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Changing Attitudes towards Hepatitis B among Asian Americans: From Saving Face to Getting Serious

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Abstract

Background: Asian Americans have the highest prevalence of hepatitis B virus (HBV) in the US. The San Francisco Hep B Free (SFHBF) campaign aimed to increase awareness and access to HBV education and services among Asian Americans in San Francisco. **Purpose:** We sought to examine attitudes and knowledge among Asian Americans regarding HBV at baseline (2009) and benefits of the SFHBF outreach campaign four years later (2013). **Methods:** Four focus groups were conducted (n=45) in 2009, followed by in-depth interviews (n=40) in 2013. **Results:** In 2009, many participants were misinformed about HBV symptoms and transmission. They also reported stigma associated with HBV, which hindered Asian Americans from discussing the disease and seeking services. The 2013 interviews revealed that SFHBF had contributed towards awareness of HBV screenings and vaccinations, and also instilled acute seriousness that HBV could affect them directly. **Conclusion:** The in-depth interviews conducted in 2013 illustrated that there was less concern about “saving face,” but a shift to a level of seriousness associated with HBV. Future efforts among Asian Americans should continue to focus on self-efficacy regarding HBV prevention, including screening and vaccination.

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Introduction

Asian Americans are disproportionately affected by chronic hepatitis B virus (HBV) and its sequelae – cirrhosis, liver failure, hepatocellular carcinoma (HCC), and death (Centers for Disease Control and Prevention, 2009). Currently, San Francisco has the highest rate of liver cancer in the United States, with Asian Americans representing an estimated 88% of reported cases while comprising only one-third of the city’s population (U.S. Census, 2010). Past studies of HBV awareness, knowledge, and behavior among Asian Americans (e.g., Cambodian Americans, Chinese Americans, Korean Americans, Vietnamese Americans) reveal that many hold incorrect beliefs and concerns regarding HBV (Carabez, Swanner, Yoo & Ho, 2014; Yoo, Fang, Zola, & Dariotis,

2012). Such beliefs include: misinformation and confusion about the different forms of viral hepatitis and their transmission routes (Choe et al., 2005; Shiao et al., 2012); lack of information about vaccination schedules (Chang, Nguyen, & So, 2008; Choe et al., 2005; Taylor et al., 2005; Taylor et al., 2006; Taylor, Seng, Acorda, Sawn, and Li, 2009; Wu, Lin, So, & Chang, 2007); and social stigma or saving face, i.e., a cultural norm to maintain a positive reputation (Carabez et al., 2014; Yoo et al., 2012). Asian Americans’ levels of knowledge and preventive practices also have been observed to differ by age (Taylor, Jackson, Chan, Kuniyuki, & Yasui, 2002; Taylor et al., 2005; Wu et al., 2007). All of these factors create barriers to seeking treatment and preventive services for HBV. Thus, there exists a serious need to provide culturally and linguistically appropriate education about HBV

prevention and screening throughout the Asian American community.

San Francisco Hep B Free Campaign

In January 2007, a citywide coalition program named San Francisco Hep B Free (SFHBF) campaign was founded as a partnership between AsianWeek Foundation, the Asian Liver Center at Stanford University, and the San Francisco Department of Public Health. Their goal was to create public and healthcare provider awareness about the significance of testing and vaccinating Asian Americans - particularly foreign-born individuals - for chronic HBV infection and to overcome gaps in knowledge and barriers to screening. SFHBF aims to eliminate HBV infection through increased awareness, testing, vaccination and treatment by utilizing a broad, community-wide collaboration that includes the Asian American community, health care system, policy makers, businesses, and the general public.

Since its founding, SFHBF has mounted mass media and grassroots messaging campaigns that aims to raise citywide awareness of HBV and promote the use of the existing health care system for HBV screening and follow-up. In 2007, the campaign was launched with the message, “B Sure. B Tested. B Free.” on bus signs throughout the city of San Francisco (See Table 1). In 2008, the “B a Hero” ad campaign featured Asian American heroes with Superman-inspired costumes with a “B” appearing in place of the Superman “S” to demonstrate that everyone can be a hero by getting tested for HBV. In 2009, the third ad of the public health campaign, “Which One Deserves to Die?” was used to motivate individuals to take action and get tested by emphasizing the seriousness of the disease. As of 2013, the SFHBF campaign had conducted over 60 educational events reaching over 1,100 health care providers. Community events and fairs have reached over 200,000 members of the general public. Over 20,000 Asian and Pacific Islanders have been screened and vaccinated (Kolchak, 2015). Entering its eighth year, SFHBF is working to widen its outreach efforts to include a Business Initiative and targeting subgroups such as Vietnamese, Filipino, and Pacific Islanders (Kolchak, 2015).

