework for the study of access to medical care. *Health services research, 9*(3), 208.

Anderson, J. G. (1973). Health services utilization: Framework and review. *Health services research, 8*(3), 184.

Andersen, R. M. (2008). National health surveys and the behavioral model of health services use. *Medical care, 46*(7), 647-653. doi:10.1097/mlr.0b013e31817a835d

Andersen, R. M. &Davidson, P. L. (2011). Improving access to care in America. In R.M. Andersen, T.H. Rice, & G. F. Kominski (Eds.), *Changing the US health care system: key issues in health services policy and management* (3rd ed., pp. 3-31). San Francisco: Jossey-Bass.

Andersen, R., & Newman, J.F. (1973). Societal and individual determinants of medical care utilization in the United States. *Milbank Memorial Fund Quarterly Health and Society, 51*, 95–124.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: does it matter? *Journal of health and social behavior, 36*(1), 1-10. doi:10.2307/2137284

Andrew, F. M., & Withey, S. B. (1976). *Social indicators of well-being.* New York: Plenum Press. doi:10.1007/978-1-4684-2253-5

Ai, A. L., Appel, H. B., Huang, B., & Lee, K. (2012). Overall health and healthcare utilization among Latino American women in the United States. *Journal of Women's Health, 21*(8), 878-885. doi:10.1089/jwh.2011.3431

Ailinger, R. L., & Causey, M. R. (1993). Home health service utilization by Hispanic elderly immigrants: a longitudinal study. *Home health care services quarterly, 14*(2-3), 85-96.

Arcaya, M. C., Arcaya, A. L., & Subramanian, S. V. (2015). Inequalities in health: Definitions, concepts, and theories. *Global health action, 8*(1), 27106. doi:10.3402/gha.v8.27106

Arnett, M. J., Thorpe, R. J., Gaskin, D. J., Bowie, J. V., & LaVeist, T. A. (2016). Race, medical mistrust, and segregation in primary care as usual source of care: findings from the exploring health disparities in integrated communities study. *Journal of Urban Health, 93*(3), 456-467.

Bainbridge, K. E., & Wallhagen, M. I. (2014). Hearing loss in an aging American population: Extent, impact, and management. *Annual Review of Public Health, 35*, 139-152. doi:10.1146/annurev-publhealth-032013-182510

Bennett, I. M., Chen, J., Soroui, J. S., & White, S. (2009). The contribution of health literacy to disparities in self-rated health status and preventive health behaviors in older adults. *The Annals of Family Medicine, 7*(3), 204-211. doi:10.1370/afm.940

Betz, M. E., Ginde, A. A., Southerland, L. T., & Caterino, J. M. (2014). Emergency department and outpatient treatment of acute injuries in older adults in the United States: 2009–2010. Journal of the American Geriatrics Society, 62(7), 1317-1323. doi:10.1111/jgs.12877

Bishop, F. L., Yardley, L., & Lewith, G. T. (2008). *Treat or treatment: A qualitative study analyzing patients' use of complementary and alternative medicine. American Journal of Public Health, 98*(9), 1700-1705. doi:10.2105/ajph.2007.110072

Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science and Medicine, 66*(8), 1733-1749. doi:10.3386/w12935

Brennan-Ing, M., Seidel, L., London, A. S., Cahill, S., & Karpiak, S. E. (2014). Service utilization among older adults with HIV: The joint association of sexual identity and gender. *Journal of homosexuality, 61*(1), 166-196. doi:10.1080/00918369.2013.835608

Brownell, P., Crswick- Fenley, R., & Kim, J. H. (2015) Older adult immigrants in the United States: Issues and services. In F. Chang-Muy & E. P. Congress (Eds.). *Social Work with Immigrants and Refugees: Legal Issues, Clinical Skills, and Advocacy* (pp. 277-308). New York, NY: Springer Publishing Company.

