ABSTRACT

EXPLORING FACTORS ASSOCIATED WITH PERCEIVED RISKS OF HEPATITIS B VIRUS AMONG SOUTHEAST ASIAN AMERICANS

By Ying Moua

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Chronic hepatitis B virus (HBV) disproportionately affects Asian Americans and Pacific Islanders. They account for more than half of infected individuals with HBV. Untreated HBV may ultimately lead to liver failure. Asian Americans have the lowest HBV screening rates; yet, they have the highest incidence of liver disease. A better understanding of HBV among Asian Americans is needed. This study explored factors associated with knowledge of HBV and perceived risks of HBV. A convenience sample was recruited at a faith-based organization and through the Asian Pacific Islander Network in Long Beach, California. Participants completed a self-administered questionnaire. Bivariate correlation coefficients were computed. Results indicated that knowledge of HBV was moderately low, even amongst the sample with a high level of education. Programs are needed to increase HBV screening for Asian Americans from all levels of education. Public health social workers can lead the charge.

EXPLORING FACTORS ASSOCIATED WITH PERCEIVED RISKS OF HEPATITIS B VIRUS AMONG SOUTHEAST ASIAN AMERICANS

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CHAPTER 1

INTRODUCTION

The hepatitis B virus (HBV) is a global health concern due to it being a contagious liver disease and it is primarily endemic in the Asia-Pacific region (Sheikh et al., 2010; World Health Organization [WHO], 2014). When an individual is infected, the level of severity can either be categorized as acute HBV or chronic HBV (Centers for Disease Control and Prevention [CDC], 2009). Although HBV has been found to be a preventable disease, according to the WHO, approximately 240 million people have been diagnosed with chronic liver infections and more than 780,000 deaths occur every year (2014). One in 4 carriers will die as a result of liver cancer or liver cirrhosis if HBV remains undiagnosed and/or untreated (Trinh-Shevrin et al., 2011; WHO, 2014).

HBV is transmitted through blood, bodily fluids, intravenous usage of drugs, sexual intercourse; horizontal transmission and mother-to-child; vertical transmission (CDC, 2009; Heiberg & Hogh, 2012; Kane, 1995b). HBV cannot be transmitted virally, for example, through coughing, sneezing, or holding hands (CDC, 2009). As mentioned earlier, HBV can be prevented through a series of vaccinations which are usually provided during infancy, childhood, and sometimes adulthood (Alessandrini, Shaw, Bilker, Schwarz, & Bell, 2001; McBride, 2008). However, it is important for high risk populations to be aware of preventative screening beginning with serological testing and following through with routine check-ups, if applicable. HBV screening is necessary to identify individuals whom are at a higher risk or may already have been infected (Wu,

Lin, So, & Chang, 2007). The lack of knowledge and perceived risks of HBV can pose a major barrier for health seeking behaviors.

In the United States, chronic liver disease is the twelfth leading cause of death (Nguyen & Thuluvath, 2008). In fact, Asian Americans and Pacific Islanders represent the highest number of new cases (National Cancer Institute [NCI], 2012). Although Asian Americans have the highest incidence rates of liver disease, they continue to have low rates for HBV screening (CDC, 2014). Roughly 40% to 70% of Asian Americans have serological evidence of HBV infection with 15% being chronic carriers (Kane, 1995a). In a study conducted by Flores, Lang, Salmeron, and Bastani (2012), the percentage of HBV found in Whites (33%) and African Americans (24%) were much lower than Asian Americans, with the exception of Latinos (45%). According to Trinh-Shevrin et al. (2011) Asian Americans are generally 30 to 50 times more likely to have chronic HBV in comparison with Whites.

Statistics show an estimated 45,000 people who legally immigrate to the United States are from HBV endemic countries (Sheikh et al., 2010). Individuals emigrating from HBV endemic countries are at higher risk for HBV infection, especially those from Southeast Asia (Gjerdingen & Lor, 1997; Lesmana et al., 2006). In Asia-Pacific regions the rates of being a carrier are elevated, especially in countries where vaccinations have yet to be placed into practice. Even after resettlement into a developed country, such as the United States, HBV is still prominent with first generation minorities (Tong et al., 2011). Sheikh et al. (2010) found that 92% of their participants who tested positive for HBV were in fact born outside of the United States. Additionally, past research has

indicated HBV to be largely transmitted by birth unknowingly (Hepatitis B Foundation, 2014; Shiraki, 2000).

Prior HBV research has primarily been conducted amongst White, African American/Black, and Latino populations. There is insufficient research with Asian Americans, specifically Southeast Asians Americans, with little knowledge indicating their perception of health in association to HBV. Given the aforementioned facts, HBV prevention and education remain an important priority. To that end, a better understanding of the perceived risks of Southeast Asian Americans is needed.

Definition of Terms

Horizontal transmission: HBV is received through the exchange of bodily fluids or sexual intercourse (Heiberg & Hogh, 2012; Kane, 1995b). HBV can also be obtained through the usage of contaminated equipment, such as drug injections (Heiberg & Hogh, 2012).

Vertical transmission: HBV infection largely occurs during childbirth. At the same time as childbirth, HBV is spread from the infected mother to her newborn child. This process is also referred to as perinatal transmission (Kane, 1995b).

Perceived risks: For the purpose of this study, a perceived risk is operationalized to measure the perception of an individual's immediate risks through the context of HBV susceptibility and severity. Perceived risks will be measured through two domains: perceived risks of susceptibility and perceived risks of severity.

Perceived risks of susceptibility: The belief that an individual is worried about acquiring either HBV and/or liver cancer and at high risk for HBV (Ma et al., 2007).

Perceived risks of severity: Severity of HBV is the perception of impact that it will have on an individual's life along with the belief that individuals with HBV will die due to liver cancer (Ma et al., 2007).

CHAPTER 2

LITERATURE REVIEW

This chapter begins with a detailed description of HBV and will highlight the disproportionate infection rate of HBV within the United States. In addition it will discuss the common routes of transmission within the target population. Next, it will explore cultural health beliefs of western medicine and traditional health practices. Moreover, a discussion of the theoretical framework, the Health Belief Model (HBM), will be provided.

Hepatitis B virus

Hepatitis B is a disease that spreads to infect the liver. Hepatitis is the inflammation of the liver that leads to impairment and eventually disables the liver from functioning (National Institute of Diabetes and Digestive and Kidney Diseases [NIDDK], 2012). More importantly, HBV is ranked second, with tobacco being first, as a human carcinogen; thus making it responsible for approximately 90% of hepatocelluar carcinoma (HCC) throughout the world (Lee & Baik, 2011). "HBV is composed of an inner core protein and an outer coat of hepatitis B surface antigen (HBsAg). When HBV replicates in the liver, it produces excess HBsAg and this excess material coalesces into small spheres and long tubular particles" (Kane, p. S16, 1995a). As a result, three types of infection may occur: "(I) acute hepatitis with development of anti-HBs antibody in the blood leading to long-term immunity, (II) chronic carriage of HBV, and (III) asymptomatic infection leading either to immunity or chronic carriage" (Kane, 1995a, p. S16). After infection takes place, HBsAg can be identified within 4 to 10 weeks; yet

symptoms could take approximately 6 months (Lambert, 2009) if they should appear (Asian Liver Center [ALC], 2014; CDC, 2014). HBV is often referred to as a silent killer due to the inconsistency of visible symptoms (ALC, 2014; CDC, 2014). An HBV study amongst Asian American college students found that two-thirds of their participants were unknowingly infected with HBV (Lee et al., 2013). Another study reported 44.9% of participants were unaware of their chronic HBV infection (Lin, Chang, & So, 2007). Consequently, this infection may later develop into chronic liver disease, liver cirrhosis, and/or primary liver cancer (Flores et al., 2012; Kane, 1995a; Lambert, 2009; Sorrell et al., 2009; Trinh-Shevrin et al., 2011; U.S. Department of Health and Human Services Office of Minority Health [OMH], 2014; WHO, 2014).