Table 1.

SFHBF Public Awareness Evaluations, 2009 & 2013		
SFHBF Campaign Messages	Year of Evaluation	Evaluation Focus
2007 Be Sure, Be Tested, Be Free Campaign	2009	Awareness and Knowledge of HBV Screening and vaccination behavior
2008 Be a Hero Campaign		Information sources for Health Recognition of SFHBF efforts Identify knowledge gaps to inform next media message
2009 Which one Deserves to Die Campaign?	2013	Awareness and Knowledge of HBV Screening and vaccination behavior Interaction with Doctors re. HBV Recognition of SFHBF efforts SFHBF & screening, vaccination or follow-up care re. HBV

Two different articles have been written about SFHBF regarding its effectiveness (Shiau et al., 2012) and the qualitative themes (Yoo et al., 2012) presented in the SFHBF campaigns. Shiau et al. (2012) assessed the effectiveness of the 2008 “Be a Hero” media campaign and the scope of HBV awareness among Asian Americans in San Francisco. With a sample of 306 Asian Americans, the results indicated that a year after the SFHBF campaign was launched, there was a high level of HBV awareness among Asian American San Francisco residents, yet misinformation about HBV transmission and prevention and differences between hepatitis A, B, and C remained. Meanwhile, Yoo et al. analyzed the health communication messages in SFHBF campaign directed towards the Asian American population (2012). The team’s key finding was that the SFHBF campaign was able to de-stigmatize HBV by providing scientific facts about all methods of HBV transmission, rather than a historic focus on sexual

transmission, culturally associated with “non-virtuous” behavior. These efforts were aided by having prominent community figures discuss their own experiences with HBV and stress the importance of screening, vaccination, and follow-up care. Despite these two studies, a gap exists in understanding the effectiveness of SFHBF’s major health campaigns.

Since the inception of SFHBF, other HBV public health campaign efforts directed towards Asian Americans have emerged in other major U.S. cities such as New York City, Philadelphia, Baltimore, and Los Angeles. Like San Francisco, the New York City campaign, BFreeNYC, was a citywide coalition of hospitals, nonprofit organizations, government agencies, media outlets, and corporations to address HBV among the Asian American population in the city (Trinh-Shevrin et al., 2011). Between 2004 and 2008, the citywide campaign screened over 9,000 people. Similar to SFHBF, BFreeNYC used media and educational events featuring culturally responsive images, values, and figures to appeal to ethnic-specific populations.

The Present Study

To date, very limited studies have examined processes (Yoo et al. 2012; Bailey et al., 2011; Trinh-Shevrin et al., 2011) and effectiveness (Shiau et al., 2012; Pollack et al., 2011) of citywide campaigns directed towards increasing HBV awareness among Asian Americans. Past studies published have been on the quantitative data from the SFHBF campaign (Shiau et al., 2012; Bailey et al., 2011) with limited attention on qualitative data that could provide an opportunity for better insight into the narratives related to barriers to screening or outreach among Asian Americans that is often hard to evaluate with quantitative questionnaires. Moreover, no studies to date have compared themes from two differing points in the SFHBF campaign. This paper provides an opportunity to qualitatively explore baseline attitudes regarding HBV and the perceived efficacy of the SFHBF campaign among Asian Americans in San Francisco by comparing qualitative data conducted in 2009 and 2013.

Methods

Background

The San Francisco Department of Public Health and the SFHBF committee collaborated with the Henne Group to administer focus groups in 2009 and in-depth interviews in 2013. The focus groups aimed to ascertain the factors that were preventing Asian Americans from seeking HBV screening as well as to identify effective messages that could be used to encourage Asian Americans to consider HBV screening and vaccination. The “Which One Deserves to Die?” public health campaign was created based on results from the 2009 focus groups. In addition to assessing the level of general knowledge of HBV among Asian Americans in San Francisco, the 2013 interviews assessed the perceived effectiveness of the latest campaign. This paper does not allow for efficacy evaluation between 2009 and 2013 due to differences in sampling and data collection methods. The nature of the focus groups reduced the ability for all participants to be interviewed equally and candidly. However, the follow-up assessment conducted done in 2013 used in-depth interviews, as opposed to focus groups, in order to optimize the quality of data/responses.