Calvo, R., Carr, D. C., & Matz-Costa, C. (2017). Expanding the happiness paradox: Ethnoracial disparities in life satisfaction among older immigrants in the United States. *Journal of Aging and Health, 31*(2), 231-255. doi:10.1177/0898264317726608

Carlson, J. N., Menegazzi, J. J., & Callaway, C. W. (2013). Magnitude of national ED visits and resource utilization by the uninsured. *The American Journal of Emergency Medicine, 31*(4), 722-726. doi:10.1016/j.ajem.2013.01.001

Chen, J. & Vargas-Bustamante, A. (2011). Estimating the Effects of Immigration Status on Mental Health Care Utilizations in the United States. *Journal of Immigrant Minority Health, 3,* 671. doi:10.1007/s10903-011-9445-x

Chen, J., Vargas-Bustamante, A., Mortensen, K., & Ortega, A. N. (2016). Racial and ethnic disparities in health care access and utilization under the Affordable Care Act. *Medical care, 54*(2), 140.

Cozby, P.C. (2015). *Methods in Behavioural Research* (12th edition). New York, NY: McGraw Hill Education.

Cristancho, S., Garces, D. M., Peters, K. E., & Mueller, B. C. (2008). Listening to rural Hispanic immigrants in the Midwest: A community-based participatory assessment of major barriers to health care access and use. *Qualitative health research, 18*(5), 633-646. doi:10.1177/1049732308316669

Cullen, K. A., Hall, M. J., & Golosinskiy, A. (2009). Ambulatory surgery in the United States, 2006. *Healthcare Cost and Utilization Project Statistical Briefs, 11*. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Damron-Rodriguez, J., Wallace, S., & Kington, R. (1995). Service utilization and minority elderly: Appropriateness, accessibility and acceptability. *Gerontology and Geriatrics Education, 15*(1), 45-64.

Derose, K. P., Escarce, J. J., & Lurie, N. (2007). Immigrants and health care: Sources of vulnerability. *Health affairs, 26*(5), 1258-1268.

Diener, E. (1984). Subjective well-being. *Psychological bulletin, 95*(3), 542.

Diener E., Emmons R., Larsen R., Griffin S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71–75. doi:10.1207/s15327752jpa4901_13

Ezeamama, A. E., Elkins, J., Simpson, C., Smith, S. L., Allegra, J. C., & Miles, T. P. (2016). Indicators of resilience and healthcare outcomes: Findings from the 2010 health and retirement survey. *Quality of Life Research, 25*(4), 1007-1015. doi:10.1007/s11136-015-1144-y

Fenton, J. J., Jerant, A. F., Bertakis, K. D., & Franks, P. (2012). The cost of satisfaction: A national study of patient satisfaction, health care utilization, expenditures, and mortality. *Archives of Internal Medicine, 172*(5), 405-411. doi: 10.1001/archinternmed.2011.1662

Fingar, K. R., Barrett, M. L., Elixhauser, A., Stocks, C., & Steiner, C. A. (2015). Trends in potentially preventable inpatient hospital admissions and emergency department visits. *Healthcare Cost and Utilization Project Statistical Briefs*. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Fisher-Borne, M., Cain, J. M., & Martin, S. L. (2015). From mastery to accountability: Cultural humility as an alternative to cultural competence. *Social Work Education, 34*(2), 165-181. doi:10.1080/02615479.2014.977244

Gelberg, L., Andersen, R. M., & Leake, B. D. (2000). The behavioral model for vulnerable populations: Application to medical care use and outcomes for homeless people. *Health Services Research, 34*(6), 1273.

Gilbert, N., 2009. European measures of poverty and “social exclusion”: Material deprivation, consumption, and life satisfaction. *Journal of Policy Analysis and Management, 28*(4), 738-744. doi: 10.1002/pam.20471

Goto, T., Yoshida, K., Tsugawa, Y., Camargo Jr, C. A., & Hasegawa, K. (2016). Infectious disease–related emergency department visits of elderly adults in the United States, 2011–2012. *Journal of the American Geriatrics Society, 64*(1), 31-36. doi:10.1111/jgs.13836

Guo, Y., & Cheng, T. C. (2017). A comparative study of mental health care utilization between foreign-born adults and US-born adults. *Journal of Community Psychology, 45*(2), 145-159. doi:10.1002/jcop.21839

Habibov, N., & Afandi, E. (2016). Does life satisfaction determine subjective health? Applied Research in Quality of Life, 11(2), 413-428. doi:10.1007/s11482-014-9371-x

Hamarat, E., Thompson, D., Zabrucky, K. M., Steele, D., Matheny, K. B., & Aysan, F. (2001). Perceived stress and coping resource availability as predictors of life satisfaction in young, middle-aged, and older adults. *Experimental Aging Research, 27*, 181-196. doi:10.1080/036107301750074051