In some cases, the body is able to dispose the virus from the body resulting in acute HBV (NIDDK, 2012). Acute HBV refers to the early stage of infection during the first 6 months (CDC, 2005). Newly affected adults may display symptoms, such as: fever, fatigue, muscle or join pain, loss of appetite, mild to severe nausea and vomiting, bloated stomach, weight loss, abdominal pain, diarrhea, dark urine, and/or pale stool (CDC, 2006; Hepatitis B Foundation, 2014). It is important to recognize that HBV can still be transmitted to others despite the lack of appearance of symptoms (CDC, 2006).

According to the Hepatitis B Foundation (2014), several adults will develop antibodies and recover entirely from HBV infection. However, if this infection persists beyond 6 months, HBV develops into a chronic condition. The chronic condition of hepatitis B is a long-term infection (NIDDK, 2012). Chronic hepatitis B begins to take place when the body is unable to dispose the virus. By way of contrast with adults, the exact opposite takes place for infants and young children. HBV infection in infants

(90%) and young children (50%) will ultimately turn chronic (CDC, 2014). Developing chronic HBV is at a higher risk when the individual is younger (Office of Population Affairs [OPA], 2014). Previous research supports a higher prevalence of HBV in young adults (Lin et al., 2007; Sheikh et al., 2010) when compared to older adults, resulting during infancy or childhood infection although it is not yet clear at this time (Sheikh et al., 2010). Without screening and treatment, chronic HBV may lead to liver cirrhosis; thus ultimately resulting in liver failure (NIDDK, 2012).

Disproportionate Infection and Transmission

Asian Americans and Pacific Islanders are disproportionately affected by HBV, and chronic HBV is highly prevalent among this population (McBride, 2008; ALC, 2014). Research has generally shown HBV infection in the United States is minimal; however, statistics show that when viewing ethnic breakdown of Asian Americans and Pacific Islanders, they make-up more than 50% of the American population who live with chronic HBV (ALC, 2014; CDC, 2014; Lok, Heathcote, & Hoofnagle, 2000). Moreover, statistics show that 1 in every 12 Asian Americans live with chronic HBV (ALC, 2014; CDC, 2014), while only one in every 1,000 non-Hispanic White Americans are infected (ALC, 2014). Vietnamese American men have been shown to present at the highest rank for liver cancer, immediately followed by Hmong American men (McBride, 2008). Likewise, the death rate for Asian Americans and Pacific Islanders infected with HBV is 7 times greater than White Americans (CDC, 2014). These high rates have been attributed to the lack of HBV knowledge, cultural stigma, recent immigration from HBV endemic regions, access to medical services, and language barrier (Baker, Dang, Ly, & Diaz, 2010; CDC, 2014; Lesmana et al., 2006; Ma et al., 2007). For example, Korean

Americans are shown to have both low knowledge and misunderstandings of HBV infection (Lee, Lee, Kim, Hontz, & Warner, 2007). Additionally, another study resulted in only 29.9% of participants responding correctly in identifying that Asian Americans pose as a greater risk in comparison to White Americans for HBV infection (Hwang, Huang, & Yi, 2008). Moreover, Baker et al. (2010) found perceived barriers to HBV immunizations as nativity, socioeconomic status (SES), and use of traditional health care practices.

With chronic HBV being a common disease in the Asian American and Pacific Islander communities, they are also not a well represented group in the National Health and Nutrition Examination Survey study. Similarly, identifying statistics in prevalence of HBV infection may also be underreported within the United States (Hu, 2008). The insufficient amount of reliable data has hindered efforts to understand and develop interventions that can reduce the rate of HBV for this special target population (Lee & Baik, 2011). For that reason, resources for HBV are poorly aimed at this special population and remain limited (Hu, 2008). Equally, OMH (2013) has stated the seriousness of HBV and recognizes that there is a recurrent neglect in the racial and ethnic health disparity pertaining to HBV.

It is important be aware that the Asian American community is continually growing within the United States. The Asian American population is anticipated to increase 213% by the year 2050 (Hwang et al., 2008) which will result in approximately 47% of the United States population (Juckett, 2005). This large influx of individuals poses a great risk to the Asian American community for encountering HBV infection. Asian Americans that have yet to become infected with HBV are now more susceptible

than ever, in contracting the virus. It is concerning that individuals are at a much greater risk of becoming infected from household members and/or sexual partners (Hwang et al., 2008). A recent study conducted in Alameda County, California found highest rates of chronic HBV infection from individuals living with an HBV carrier (Hur, Wong, Lee, Lee., & Juon, 2012).

Transmission for HBV for this target population is found largely by vertical transmission (Kane, 1995b; Lavanchy, 2004; Lesmana et al., 2006). The likelihood of pregnant mothers passing HBV to their infants during delivery is dependent upon gestation week. Transmission of HBV beyond the second trimester is highly infectious. More importantly, it is a frequent occurrence that HBV infection takes place in postpartum (Shiraki, 2000). Research supports that a vertical transpose of the virus relates to chronic infection (Lesmana et al., 2006). Children (90%) resulting in chronic HBV infection have shown to encounter the virus perinatally (Heiberg & Hogh, 2012). Mothers who do not seek proper prenatal care are at a higher risk of obtaining the virus, especially if they are unaware of their infection (McBride, 2008). It is imperative that expecting mothers be screened for HBV and take preventative precautions. Mothers with identified HBV should notify their doctors to prevent vertical transmission (NIDDK, 2011).

Despite the efforts of implementing immunizations, they are seemingly inconsistent. Although schools continue to implement mandatory vaccination requirements, students continue to remain unvaccinated. Lee et al. (2013) found that more than 15% of college students are unknowingly infected with HBV. Even more than half of the Lee et al. (2013) college participants reported being unsure of receiving any

HBV vaccination as a result of a lack in HBV knowledge. Additionally, access to vaccinations remains limited. These limitations are associated to numerous external factors, such as cultural beliefs, access to health insurance, and/or a lack of awareness (CDC, 2014; Lesmana et al., 2006). It is important to shed light on HBV resistance. HBV has a high probability of surviving outside of its host (Lavanchy, 2004). Furthermore, research shows HBV infection continues to grow even after resettlement in Canada and the United States (Hurie, Mast, & Davis, 1992). Especially with the expected increase of growth within the Asian communities by 2050 (Hwang et al., 2008), HBV infection is expected to rise.

In countries that have low endemicity, HBV are largely spread from horizontal transmission (Lavanchy, 2004). It is important to be aware of all horizontal transmission routes. For example sharing items, such as a toothbrush, with an infected individual can spread the virus. Additionally, children diagnosed with chronic HBV have been documented to have tested positive for the virus in their saliva, sweat, and urine. With this being said, children are continuously coming into contact with bodily fluids, for example saliva, thus creating several opportunities for horizontal transmission through mucous membranes (Heiberg & Hogh, 2012). As previously mentioned, HBV infection can be asymptomatic (ALC, 2014; CDC, 2014), consequently the severity of preventative screening is of vital importance due to the underlying result of chronic liver disease, liver cirrhosis, and primary liver cancer (Flores et al., 2012; Kane, 1995a; Lambert, 2009; Sorrell et al., 2009; Trinh-Shevrin et al., 2011; OMH, 2014; WHO, 2014).