Participants

Both the focus group participants and in-depth interviewees were recruited as part of the SFHBF Evaluation Project. All respondents were anonymous. Inclusion criteria for focus group participants include those who were a San Francisco resident, 18 years old and older, identifying as Asian, Cantonese or English speaker, and have not been screened for HBV. The inclusion criteria for those in the in-depth interviews included those over the age of 18, identification as Asian, San Francisco resident, and a Cantonese or English speaker. Both the focus group and the in-depth interviewees were a convenience sample of a cross-sectional survey that had been conducted 6-8 weeks prior. Both of the samples, may have entered the focus groups or in-depth interviews more informed about HBV than those who would have not participated in the earlier survey. Cantonese was prioritized in order to be able to compare data from the 2009 focus groups and 2013 in-depth

interviews, and also because this language was spoken by the campaign's target population in San Francisco. Four focus groups were conducted (n=45) in 2009, followed by in-depth interviews (n=40) in 2013.

Measures

The Henne Group facilitated the focus and in-depth phone interviews. Questions from the focus group and interviews were created to determine which messages about Asian Americans and HBV should be developed. The questions were reviewed and approved by the Hep B Free steering committee, which included representatives from San Francisco Department of Public Health, AsianWeek Foundation, physicians from various San Francisco hospitals/clinics and the Hospital Council. Questions for both focus groups and in-depth interviews assessed HBV awareness, barriers to screening/disclosure, and reactions to the SFHBF campaign. Participants in the focus groups were asked questions in seven domains: 1) challenges faced in daily life, 2) general health information, 3) knowledge of HBV, 4) personal knowledge of someone with HBV, 5) stigma associated with HBV, 6) health information sources, and 7) reaction to SFHBF campaign messages. Participants in the in-depth phone interviews were asked questions in four domains: 1) awareness and knowledge of HBV, 2) awareness of SFHBF campaign efforts, 3) interactions with doctors regarding HBV, 4) screened and/or vaccinated for HBV.

Procedures

Based on careful administrative review by Ethical and Independent Review Services, it was determined that this evaluation project qualified for an exemption from an Institutional Review Board review. Procedures included informed consent and confidentiality of respondents. Oral consent was obtained from participants prior to administering focus groups and in-depth interviews. In 2009, two focus groups were conducted in English and two in Cantonese (n=45 total participants), each with duration of 90 minutes. In 2013, in-depth telephone interviews (n=40) that were approximately 30 minutes were conducted in English and Cantonese. Both focus groups and interviews

were audio-recorded and were later translated and transcribed. Qualitative data analysis of interview transcripts was performed and major themes were identified.

Results

Focus group and in-depth interview participants included adult Asian American San Francisco residents who ranged from ages 18 to 65 and who spoke English or Cantonese (See Table 2). The study found that knowledge and information regarding HBV among Asian American participants differed qualitatively from 2009 to 2013. Widespread misconceptions about HBV and a desire to "save face," which resulted in a decreased willingness to discuss HBV openly, were common themes in the 2009 focus groups. Key findings from the 2013 interviews included that 84.5 percent of participants were aware that there was an HBV vaccine and 65 percent recalled that they had seen SFHBF campaign advertisements throughout the city. Moreover, the 2013 interviews included an increased serious concern regarding HBV transmission and infection among Asian Americans.

Table 2.

Background of San Francisco Asian American Participants, 2009 & 2013

	2009 (n=45) n (%)	2013 (n=40) n (%)
Gender		
Male	23 (51.1)	20 (50)
Female	22 (48.8)	20 (50)
Primary Language		
English	24 (53.3)	20 (50)
Cantonese	21 (46.6)	20 (50)
Age Ranges		
18 – 24	4 (8.88)	8 (20)
25 – 34	12 (26.6)	8 (20)
35 – 44	8 (17.7)	5 (12.5)
45 – 54	12 (26.6)	7 (17.5)
55 – 64	6 (13.3)	7 (17.5)
65+	3 (6.66)	5 (12.5)

Baseline (2009 Focus Groups)

In 2009, 22.2 percent of participants were aware of a HBV vaccine and had been vaccinated

against HBV (See Table 3). Only 16.7 percent of these participants were personally concerned about HBV. When probed further in the focus group discussions regarding the beliefs and attitudes related to HBV, many were unsure or had inaccurate information. For example, participants were presented with three factual statements about HBV and were asked whether they believed if the statements were true or false.