Health and Retirement Study. (2014). Sample sizes and response rates. Retrieved from http://hrsonline.isr.umich.edu/sitedocs/sampleresponse.pdf

Helliwell, J. F., & Huang, H. (2014). New measures of the costs of unemployment: Evidence from the subjective well-being of 3.3 million Americans. *Economic Inquiry, 52(*4), 1485-1502. doi:10.3386/w16829

Hines, A. L., Barrett, M. L., Jiang, H. J., & Steiner, C. A. (2014). Conditions with the largest number of adult hospital readmissions by payer, 2011. *Healthcare Cost and Utilization Project Statistical Briefs,* 172. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Huber, M., Knottnerus, J. A., Green, L., van der Horst, H., Jadad, A. R., Kromhout, D., ... & Schnabel, P. (2011). How should we define health?. *British Medical Journal, 343,* 4163.

Jivraj, S., & Nazroo, J. (2014). Determinants of socioeconomic inequalities in subjective well-being in later life: A cross-country comparison in England and the USA. *Quality of Life Research, 23*(9), 2545-2558. doi: 10.1007/s11136-014-0694-8

Jivraj, S., Nazroo, J., Vanhoutte, B., & Chandola, T. (2014). Aging and subjective well-being in later life. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 69*(6), 930-941.

Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic perspectives, 20*(1), 3-24.

Kang, S. Y., & Deren, S. (2009). Factors mediating and moderating the relationship between gender and utilization of health care among Puerto Rican drug users in

New York. *Drug and Alcohol Dependence, 102*(1-3), 138-143. doi:10.1016/j.drugalcdep.2009.02.011

Kennedy, L. W., Northcott, H. C., & Kinzel, C. (1978). Subjective evaluation of well-being: Problems and prospects. *Social Indicators Research, 5*(1-4), 457-474. doi: 10.1007/bf00352943

Keto, J., Ventola, H., Jokelainen, J., Timonen, M., Linden, K., Ylisaukko-oja, T., ... & Auvinen, J. (2017). Primary health care utilisation and its costs among middle-aged smokers. *The European Journal of Health Economics, 18*(3), 351-360. doi:10.1007/s10198-016-0793-2

Keyes, C.L.M., Shmotkin, D., & Ryff, C.D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82,* 1007-1022 doi:10.1037/0022-3514.82.6.1007

Kim, E. S., Kubzansky, L. D., & Smith, J. (2015). Life satisfaction and use of preventive health care services. *Health Psychology, 34*(7), 779. doi:10.1037/hea0000174

Kim, E. S., Park, N., Sun, J. K., Smith, J., & Peterson, C. (2014). Life satisfaction and frequency of doctor visits. *Psychosomatic medicine, 76*(1), 86.

Kindermann, D., Mutter, R., & Pines, J. M. (2013). Emergency department transfers to acute care facilities, 2009. *Healthcare Cost and Utilization Project Statistical Briefs, 151.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Kleinman, A. (1973). Toward a comparative study of medical systems: An integrated approach the study of the relationship of medicine and culture. *Science, Medicine, and Man, 1*(1), 55-65.

Leclere, F. B., Jensen, L., & Biddlecom, A. E. (1994). Health care utilization, family context, and adaptation among immigrants to the United States. *Journal of Health and Social Behavior, 35*(4), 370.

Lee, S. Y. D., Tsai, T. I., Tsai, Y. W., & Kuo, K. N. (2010). Health literacy, health status, and healthcare utilization of Taiwanese adults: results from a national survey. *BioMed Central Public Health, 10*(1), 614. doi:10.1186/1471-2458-10-614

Levesque, J. F., Pineault, R., Provost, S., Tousignant, P., Couture, A., Da Silva, R. B., & Breton, M. (2010). Assessing the evolution of primary healthcare organizations and their performance (2005-2010) in two regions of Québec province: Montréal and Montérégie. *BioMed Central family practice, 11*(1), 95. doi: 10.1186/1471-2296-11-95

Liew, H. P., & Brooks, T. (2017). A conjoint analysis of inpatient satisfaction ratings in Indonesia. *Health Policy and Technology, 6*(1), 105-113. doi:10.1016/j.hlpt.2016.11.007