Moreover, the horizontal transmission received through sexual activities (Lavanchy, 2004) and by intravenous drug usages (CDC, 2009; Heiberg & Hogh, 2012;

Kane, 1995b) with an infected person. Lee et al. (2013) discovered that sexual transmission routes of HBV are a barrier for college students who lack in knowledge of HBV and HBV severity. Indeed Asian Americans are at higher risk for HBV; however, a consequence of unsafe sex is becoming infected with the virus.

Cultural Health Beliefs and Practices

Culture is the beliefs and attitudes that are instilled and shared amongst individuals. According to previous research, an individual's outlook is directly related to their cultural and religious background which in turn determines behavioral actions (Juckett, 2005). In fact, they contribute to health behavior and health beliefs (Roy, Torrez, & Dale, 2004). For example, Hwang et al. (2008) discovered that within the Chinese community, several concerns emerged in regards to the amount of blood that is withdrawn at medical facilities within the United States. They compared their experiences of modern medicine with that of Chinese medicine in China. Within other Asian communities, Hu (2008) reported that blood tests were often believed to result in a reduction of energy from the body. For this reason, Chinese participants have expressed feelings of skepticism with modern medicine practices (Hwang et al., 2008).

The decisions that influence the choices to seek Western health care, type of treatment, and the necessity of health care are complex. Modern treatment is regularly in disagreement with traditional practices. Prior research has determined a significant relationship between in influence of culture and health seeking behaviors. Horne et al. (2004) found Asian women to be least likely to receive breast cancer and cervical cancer screenings when compared to Caucasian women due to cultural modesty. Traditional forms of healing are often sought prior to modern medicine; for example, using herbs,

spiritualism, and folk healers (Roy et al., 2004), and shamans (Helsel, Mochel, & Bauer, 2004; Helsel, Mochel, & Bauer, 2005). As a result, individuals who sought health treatment from herbalists and shamans displayed greater barriers in seeking treatment from Western providers (Baker et al., 2010). Another commonly practiced healing method among the Vietnamese and Hmong is to wear amulets in order to protect against diseases (Jenkins, Le, McPhee, Stewart, & Ha, 1996) or evil spirits (Helsel et al., 2004), respectively. These types of traditional healing methods and practices are typically used in place of Western medicine.

Cultural and religious beliefs also impact an individual's assumption of one's reality, the causation of diseases, and how illnesses are acquired (Juckett, 2005). For instance, various Asian ethnicities convey their belief in having a lack of control over external forces (Davidhizar & Giger, 2004). In the Vietnamese community, it is traditionally believed that a disease is caused from an imbalance of forces within the body, while other illnesses are believed to be caused by a type of bad wind or either from spirits and ghosts (Jenkins et al., 1996). By way of example, Asian and Latino cultures believe that the human body is comprised of a balance between hot and cold. Indeed they further believe that improper management of the hot and cold within the body will result in stimulating a disease or illness due to an unnatural disturbance. Likewise, various Asian cultures make use of the belief that susceptibility to illnesses and diseases derives from the imbalances of hot and cold. In particular, the primary role of Chinese medicine is to keep the energies of hot and cold harmonious. In order to do so, the Chinese have implemented a balance between diet, lifestyle, acupuncture, and herbal regimens. For example, the Chinese prefer hot tea or hot water over cold beverages (Juckett, 2005).

Moreover, Barrett et al. (1998) found that it is bad luck to talk about long-term morbidity or mortality with the Hmong people. These explanations are often believed to hex the future, thus bringing misfortune upon the individual and/or family members (Barrett et al., 1998).

In a study conducted by Hwang et al. (2008), Chinese participants strongly believed that traditional Chinese medicine had the capacity to cure diseases. Conversely, Western medicine only has the ability to treat the symptoms. Helsel et al. (2005) reported that the Hmong people were under the assumption that if an individual was actively suffering from symptoms of an illness or disease, only then was it was necessary to consume Western medication regardless of a medical diagnosis. Due to this assumption, it appears that the Hmong people are unable to distinguish between a cure for a disease and an illness; nor the meaning of controlling for a disease or illness. For instance, some cultures are hesitant and/or unwilling to accept healing practices that are not in alignment of their beliefs (Davidhizar & Giger, 2004). Juckett (2005) discovered that traditional healers are frequently sought out prior to receiving Western medicine. Therefore, individuals are more likely to receive health practices that respect and support their cultural and religious beliefs (Davidhizar & Giger, 2004).

Likewise, home remedies and traditional cultural healing practices are, more often than not, believed to influence the curing of an illness and/or prevent it from occurring. Some hold beliefs that objects, colors, or numbers are associated with either good luck or bad luck which in turn impacts a person's well-being (Davidhizar & Giger, 2004). A study found significance between ethnicity and parents' decision to provide health care to their children through home remedies rather than seeking professional medical advice

(Roy et al., 2004). A popular home remedy within the Asian community is coining. Coining consists of the usage of a coin that is "…rubbed onto the patient's skin, causing red striations" (Juckett, 2005, p. 2272). This method is usually conducted to remove illnesses that have occurred due to a cold imbalance (Juckett, 2005). In the Hmong community, individuals who do not identify with a religious background of Christianity resort to traditional and cultural healing practices, such as shamanism. Shamans hold a high and respected status within the Hmong community and are considered a liaison and healer between the human and spiritual world (Capps, 1994; Deinard & Dunnigan, 1987). The Hmong culture believes that the ancestral world, the human world, and the spiritual world are intertwined (Helsel et al., 2004).

Beliefs of Western Medicine

Within the Asian community, Western medicine is believed to operate in extremes. This is true within the Hmong (Barrett, 1998) and Vietnamese (Jenkins et al., 1996) communities. Hmong and Vietnamese have expressed Western medicine as being too strong, thus arising to headaches and dizziness which in turn leads to a further imbalance in the body (Barrett, 1998; Jenkins, et al., 1996). What is more, Western medicine is frequently perceived negatively from the Asian community. It is believed that chemicals are an unnatural substance, therefore causing harm and an imbalance of the body. In a study conducted in the United Kingdom, individuals who self-identified as Asian generally held the concept that medicines possess harm to the body. In fact, they also believe that medicines are addictive poisons (Horne et al., 2004). Research has supported that Asians typically associate modern medicine to intrinsic value. Asians are interested in the fundamental value of whether the medicine will be harmful or beneficial

to the body. For that reason, Asians are more likely than Europeans to perceive medicines as intrinsically harmful (Horne et al., 2004). Furthermore, cultural beliefs and perceived notions of modern medicine impacts treatment preferences and continuity of health care (Barrett, 1998; Horne et al., 2004).

On the other hand, Asians who have pursued Western medicine have reportedly expressed no satisfaction with its results (Horne et al., 2004). In a recent study, Hwang et al. (2008) found that Asians who initially attempted Western medicine later turned to complementary alternative medicine, for example traditional medicine. Individuals who resorted to traditional medicine indicated that Western medicine was not strong enough to cure their illness, particularly within the Chinese and Korean communities. As a result, the insufficient knowledge and experience in Western medicine creates another barrier in addition to cultural beliefs and health seeking behaviors (Hu, 2008). Others conveyed their experience of modern medicine as more costly, especially for individuals who do not have health insurance (Hwang et al., 2008; Roy et al., 2004). In contrast with the general population, 34.4% of Korean Americans do not have health insurance. Let alone, Korean Americans are seemingly the highest of uninsured individuals throughout the Asian American and Pacific Islander communities (Juon et al., 2008). South Korea provides national insurance, thus Koreans are less likely to worry about cost of health care and are more likely to receive modern medicine in Korea (Philbin, Erby, Lee, & Juon, 2012).