Table 3.

Knowledge and Information regarding HBV among Asian Americans in San Francisco, 2009 & 2013		
	2009 (n=45)	2013 (n=40)
	n (%)	n (%)
Personally vaccinated	10 (22.22)	18 (46.2)
Existence of vaccine for HBV	10 (22.22)	33 (84.5)
Top sources for HBV information		
Physician	12 (26.7)	15 (35.0)
Advertisements	6 (13.3)	13 (32.5)
Pamphlets	1 (2.2)	11 (27.5)
Online	10 (22.2)	5 (12.5)
Personally concerned about HBV	4 (16.7)	30 (55.6)
Shared HBV information with family and friends	8 (33.3)	15 (43.0)

Misinformation on HBV susceptibility and transmission. The first statement, “*Hepatitis B is the number one cause of liver cancer; responsible for causing 80% of all liver cancer,*” was answered correctly by 51% of the participants while the remaining respondents were undecided (38.0%) or deemed the statement to be false (11%) (See Table 4). Many participants showed a lack of awareness of their risk factors. For instance, an English-speaking participant suggested that she was not at risk because of her young age:

I would say no because I feel like I'm at an age where I'm still very healthy so I

feel in some way I feel, like immortal, to certain diseases.

Table 4.

Hepatitis B Knowledge, 2009 (n=45)			
	n=45		
Statement	True	False	Undecided
	n (%)	n (%)	n (%)
Hepatitis B is the number one cause of liver cancer; responsible for causing 80% of all liver cancer	23 (51.1)	5 (11.1)	17 (37.7)
One in four Asian Pacific Islanders with Hepatitis B will die from liver cancer	7 (33.3)	4 (19)	10 (47.6)
One in ten Asian and Pacific Islanders have a high risk of getting hepatitis B, vs. 1 in 1,000 in other ethnic groups	13 (28.8)	12 (26.6)	20 (44.4)

Cantonese-speaking immigrant participants felt there was nothing one could do to prevent HBV because they are unaware of HBV preventivemethods. Of these participants, 80.9 percent were unfamiliar that there is a vaccine for HBV. They also described a fatalistic attitude about HBV. They felt as if they could not prevent HBV and that diseases should be accepted as part of their life cycle. One Cantonese-speaking participant stated:

Well, if that's really the case, we have nothing to do, but to face the reality and...if we can prevent it, then prevent it. If we can't prevent the disease, then we have to confront it.

Numerous Cantonese and English-speaking participants were unaware that HBV can lead to liver cancer. When participants were presented with the statement, “*One in four Asian Pacific Islanders with Hepatitis B will die from liver cancer,*” several participants expressed uncertainty about the truthfulness of this statement. Only 33 percent of the participants believed this was true while 67 percent were unsure or felt it was false.

Many participants were also misinformed about their own risk factors associated with HBV. One Cantonese-speaking participant stated that after reading the previous statement, he would tell people, "Wash your hands more often." Another participant noted, "When people are sharing utensils, you should tell people to be more aware of what you're eating." The level of participant misinformation about HBV and their attitudes reveal the lack of knowledge regarding methods of HBV transmission.

When the third statement was presented, *One in ten Asian and Pacific Islanders have a high risk of getting hepatitis B, vs. 1 in 1,000 in other ethnic groups*, only 28.8 percent believed this was true, while others deemed it was false (26.6%) or were undecided (44.4%). Some Cantonese-speaking participants felt that the statistic was either fabricated, or that the entire Asian American population was being labeled as diseased:

One out of one thousand in other ethnicities? That's fake. We are all human beings. The disparity shouldn't be that high. They are just making up the data.

Another Cantonese-speaking respondent stated:

It seems like they are exaggerating the fact. I feel like as an Asian, I am being stigmatized. Even if you say one out of one hundred, I wouldn't have believed it either.

While many seemed to reject the data, others, particularly among the English speakers, were undecided because they felt that the statement needed to be clearer about whether it was referring to Asians in the U.S. or globally:

Well since it doesn't specify, I mean, that could be all Asians in the world or Asians in the U.S. Yea, I mean, it's a lot different if it's in the world and yet say Asians in the United States have just an equal chance of getting it as anyone else in the United States.

Similarly, another participant shared:

Well if you see it, automatically it kind of catches my attention but then when I think about it, it's like well, hell that could apply to Asians all over the world and it might not just apply to just Asians here.