Lin, M. T., Burgess, J. F., & Carey, K. (2012). The association between serious psychological distress and emergency department utilization among young adults in the USA. *Social psychiatry and psychiatric epidemiology, 47*(6), 939-947. doi:10.1007/s00127-011-0401-9

Lopez-Gonzalez, L., Pickens, G. T., Washington, R., & Weiss, A. J. (2014). Characteristics of Medicaid and uninsured hospitalizations, 2012. *Healthcare Cost and Utilization Project Statistical Briefs, 182*. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Mather, M., Jacobsen, L. A. and Pollard, K. M. (2015). Aging in the United States. *Population Bulletin, 70*(2). Retrieved from https://www.prb.org/wp-content/uploads/2016/01/aging-us-population-bulletin-1.pdf

Moore, B., Levit, K., & Elixhauser, A. (2014). Costs for hospital stays in the United States, 2012. *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Nagamine, M., Jiang, H. J., & Merrill, C. T. (2006). Trends in elderly hospitalizations, 1997–2004. *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Nandi, A., Galea, S., Lopez, G., Nandi, V., Strongarone, S., & Ompad, D. C. (2008). Access to and use of health services among undocumented Mexican immigrants in a US urban area. *American Journal of Public Health, 98*(11), 2011-2020. doi:10.2105/ajph.2006.096222

National Association of Social Workers. (2008). *NASW Code of Ethics: Guide to the everyday professional conduct of social workers.* Washington, DC: NASW.

National Association of Social Workers. (2015). *Standards and Indicators for Cultural Competence in Social Work Pratice.* Washington, DC: NASW.

Netuveli, G., Wiggins, R. D., Hildon, Z., Montgomery, S. M., & Blane, D. (2006). Quality of life at older ages: evidence from the English longitudinal study of aging (wave 1). *Journal of Epidemiology and Community Health, 60*(4), 357-363. doi:10.1136/jech.2005.040071

Owens, P. L., and R. Mutter. (2010) Emergency department visits for adults in community hospitals, 2008. *Healthcare Cost and Utilization Project Statistical Briefs,* 100. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Park, J., Roh, S., & Yeo, Y. (2012). Religiosity, social support, and life satisfaction among elderly Korean immigrants. *The Gerontologist, 52,* 641-649. doi:10.1093/geront/gnr103

Phillips, K. A., Morrison, K. R., Andersen, R., & Aday, L. A. (1998). Understanding the context of healthcare utilization: assessing environmental and provider-related

variables in the behavioral model of utilization. *Health services research, 33*(3), 571.

Pfuntner, A., Levit, K., & Elixhauser, A. (2012). Components of cost increases for inpatient hospital procedures, 1997–2009. *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Plagnol, A. (2010). Subjective well-being over the life course: Conceptualizations and evaluations. *Social Research: An International Quarterly, 77*(2), 749-768.

Pourat, N., Wallace, S. P., Hadler, M. W. and Ponce, N. (2014). Assessing health care services used by California's undocumented immigrant population in 2010. *Health Affairs 33*(5), 840-847. doi:10.1377/hlthaff.2013.0615

Population Reference Bureau (2014). Elderly immigrants in the United States. *Population Reference Bureau.* Retrieved from https://www.prb.org/elderlyimmigrants/us

Price, T. E., Schuchat, A., Rothwell, C. J. (2016). *Health, United States: With chartbook on long-term trends in health.* Hyattsville, Maryland: National Center for Health Statistics. Retrieved from https://www.cdc.gov/nchs/data/hus/hus16.pdf

Qasim, M., & Andrews, R. M. (2012). Post-surgical readmisssions among patients living in the poorest communities, 2009. *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Redondo-Sendino A, Guallar-Castillon P, Banegas JR, Rodriguez-Artalejo, F. (2006) Gender differences in the utilization of health-care services among the older adult population of Spain. *BioMed Central Public Health, 6,* 155. doi:10.1186/1471-2458-6-155

Rubin, A., & Babbie, E. (2013). *Essential Research Methods for Social Work* (3rd ed.). Belmont, CA: Brooks/Cole Cengage Learning.