Educational Attainment

Education and income are common measures of SES (Adler & Ostrove, 1999). Educational attainment varies tremendously amongst Asian Americans. Southeast Asians

rank as having the highest rate of poverty (Baker et al., 2010) with no formal education (Ma et al., 2007). Men with minimal education are more likely to have never been screened for HBV (Hu, 2008). Individuals with higher education are more inclined to inquire about HBV with their health care professional (Grytdal et al., 2009). Lee et al. (2007) also linked lower education with faulty conceptions of HBV, such as HBV being hereditary. Whereas another study that consisted of less acculturated Vietnamese American college students indicated to never receiving HBV vaccinations (Hwang et al., 2008). Interestingly, a study compared Vietnamese Americans and Cambodian Americans while controlling for level of education and health care access, Vietnamese Americans continued to have less probability of being screened for HBV. Despite of English proficiency, Vietnamese Americans and Cambodian Americans continued to result in failure for HBV screening (Grytdal et al., 2009).

Moreover, higher SES is associated with lower levels of mortality rates along with increase well-being (Adler & Ostrove, 1999). Participants who identified as low SES perceived greater barriers and low urgency to obtain HBV immunizations (Baker et al., 2010). More importantly, low SES is associated with less knowledge; for that reason access to HBV preventative care and HBV treatment remains limited (Hu, 2008). Additionally, lower household income has shown to have less HBV knowledge.

Theoretical Framework

This study is grounded by the theoretical framework, the Health Belief Model (HBM). HBM has been used to examine behaviors, beliefs, and attitudes toward various health concerns. HBM provides insight to understand health behavioral actions. HBM sheds light of reasoning people who are at risk for various health infections opt out of

preventive care. According to HBM, individuals are more likely to seek medical services if they perceive themselves to be susceptible to the infection with perception of the severity as being significant, regardless of the reality (Wai et al., 2005).

HBM is made up of six core concepts: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Wai et al., 2005). These concepts attribute to the behaviors, beliefs, and attitudes toward health concerns which may pose as a barrier to access screening and treatment for the disease. HBM attempts to provide awareness as a result to health-related behavioral decisions and actions that result from convinced patterns of beliefs (Breslow, 2002). For the purpose of this study, HBM will be used to guide and explore perceived risks of susceptibility and perceived risks of severity regarding HBV.

Research Questions

Although HBV is a preventable disease, it continues to pose a significant health risk to Asian Americans and Pacific Islanders, especially Southeast Asian Americans. An understanding of the cultural influence on HBV, and the factors associated with the level of knowledge of HBV, are limited. For this reason Southeast Asian Americans are living unknowingly with high risk for HBV. The purpose of this study was to explore factors associated with knowledge of HBV and perceived risks of HBV. The following are questions that will be explored:

1. Does a relationship exist between Ethnicity and Perceived Risks of HBV?
2. Does a relationship exist between Level of Education and Perceived Risks of HBV?
3. Does a relationship exist between Gender and Perceived Risks of HBV?
4. Does a relationship exist between Age and Perceived Risks of HBV?

5. Does a relationship exist between Knowledge of HBV and Perceived Risks of HBV?

CHAPTER 3

METHODOLOGY

Participants

This study focused on Asian Americans (N = 64). Both men (n = 21) and women (n = 43) were part of this study. Participants had to self-identify as Asian and be 18 years old or older. Exclusion criteria for individuals to participate in the study were: (i) Having been previously tested for HBV or liver disease and (ii) Having been diagnosed with HBV or liver disease.

Recruitment

Participants were recruited through a convenience sample for this study's purpose. Participants were recruited from New Blessing Mission Church and Asian Pacific Islander Network (APIN) through flyers (see Appendix D) and an e-mail (see Appendix E) via listserv, respectively. Participants were also encouraged to refer friends and family to participate in the study. Prior to the recruitment process, the researcher received permission and obtained letters of support to distribute flyers and send an e-mail via listserv from New Blessing Mission Church (see Appendix A) and APIN (see Appendix B). Interested individuals from New Blessing Mission Church received their questionnaires (see Appendix G) at the start of service. Ministry leaders agreed to distribute both the informed consent forms and questionnaires to interested participants. APIN participant(s) and other referred individuals were given two options in which they could complete the questionnaire: (i) group setting or (ii) on an individual basis. The

completion of questionnaires by APIN participant(s) and other referred participants depended upon their availability. Individuals who completed a self-administered questionnaire were provided with instructions in completing the survey and on mailing procedures (see Appendix F). Furthermore, participants were not given incentives to complete the questionnaire.

Procedure

An Institutional Review Board application was submitted and approved at California State University, Long Beach prior to the beginning of the study. Participants were informed of this study through flyers and an e-mail via listserv. Interested individuals that were referred or from APIN were instructed to send an inquiry to the e-mail address provided on the flyer. Upon receiving the e-mail, the current researcher then sent a response e-mail to the prospective participant in an attempt to arrange a date and time. Participants from New Blessing Mission Church that agreed to participate were to inform their ministry leader(s). All participants were given an informed consent form (see Appendix C) to read and sign immediately prior to the start of the questionnaire. Each participant received two copies of the informed consent form and was instructed to keep one copy of the informed consent form for their records. Upon receiving a signed inform consent form, participants were then asked to complete a series of questions that assessed their knowledge of HBV and perception of risks of HBV. Additionally, participants were asked to provide demographic information listed on the last page of the questionnaire.

It is important to note that participants were reminded that their decision to participate was strictly voluntary and their decision to terminate at any time was

acceptable. Similarly, participants were ensured of full anonymity. The questionnaire did not ask for any personal individual identifiers, such as, name, address, or birth date. More importantly, participants were instructed to rate each statement on the questionnaire to the best of their knowledge and belief. Participants were also informed that this was an independent assignment in which they were not allowed to interact with other individuals. Although participants were expected to complete the questionnaire packet between 15 to 20 minutes, they were able to complete the questionnaire at their own pace; thus creating a more comfortable environment. At the completion of the questionnaire, participants were provided with the contact information (see Appendix H) of the current researcher and faculty advisor, and thus encouraged to contact the current researcher to ask and discuss any questions and/or concerns. In the unlikely event that a participant became upset while answering the questionnaire, or after, a list of local mental health assistance programs, and their contact information, was provided (see Appendix I).

The questionnaire used in this study was obtained from previous researchers (Baker et al., 2010; Flores, et al., 2012; Ma, Fang, Shive, Toubbeh, Tan, & Siu 2007). However, the demographic section of the questionnaire, with the exception of the questions pertaining to nonemergency health care (Baker et al., 2010), was created by the current researcher.

Measures

The questionnaire consisted of 24 close-ended items on HBV knowledge and perception of risks (e.g., perceived susceptibility and perceived severity). Questions regarding perceived susceptibility and perceived severity aimed to measure an individual's perception of the belief in HBV threat. HBV knowledge was measured

using a continuous level of measurement and was later recoded into an ordinal variable of low levels and high levels of knowledge. The demographic portion of the questionnaire included: age, gender identification, highest level of education completed, ethnicity, nonemergency health care treatment/plan, marital status, and annual household income. Each of the demographic items on the survey was measured using categorical level of measurement. It is important to note that the ethnic variable was later recoded into four groups. However, the past and current level of measurement did not change. The ethnic variable remains as a nominal level of measurement. Due to a small sample size, ethnicities were placed in groups according to their geographic origin. Participants represented the following ethnic groups: (i) Hmong; (ii) Filipino; (iii) Cambodian, Chinese, and Vietnamese; and (iv) Japanese and Korean. Additionally, the knowledge variable was also later recoded into a categorical variable of low levels and high levels. Prior to the recoding of the knowledge variable, the level of measurement was continuous.

The dependent variable, perceived risks of HBV, was measured using a Likert Scale. It is important to note that the dependent variable was later recoded into two categorical variables of low levels and high levels of perceived risks of HBV. Perceived risks of HBV were initially measured as a continuous variable. The response categories for the Likert Scale ranged from "1" (*strongly* disagree) to "5" (*strongly* agree).

Data Analysis

The Statistical Package for the Social Sciences (SPSS), was used to analyze the quantitative data. Frequency distributions, Measures of Central Tendency, and Measures of Variability/Dispersion were run for the appropriate demographic variables.

Correlation Coefficients were computed to explore bivariate relationships. Spearman's Rho was used to explore relationships between two ordinal variables. Additionally, Cross Tabulations were displayed to review bivariate tables. Moreover Phi Coefficients and Cramer's V Coefficients were used to analyze the relationships between the categorical dependent variables, and the categorical independent variables: age, ethnicity, and gender. Fisher's Exact Tests were run to explore associations between the categorical variables.

CHAPTER 4

RESULTS

Demographics

As shown in Table 1, the study consisted of 21 men (33%) and 43 women (67%) participants. Participants' ages ranged from 18 to 44, with one participant reporting to be 45 years old or older. The study largely consisted of participants between ages 25 to 34 (45%) and 18 to 24 (34%). Additionally, 42% of the participants have a bachelor's degree or higher. Furthermore, 23% of the sample reported an annual household income of $100,000 or higher (Median = 5.00). Sixty-one percent of participants reported using Western, private practice or HMO as their preferred choice of health care in a non-emergency health care situation. Sixteen percent of participants reported using Western community clinic. Additionally, 13% reported using both Western and traditional (cultural). Conversely, 8% reported having no health care provider and 3% declined to answer.

Does a Relationship exist between Ethnicity and Perceived Risks of HBV?

Cramer's V correlation was used to explore a relationship between ethnicity and perceived risks of HBV. As shown in Table 2, Cramer's V correlation did not reveal a significant relationship between ethnicity and perceived severity (CV = .264, p = .222). Additionally, the Fisher's Exact Test (see Table 3) did not indicate a significant association between ethnicity and perceived severity was not significant (FET = 4.032, p = .265). On the other hand, a significant relationship was found between ethnicity and

perceived susceptibility (CV = .555, p = .001). Further, the Fisher's Exact Test between ethnicity and perceived risks of HBV revealed a significant association between ethnicity and perceived susceptibility (FET = 19.914, p = .001). A cross tabulation table was conducted and found that Hmong (84%) and Filipino (60%) participants have high perception of susceptibility when compared to Cambodian, Chinese, and Vietnamese (18%) and Japanese and Korean (33%). Conversely, Cambodian, Chinese, and Vietnamese (82%) and Japanese and Korean (67%) participants were more likely to perceive low susceptibility to HBV. All groups of ethnicities remained high in perception of severity, all ranging from 68 % to 75%. Only 40% of Filipino participants perceived themselves to have low severity to HBV.

Does a Relationship exist between Level of Education and Perceived Risks of HBV?

Spearman's Rho was used to explore a relationship between level of education and perceived risks of HBV. However, as shown in Table 2, a relationship between level of education and perceived susceptibility (RHO = -.203, p = .109) were not found significant. Additionally, no significant relationships existed between level of education and perceived severity (RHO = .245, p = .051).

Does a Relationship exist between Gender and Perceived Risks of HBV?

A Phi Coefficient Correlation was used to analyze a relationship between gender and perceived risks of HBV (see Table 2). As a result, no significant relationships were found between gender and perceived severity (Phi = .220, p = .078). Moreover, no significant relationships were determined between gender and perceived susceptibility (Phi = -.011, p = .927). Furthermore, a cross tabulation was computed. Women participants (74%) were more likely to perceive low severity of HBV compared to their

male participant counterparts (52%). Interestingly, the perception of low levels and high levels of perceived susceptibility of HBV between men (52%) and women (51%) were close in range.

Does a Relationship exist between Age and Perceived Risks of HBV?

Cramer's V was used to explore a relationship between age and perceived risks of HBV. As shown in Table 2, Cramer's V did not reveal a significant relationship between age and perceived severity (CV = .124, p = .805). Additionally, no significant relationships was indicated between age and perceived susceptibility (CV = .243, p = .287). A Fisher's Exact Test was performed to determine an association between age and perceived risks of HBV. As shown in Table 3, no relationships were found significant between age and perceived severity (FET = .985, p = .920). Moreover, no relationships were found significant between age and perceived susceptibility (FET = 3.677, p = .271). A cross tabulation was also computed. Participants in all age groups had a low perception of severity. On the other hand, 63% of participants whose age ranged from 18 to 24 had a high level of perception of susceptibility to HBV.

Does a Relationship exist between Knowledge of HBV and Perceived Risks of HBV?

As previously mentioned in chapter 3, prior to the recoding of knowledge of HBV, a univariate analysis was computed (Mean = 3.77, Median = 3.70, SD = .55). A Spearman's Rho analysis was run to explore a relationship between knowledge of HBV and perceived risks of HBV (see Table 3). No significant relationships were identified between knowledge of HBV and perception of severity (RHO = .010, p =.935). Moreover, no relationships were significant between knowledge of HBV and perception of susceptibility (RHO = .029, p = .818).

Health Care Practice Preference

As shown in Table 1, 61% of participants reported using Western, private practice, or HMO for health care preference in a non-emergency health care situation. While 16% of participants indicated using Western, community clinics and 13% of participants reported using both Western and traditional (cultural) practices for non-emergency health care situations. On the hand, 8% reported not having a health care provider. It is important to shed light that no participants indicated their preferred choice for non-emergency health care situations to consist of only traditional (cultural only). Furthermore, 3% of the sample failed to respond.

CHAPTER 5

DISCUSSION

This chapter discusses the results and limitations of the study. Next, implications for future research are explored. Moreover, a discussion of relevance to social work practice and multiculturalism are explored.

Ethnicity

The purpose of this study was to explore the relationships between various factors that are associated with knowledge of HBV and perceived risks of HBV. The findings for this study indicate that greater awareness regarding perceptions of susceptibility is found amongst Hmong and Filipino American participants. This finding corroborates previous research with Hmong Americans men who rank as one of the highest for liver cancer (McBride, 2008). Likewise, literature also indicates that Vietnamese Americans men rank as the top population for liver cancer (McBride, 2008), yet the findings for this study indicate that 82% of Vietnamese, Cambodian, and Chinese Americans are more likely to perceive low susceptibility to HBV. This result could be misrepresented due to the grouping of the ethnicities. However, it is important to note that these ethnicities lay within the Southeast Asia geographic region, and thus provides a glimpse in the lack of inclination to request HBV information with their health care professionals (Grytdal et al., 2009). Additionally, Japanese Americans and Korean Americans also had high rates of low perception to susceptibility of HBV. This is congruent to previous research that

resulted in Korean Americans generally having low knowledge and misunderstandings of HBV (Lee et al., 2007).