Russo, C. A., Andrews, R. M., & Coffey, R. M. (2006). Racial and ethnic disparities in potentially preventable hospitalizations, 2003. *Healthcare Cost and Utilization Project Statistical Briefs, 10.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Russo, C. A., & Elixhauser, A. (2006). Hospitalizations in the elderly population, 2003. *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Russo, A., Elixhauser, A., Steiner, C., & Wier, L. (2007). Hospital-based ambulatory surgery, 2007. *Healthcare Cost and Utilization Project Statistical Briefs, 86.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics, 83,* 10-28. doi:10.1159/000353263

Saadi, A., Himmelstein, D. U., Woolhandler, S., & Mejia, N. I. (2017). Racial disparities in neurologic health care access and utilization in the United States. *Neurology, 88*(24), 2268-2275.

Safi, M. (2010). Immigrants' life satisfaction in Europe: Between assimilation and discrimination. *European Sociological Review, 26*(2), 159-176. doi:10.1093/esr/jcp013

Saint Arnault, D. (2018). Defining and theorizing about culture: The evolution of the cultural determinants of help-seeking. *Nursing research, 67*(2), 161-168. doi:10.1097/nnr.0000000000000264

Salinas Jr, C., & Lozano, A. (2017). Mapping and recontextualizing the evolution of the term Latinx: An environmental scanning in higher education. *Journal of Latinos and Education, 1,* 14. doi:10.1080/15348431.2017.1390464

Sarría-Santamera, A., Hijas-Gómez, A. I., Carmona, R., & Gimeno-Feliú, L. A. (2016). A systematic review of the use of health services by immigrants and native populations. *Public Health Reviews, 37*(1), 28. doi:10.1186/s40985-016-0042-3

Scully, J. L. (2004). What is a disease? *European Molecular Biology Organization Reports,* 5(7), 650-653.

Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social indicators research, 5*(1-4), 475-492.

Pleis, J. R., Ward, B. W., & Lucas, J. W. (2010) Summary Health Statistics for the U.S. Population: National Health Interview Survey, 2009. *Vital and Health Statistics, 10*(249), 1-207.

Song, H. J., Han, H. R., Lee, J. E., Kim, J. Y., Kim, K. B., Ryu, J. P., & Kim, M. (2010). Does access to care still affect health care utilization by immigrants? Testing of an empirical explanatory model of health care utilization by Korean American immigrants with high blood pressure. *Journal of Immigrant and Minority Health, 12*(4), 513-519. doi:10.1007/s10903-009-9276-1

Steiner, C., Barrett, M., & Hunter, K. (2010). Hospital readmissions and multiple emergency department visits, in selected states, 2006–2007. *Healthcare Cost and Utilization Project Statistical Briefs,* 90. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Stone, L. C., Viruell-Fuentes, E. A., & Acevedo-Garcia, D. (2007). Understanding the socio-economic, health systems and policy threats to Latino health: Gaining new perspectives for the future. *California Journal of Health Promotion, 5,* 82-104.

Stones, M. J., & Kozma, A. (1985). Structural relationships among happiness scales: A second order factorial study. *Social Indicators Research, 17*(1), 19-28.

Stranges, E., Coffey, R., & Andrews, R. M. (2008). Potentially Preventable Hospitalizations Among Hispanic Adults, 2006. *Healthcare Cost and Utilization Project Statistical Briefs,* 61. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Stranges, E., & Friedman, B. (2009). Potentially Preventable Hospitalization Rates Declined for Older Adults 2003-2007. *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Stranges, E., & Stocks, C. (2010). Potentially preventable hospitalizations for acute and chronic conditions, 2008. *Healthcare Cost and Utilization Project Statistical Briefs, 99.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Strine, T. W., Chapman, D. P., Balluz, L. S., Moriarty, D. G., & Mokdad, A. H. (2008). The associations between life satisfaction and health-related quality of life, chronic illness, and health behaviors among US community-dwelling adults. *Journal of Community Health, 33*(1), 40-50. 10.1007/s10900-007-9066-4

Squires, D. A. (2012). Explaining high health care spending in the United States: an international comparison of supply, utilization, prices, and quality. The *Commonwealth Fund Issues in International Policy, 10.* Retrieved from https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_issue_brief_2012_may_1595_squires_explaining_high_hlt_care_spending_intl_brief.pdf