Age and Gender

HBV is largely transmitted through vertical transmission (Kane, 1995b; Lavanchy, 2004; Lesmana et al., 2006) to which this study revealed that women were more likely to have low levels in perception of severity to HBV. For this reason alone, it is imperative that health professionals provide sufficient education to all women, particularly to expecting mothers. Awareness and education of HBV infection will lead to preventative care for mothers who are infected. Additionally, mothers who test positive for HBV will be able to prevent HBV transmission to their children. Research has typically shown that men outrank women in liver cancer. However, this study was unable to confirm a relationship between gender and perceived risks of HBV. Furthermore no relationships were found between age and perceived risks of HBV. As a result, individuals receiving HBV education should be aimed at all age groups. HBV education should be provided to children and parents to put into effect immunizations.

Level of Education and Knowledge of HBV

Previous research indicated that individuals with minimal education were more likely to have not been tested for HBV (Hu, 2008). Additionally, past research also found that individuals with a higher education were more likely to question about HBV with their health care provider (Grytdal et al., 2009). Interestingly this study showed a significant result with level of education and ethnicity. This study's sample consisted of fairly educated participants with 42% reporting having a bachelor degree or higher; yet resulting in moderate knowledge of HBV. As mentioned, knowledge of HBV should not

be dependent amongst level of education. Communication of HBV should target the Asian community evenly in order to be effective with HBV awareness. Although level of education and ethnicity was not a primary focus question that was explored in this study, it is important to shed light on the significant relationship that was found.

Health Care Practices

This study also sought to explore cultural beliefs of Western medicine. The questionnaire asked participants to report their preference of use of health care in a non-emergency health care situation. Hwang et al. (2008) indicated that Asians, in particular, Chinese and Korean, reported that traditional medicine was more effective in treating illnesses than western medicine. Additionally, Horne et al. (2004) found that Asians generally believed that medicines result in harmful effects to the body. Conversely, this study's finding on non-emergency health care preference is a contrast to previous results. More than half of this study's participants reported their preference for non-emergency health care practice to be Western, private practice, or HMO. In fact, no participants declared using traditional (cultural only). Nonetheless, participants did admit to using both Western and traditional (cultural) practices which continues to be aligned with past research (Hwang et al., 2008). Thus, it is essential to be aware of dual medical practices when providing treatment for HBV. Health professionals providing treatment should educate patients on the importance of HBV outcomes when prescribing Western medicine. In order to gain a more positive outlook on Western medicine, it is necessary that health professionals provide education on the effects that Western medicine has on HBV.

Limitations

This study consisted of a non-probability sample which did not represent the Asian American population to its entirety; therefore, leading to several limitations. It is important to note that due to the study's non-probability sample and small sample size, it is unsuitable to generalize these results to the general population. Additionally, it was challenging to achieve statistically significant results. Furthermore, due to the study's small sample size, various ethnicities were grouped according to its geographic location of origin in order to sustain a sufficient amount of participants in each ethnic group. For example, participants who self-identified as Cambodian, Chinese, and Vietnamese were classified as a group together. This same process was performed for Korean and Japanese. Individuals who identified as Hmong and Filipino had sufficient number of participants.

Another limitation of the study was the recoding of the dependent variables. The mean scores from perceived susceptibility and perceived severity were dichotomized, thus creating two categorical variables. The categorical variables represented low levels and high levels of perceived risks. The median score was used to identify the division of the variables in low levels and high levels. Moreover, this process also took place with one of the independent variables, knowledge of HBV. The initial measurement for both variables was continuous.

Another challenge within the study was the recruitment of participants. Due to the sensitivity of HBV, it was rather difficult to obtain participants. Participants expressed concerns of the linkage between the survey answers and personal identification. However, participation was strictly voluntary and anonymous. The current researcher did not ask for any identifying characteristics, such as name, date of

birth, or address. The current researcher discussed the importance of confidentiality and privacy rights.

Implications for Future Research

It is apparent that as the continuation in the lack of HBV knowledge continues, infection and transmission will contribute to higher rates of infected individuals and late diagnosis and treatment. As a result, this may ultimately lead to poor health decision outcomes. Future research is needed to further explore the entirety of factors that are associated with HBV knowledge and HBV barriers. The topics explored in this study warrant additional investigation to enhance the understanding of HBV knowledge, beliefs, and barriers. It is important to note that further research should not limit itself to the aforementioned issues and should include other areas of interests related to HBV.

Research should also further explore individuals' comprehension of diseases from various cultural perspectives; in addition to the understanding of the term high risk population. Previous research has found a lack of health care screening due to cultural modesty (Horne et al., 2004). Likewise, past research has indicated that cultural and religious beliefs have been known to have severe consequences on the comprehension and knowledge of the causation of diseases and contraction of illnesses (Juckett, 2005). Moreover, their past and current encounters of HBV education and/or awareness, if any, should also be explored. Furthermore, research should examine whether length of stay in the United States, (i.e.: first generation, second generation, and so on) encourages or hinders communication on HBV and/or other diseases within the household.

Relevance to Social Work Practice

It is important to explore the health risks of the Asian American community, such as their perceptions of susceptibility, severity, and level of knowledge for HBV. This study provides implications for social work practice by collaborating health professionals on the various factors influencing outreach and preventative health care. Moreover, the collaboration between social workers and health professionals will lead to educating community members of the risks HBV imposes on Asian Americans, Pacific Islanders, and Southeast Asian Americans. As a result, it will lead to more fluid communication in order to foster appropriate decisions based upon accurate information, thus resulting to poor decisions.

Social workers will benefit in their outreach with high risk individuals by educating the importance of the dangers of untreated HBV. Social workers will also encourage and empower infected individuals to develop concrete treatment goals. Educating the maintenance of new behaviors will help individuals to advance towards their plan of action (Miley, O'Melia, & DuBois, 2013).

Multicultural Relevance

This research study contributed to human diversity in regards to the relationship between factors associated with perceived risks of susceptibility and severity of HBV. Although this study did not find statistical significance, it is unfortunate that perceived cultural dissonance may lead to resistance and/or poor health care outcomes, from a broader perspective of the Asian American community. Therefore, it is important that information on HBV be culturally sensitive, given the large influence of traditional healing practices. Medical personnel should recognize and address cultural strengths. For example, it would be appropriate to activate the client's cultural strengths in order to

present a nonjudgmental approach. This will require a critical understanding of the complexity of the culture; in addition to where the client's identity lies within that particular culture. By doing so, this allows for the understanding and reflection of cultural values (Miley, O'Melia, & DuBois, 2013).

APPENDICES

APPENDIX A

NEW BLESSING MISSION CHURCH LETTER OF APPROVAL

NEW BLESSING MISSION CHURCH

November 25, 2014

Institutional Review Board (IRB)
California State University, Long Beach

To Whom It May Concern:

Please accept this letter of support for Ms. Ying Moua on her research entitled "Exploring Factors Associated with Perceived Risks of Hepatitis B among Southeast Asians".
I am giving Ms. Moua my permission to distribute surveys at New Blessing Mission Church located in Santa Ana, CA and will assist Ms. Moua with the survey distribution. Surveys will be distributed on Wednesday evenings between 7:00 pm to 9:00 pm.

Sincerely,

Jina Lee Flores, M.S.

19211 Dodge Avenue, Santa Ana, CA 92706-2236 Telephone (714) 554 - 1319

APPENDIX B

ASIAN PACIFIC ISLANDER NETWORK LETTER OF APPROVAL

CALIFORNIA STATE UNIVERSITY, LONG BEACH

CAREER DEVELOPMENT CENTER

October 28, 2014

Institutional Review Board (IRB)
California State University, Long Beach

Dear Review Committee:

I have read over Ying Moua's research proposal entitled "Exploring Factors Associated with Perceived Risks of Hepatitis B among Southeast Asians." I understand that this student is conducting this project as part of their requirements for the Master of Social Work program at California State University, Long Beach.

Additionally, I understand that the Institutional Review Board for the Use of Human Subject's in Research (IRB) at the University is concerned with protecting the confidentiality, privacy, and well-being of research participants. I do not have concerns about the study the student has proposed based on conversations with the student and after reviewing her research project proposal.

As a member of the Asian Pacific Islander Network (APIN), I will help to promote Ms. Moua's research study to other faculty and staff members of APIN with the necessary information needed to participate in the study via flyers. I, Wayne Tokunaga, as a member of APIN support Ms. Moua's project, including recruitment of participants and data collection, through APIN.

Should you have any questions or concerns, don't hesitate to contact me .

Sincerely,

Wayne Tokunaga, M.S.
Career Counselor
Career Development Center
California State University Long Beach
Wayne.tokunaga@csulb.edu
(562) 985-5548

APPENDIX C

INFORMED CONSENT FORM

CONSENT TO PARTICIPATE IN RESEARCH

Exploring Factors Associated with Perceived Risks of
Hepatitis B among Southeast Asians

You are asked to participate in a research study conducted by Ying Moua, from the School of Social Work at California State University, Long Beach. The findings of this study will be contributed to a thesis. You were selected as a possible participant in this study because you are: (I) 18 years or older, (II) self-identify as Asian and (I) have not been previously tested for hepatitis B virus or liver disease, and (II) have not been diagnosed with hepatitis b virus or liver disease.

PURPOSE OF THE STUDY

This study seeks to explore factors associated with knowledge of hepatitis B virus and perceived risks of hepatitis B virus.

PROCEDURES

If you agree to volunteer to participate in this study, you will complete a three page questionnaire. The questionnaire should take 15 to 20 minutes to complete.

POTENTIAL RISKS AND DISCOMFORTS

This research study expects no serious risks from participation. However, because some questions in the questionnaire are of personal nature, precautions will be taken. The potential risks to participants in relation to this study are strong emotional response(s). Should you become upset while answering the survey, or after, a list of local mental health assistance programs, and their contact information, will be provided.

Similarly, to maintain strict guidelines for confidentiality, participants will be given the contact information of the principal investigator and faculty advisor, and encouraged to contact the principal investigator to ask and discuss any concerns they have about the study.

In order to guarantee participant privacy rights, participation in this study is strictly voluntary. Participants will only share information that they are comfortable sharing. Participants will be informed that they have the option to withdraw from the study at any time.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

While you are not going to receive any compensation for participating, we hope that this study will contribute to the improvement of hepatitis B virus screening and/or preventative care.

PAYMENT FOR PARTICIPATION

Participants will not be compensated.

Approved from December 8, 2014 to December 7, 2015 by the CSULB IRB

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

Answers provided by the participant will be kept confidential. To ensure full confidentiality, the questionnaire does not ask for any personal individual identifiers such as, name, address, or birth date.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. Participation or non-participation will not affect you or other personal consideration or right you usually expect. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which in the opinion of the researcher warrant doing so.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact the principal investigator, Ying Moua by e-mail at ying.moua@student.csulb.edu or principal investigator's advisor, and Dr. Thomas Alex Washington at alex.washington@csulb.edu or (562) 985-7775.

RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact the Office of University Research, CSU Long Beach, 1250 Bellflower Blvd., Long Beach, CA 90840; Telephone: (562) 985-5314.

SIGNATURE OF RESEARCH SUBJECT

I understand the procedures and conditions of my participation described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Name of Subject

_____ _____
Signature of Subject Date

Approved from December 8, 2014 to December 7, 2015 by the CSULB IRB

APPENDIX D

HEPATITIS B VIRUS FLYER

Hepatitis B: Get in the KNOW

The purpose of this study is to find out more information about your knowledge of hepatitis B virus and perceived risks of hepatitis B virus. Additionally, this study will explore cultural beliefs of Western medicine.

REMEMBER: Your participation is *always* voluntary!

For more information or to participate, contact: Ying Moua, MSW
ying.moua@student.csulb.edu

This study might be a good fit for you if:

- *You are 18 years or older*
- *Have not been previously tested for hepatitis B virus or liver disease*
- *Have not been diagnosed with hepatitis B virus or liver disease*

Contact: Ying Moua, MSW
ying.moua@student.csulb.edu

Contact: Ying Moua, MSW
ying.moua@student.csulb.edu
Contact: Ying Moua, MSW
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ying.moua@student.csulb.edu
Contact: Ying Moua, MSW
ying.moua@student.csulb.edu
Contact: Ying Moua, MSW
ying.moua@student.csulb.edu

APPENDIX E

E-MAIL DIRECTED TO ASIAN PACIFIC ISLANDER NETWORK FOR LISTSERV

Dear APIN Members,

Hello, my name is Ying Moua and I am a current graduate student at CSULB in the School of Social Work. In partial fulfillment of the requirements for the Degree, Master of Social Work, I am currently working on a thesis regarding hepatitis B virus (HBV) and Southeast Asian Americans.

Although HBV is a preventable disease, it continues to pose a significant health risk to Asian Americans and Pacific Islanders, especially Southeast Asian Americans. According to the Asian Liver Center (2014) and Centers for Disease Control and Prevention (2013) there is one in every twelve Asian American living with chronic HBV. An understanding of the cultural influence on HBV, and the factors associated with the level of knowledge of HBV, are limited. The purpose of this study is to explore factors associated with knowledge of HBV and perceived risks of HBV.

I hope to use this avenue to not only promote my research study and/or gain participants but to also provide awareness on HBV. My research study contains a brief survey for those who are interested in participating (staff, faculty, and/or students). Please feel free to pass this e-mail and attached flyer along to those that may be interested or interested in participating. I appreciate your help and assistance with my research.

Thank you,

Ying Moua

APPENDIX F

INSTRUCTIONS FOR SELF COMPLETION OF HEPATITIS B VIRUS

QUESTIONNAIRE AND MAILING INSTRUCTIONS

HEPATITIS B: GET IN THE KNOW

Welcome to **Hepatitis B: Get in the KNOW!** I would like to personally thank you for participating in this study. Your efforts and contribution to this study is greatly appreciated. Please remember that your participation is strictly voluntary. At any time, should you feel that you can no longer continue, please turn your questionnaire over and quietly leave the room.

Instructions

In order to complete this questionnaire, please use a blue or black ink pen. Each statement is rated on a scale between 1 (*strongly disagree*) and 5 (*strongly agree*). Read each statement carefully and circle the number that best represents your knowledge or belief. Directly following the statements are a set of demographic questions. Please place a check mark (√) next to the choices that apply to you.

This questionnaire takes approximately 15 to 20 minutes to complete. Your answers are completely confidential. There is no way to link your answers back to you. Once your questionnaire is completed, please turn it over and quietly leave the room.

NOTE: Individuals who are completing this questionnaire on a self-administer basis, please refer to the mailing directions below.

Self-Administering Participants

** Please send your completed questionnaire via campus mail to:

C/O Dr. Thomas Alex Washington, Thesis Chair, SPA 224

Principal Investigator:
Ying Moua
ying.moua@student.csulb.edu
CSULB

For further assistance, questions, and/or concerns, please contact:
Principal investigator, Ying Moua, e-mail: ying.moua@student.csulb.edu

THANK YOU FOR PARTICIPATING!