Tian, W. (2016). An all-payer view of hospital discharge to post-acute care, 2013. *Healthcare Cost and Utilization Project Statistical Briefs, 205.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Torio, C., & Moore, B. (2016). National inpatient hospital costs: the most expensive conditions by payer, 2013. *Healthcare Cost and Utilization Project Statistical Briefs,* 204. Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Vargas- Bustamante, A., Fang, H., Garza, J., Carter-Pokras, O., Wallace, S. P., Rizzo, J. A., & Ortega, A. N. (2012). Variations in healthcare access and utilization among Mexican immigrants: the role of documentation status. *Journal of Immigrant and Minority Health, 14*(1), 146-155. doi:10.1007/s10903-010-9406-9

Vaidya, V., Partha, G., & Karmakar, M. (2012). Gender differences in utilization of preventive care services in the United States. *Journal of Women's Health, 21*(2), 140-145. doi: 10.1089/jwh.2011.2876

Veenhoven, R. (2008). Healthy happiness: Effects of happiness on physical health and the consequences for preventive health care. *Journal of Happiness Studies, 9*(3), 449-469.

Viladrich, A. (2012). Beyond welfare reform: reframing undocumented immigrants' entitlement to health care in the United States, a critical review. *Social Science and Medicine, 74*(6), 822-829.

Villaveces, A., Mutter, R., Owens, P. L., & Barrett, M. L. (2006). Causes of injuries treated in the emergency department, 2010. *Healthcare Cost and Utilization Project Statistical Briefs, 156.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Viruell-Fuentes, E. A., Miranda, P. Y., & Abdulrahim, S. (2012). More than culture: Structural racism, intersectionality theory, and immigrant health. *Social Science and Medicine, 75*, 2099–2106. doi:10.1016/j.socscimed.2011.12.037

Wier, L. M., Merrill, C. T., & Elixhauser, A. (2009). Hospital stays among people living in the poorest communities, 2006. A *Healthcare Cost and Utilization Project Statistical Briefs.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Wier, L. M., Yu, H., Owens, P. L., & Washington, R. (2013). Overview of children in the emergency department, 2010. *Healthcare Cost and Utilization Project Statistical Briefs, 157.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Weiss, A. J., & Elixhauser, A. (2014). Trends in operating room procedures in US hospitals, 2001–2011. *Healthcare Cost and Utilization Project Statistical Briefs, 171.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Weiss, A. J., Elixhauser, A., & Andrews, R. M. (2014). Characteristics of operating room procedures in US hospitals, 2011. *Healthcare Cost and Utilization Project Statistical Briefs, 170.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Weiss, A. J., Wier, L. M., Stocks, C., & Blanchard, J. (2014). Overview of emergency department visits in the United States, 2011. *Healthcare Cost and Utilization Project Statistical Briefs, 174.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Wier, L., Pfuntner, A., & Steiner, C. (2010). Hospital utilization among oldest adults, 2008. *Healthcare Cost and Utilization Project Statistical Briefs, 103.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Wills, E. (2009). Spirituality and subjective well-being: Evidences for a new domain in the personal wellbeing index. *Journal of Happiness Studies, 10*(1), 49–69. doi:10.1007/s10902-007-9061-6

Witt, W. P., Weiss, A. J., & Elixhauser, A. (2014). Overview of hospital stays for children in the United States, 2012. *Healthcare Cost and Utilization Project Statistical Briefs, 187.* Retrieved from https://www.hcup-us.ahrq.gov/reports/statbriefs

Wolf, M. S., Gazmararian, J. A., & Baker, D. W. (2007). Health literacy and health risk behaviors among older adults. *American Journal of Preventive Medicine, 32*(1), 19-24.

World Health Organization. (1946). Constitution of the World Health Organization, adopted by the International Health Conference. *American Journal of Public Health and the Nations Health, 36*(11), 1315-1323. 10.2105/ajph.36.11.1315

Ye, J., Mack. D., Fry-Johnson, Y., Parker, K. (2012), Health care access and utilization among US-born and foreign-born Asian Americans. *Journal of Immigrant and Minority Health 14*(5), 731-737. doi:10.1007/s10903-011-9543-9

Youdelman, M., & Perkins, J. (2002). *Providing Language Interpretation Services in Health Care Settings: Examples from the Field.* New York, NY: Commonwealth Fund.

Zhan, H. J., Wang, Q., Fawcett, Z., Li, X., & Fan, X. (2017). Finding a sense of home across the Pacific in old age: Chinese American senior's report of life satisfaction in a foreign land. *Journal of cross-cultural gerontology, 32*(1), 31-55. doi:10.1007/s10823-016-9304-2

Vita

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