APPENDIX G

QUESTIONNAIRE

Each statement is rated on a scale between 1 (*strongly* disagree) and 5 (*strongly* agree). Read each statement carefully and circle the number that best represents your knowledge or belief.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Infection with hepatitis B can increase your chance of getting liver disease.	1	2	3	4	5
2. Does a vaccine that prevents infection with hepatitis B exist?	1	2	3	4	5
3. An infection with hepatitis B can always be cured.	1	2	3	4	5
4. A person can die from infection with hepatitis B.	1	2	3	4	5
5. Hepatitis B can be spread during sexual intercourse.	1	2	3	4	5
6. Hepatitis B can be acquired from a blood transfusion.	1	2	3	4	5
7. Infection with hepatitis B can last for a lifetime.	1	2	3	4	5
8. Infection with hepatitis b can cause liver cancer.	1	2	3	4	5
9. Hepatitis B is more easily spread from person to person.	1	2	3	4	5
10. I feel that I am at high risk.	1	2	3	4	5
11. Getting screened for hepatitis B can help prevent the development of liver disease.	1	2	3	4	5
12. I worry about getting Hepatitis B.	1	2	3	4	5
13. I worry about liver cancer.	1	2	3	4	5
14. Life would change if I had hepatitis B.	1	2	3	4	5

15. I will get liver cancer and die.	1	2	3	4	5
16. I do not need to test if I feel well.	1	2	3	4	5
17. I fear of a positive result.	1	2	3	4	5
18. I do not know where to get tests.	1	2	3	4	5
19. I do not know about Hepatitis B.	1	2	3	4	5
20. It is beneficial to detect Hepatitis B early.	1	2	3	4	5
21. Early detection of Hepatitis B will prevent transmission to others.	1	2	3	4	5
22. Early detection may be easier to treat.	1	2	3	4	5
23. Early detection will prevent liver cancer.	1	2	3	4	5
24. Early detection will reduce my worry about liver disease.	1	2	3	4	5

Please place a check mark (✓) next to the choices that apply to you.

What is your age?

18-24 _____ 25 - 34_____ 35 - 44_____ 45 or older _____

What is your gender?

Female _____ Male_____ Transgender _____ Decline to answer _____

What is the highest level of education you completed?

High School/Adult School _____ Vocational /Some College _____

Bachelor degree or higher _____

Ethnicity

Cambodian _____ Chinese _____ Filipino _____ Hmong _____

Japanese _____ Korean _____ Lao _____

Vietnamese _____ Biracial _____ Decline to answer _____

Not listed: please specify _____

What type of nonemergency health care do you use?

Western, private practice or HMO _____ Western, community clinic _____

Traditional (Cultural) only _____ Western and Traditional (Cultural) _____

No health care provider _____

What is your current marital status?

Divorced _____ Cohabitate _____ Married _____ Separated _____

Single _____ Widowed _____ Decline to answer _____

What is your annual household income?

Under $10,000 _____ $10,000 - $19,000 _____ $20,000 - $29,000 _____

$30,000 - $39,000 _____ $40,000 - $49,000 _____ $50,000 - $74,000 _____

$75,000 - $99,000 _____ $100,000 and over _____

APPENDIX H

PRIMARY INVESTIGATOR CONTACT INFORMATION

HEPATITIS B:
GET IN THE KNOW

Principal investigator: Ying Moua,
E-mail: ying.moua@student.csulb.edu

Principal investigator's supervisor:
Dr. Thomas Alex Washington
Phone: (562) 985-7775
E-mail: alex.washington@csulb.edu

California State
University, Long Beach

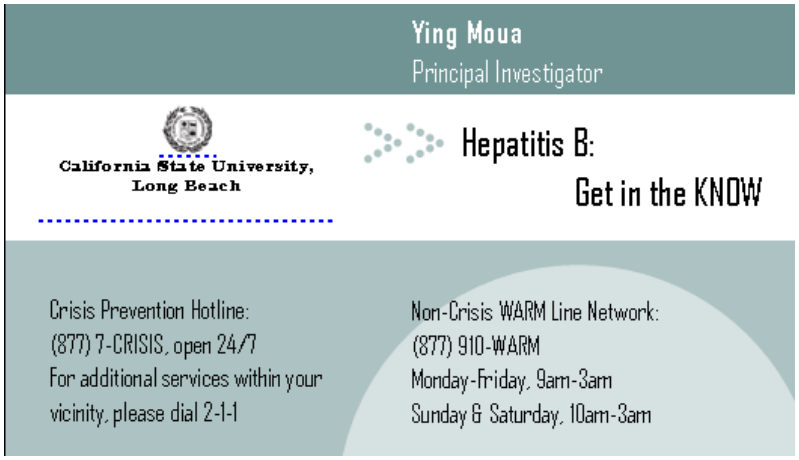
Hepatitis B: Get in the KNOW

If you have any questions or concerns about the research study, please contact the principal investigator, Ying Moua, or principal investigator's supervisor, Dr. Thomas Alex Washington. Should you require additional assistance for any emotional responses, please contact your local support group.

Thank you for participating!

APPENDIX I

LIST OF LOCAL MENTAL HEALTH ASSISTANCE


Ying Moua
Principal Investigator
California State University, Long Beach
Hepatitis B:
Get in the KNOW
Crisis Prevention Hotline:
(877) 7-CRISIS, open 24/7
For additional services within your vicinity, please dial 2-1-1
Non-Crisis WARM Line Network:
(877) 910-WARM
Monday-Friday, 9am-3am
Sunday & Saturday, 10am-3am

APPENDIX J

TABLES

TABLE 1. Participant Characteristics

Characteristics	No. (%)
Gender	
Men	21 (32.8)
Women	43 (67.2)
Age	
18-24	22 (34.4)
25-34	29 (45.3)
35-44	12 (18.8)
45 or older	1 (1.6)
Ethnicity	
Hmong	19 (29.7)
Filipino	10 (15.6)
Cambodian, Chinese, Vietnamese	22 (34.4)
Japanese, Korean	12 (18.8)
Biracial	1 (1.6)
Education	
High School/Adult School	14 (21.9)
Vocational/Some College	23 (35.9)
Bachelor or Higher	27 (42.2)
Marital Status	
Single	39 (60.9)
Cohabitate	1 (1.6)
Married	20 (31.3)
Separated	0 (0)
Divorced	2 (3.1)
Widow	0 (0)
Decline to answer	2 (3.1)
Income	
Under $10,000	14 (21.9)
$11,000-$19,000	3 (4.7)
$20,000-$29,000	4 (6.3)
$30,000-$39,000	6 (9.4)
$40,000-$49,000	4 (6.3)
$50,000-$74,000	10 (15.6)
$75,000-$99,000	3 (4.7)
$100,000 or Higher	15 (23.4)
Decline to answer	5 (7.8)
Non-Emergency Health Care	
Western, private practice or HMO	39 (60.9)
Western, community clinic	10 (15.6)
Western and Traditional (cultural)	8 (12.5)
Traditional only	0 (0)
No health care provider	5 (7.8)
Decline to answer	2 (3.1)

TABLE 2. Correlation Coefficients

	Perceived Severity			Perceived Susceptibility		
	CV	RHO	PHI	CV	RHO	PHI
Ethnicity	.222			.001*		
Education		.051			.109	
Gender			.078			.927
Age	.805			.287		
Knowledge		.935			.818	

Note: Dependent Variable: Perceived Risks (Perceived Severity; Perceived Susceptibility

*Correlation significant, $p < .01$

TABLE 3. Fisher's Exact Tests

	Perceived Severity	Perceived Susceptibility
	FET	FET
Ethnicity	.265	.001*
Age	.920	.271

Note: Dependent Variable: Perceived Risks (Perceived Severity; Perceived Susceptibility)

*Correlation significant, $p < .01$

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