The three statements presented to the focus groups drew varied responses from the participants; some felt that the statements were exaggerated while some seemed to entertain the reality of the high prevalence of HBV in the Asian American population. The reluctance to fully accept these statements as factual suggest cultural factors influenced the beliefs of Asian Americans regarding HBV.

Saving Face. In 2009, 33.3 percent of the participants repeatedly stated that they would not talk openly about HBV with their families and in their communities because of the stigma associated with the disease. These participants additionally noted that there is also a cultural avoidance of discussions about health issues in general for fear of disrupting existing relationships. We define this as "saving face," a cultural norm of maintaining a positive reputation that is seen as imperative for social acceptance and economic mobility (Carabez et al., 2014; Yoo et al., 2012). Participants in all four focus groups stated that most Asian Americans would not reveal an HBV diagnosis in order to prevent stigmatization. One participant discussed the repercussions of disclosing one's HBV status:

And that's contagious, when you tell somebody, they might treat you as an outcast, treat you differently. They don't want that relationship. I mean, as a friend, they probably don't want to be around you anymore because they're scared or co-workers are scared.

Participants noted that an HBV diagnosis is kept secret among Asian American families to protect their social capital. Several participants shared that the lack of communication between friends

and/or family members about one's HBV status led to the transmission of the disease within one's social and familial units. A recent immigrant stated the following:

Someone [I know] didn't tell and end up spreading the disease to other members in the family. He was caring about his face.

The priority to save face or shield family members from potential shame led to avoiding the discussion of HBV or revealing a positive HBV diagnosis. This resulted in negative consequences; such as compromising one's own health and that of their families and communities.

Some participants expressed concern that disclosing their seropositivity would cause others in the community to make assumptions about how they were infected, including sexual transmission due to promiscuity. An English-speaking male participant stated:

It's a stigma because most people I know believe that hepatitis is a sexually transmitted disease and you do not want to be faced with that rumor. That [one was] promiscuous, because it's a generally accepted or generally known that you received it through sexually transmitted sources.

Participants also brought up other concerns regarding seropositivity disclosure, such as potential lost wages due to being dismissed from work or not being able to afford costly treatment. One participant's anecdotal account of how a friend's mother refused treatment to manage her HBV included the following:

...because she says that the medicine that she takes makes her weak and then she's afraid she can't go to work.

The fear of the economic consequences of having HBV contributes to the issue of saving face. The focus groups in 2009 revealed that saving face was an immense deterrent in most Asian American communities to discussing

HBV. The focus groups all agreed that HBV infection within their communities was associated with a host of non-virtuous traits that had individual, familial, social, and economic implications.

In summary, the 2009 focus groups demonstrate the lack of knowledge concerning the transmission of HBV in the Asian American population. Moreover, cultural factors like saving face influences the agency of Asian Americans to seek out services, get tested, and manage the virus.

Increased Awareness of the SFHBF Ad Campaign (2013 In-Depth Interviews)

Findings from the interviews conducted in 2013 showed that there was increased awareness of HBV through SFHBF ads. Of the 40 participants in the in-depth interviews, 46.2 percent had been vaccinated, 84.5 percent knew that there is a vaccine for HBV, 55.6 percent claimed to be personally concerned about HBV, and 43 percent had shared information regarding HBV with their family and friends (See Table 3). More than three-quarters of respondents (77.5%) recalled HBV information on buses, TV, online, radio, newspapers, public transit, newspapers, health clinics, and/or at street fairs in the past four years. Participants were able to recount specific details of visual ads. One interviewee stated:

I saw them in *Sing Tao Daily* [the local Chinese language newspaper] from San Francisco Chinatown. There's people giving it out on the street and the radio broadcast. They tell you to immunize, tell people get shots, and get screened. It tells you where to get the shots.

Similarly, a Cantonese-speaking interviewee noted:

I have noticed some [HBV commercials] on Channel 26 [the Chinese language TV channel]. Health clinics, there are posters on the walls. They're posted there to remind people in-need where to go, so I think that they're okay, good. People in-need will

know where to go for assistance, so that's good.

Three participants (7.5 percent) did not remember the content of the ads but could recall the overall message. One of these participants stated the following:

I just heard about Hep B and ads about it. I always think it's not my problem so I don't pay attention to them. I always hear about Hep B problems and free testings.

Widening HBV outreach. Additionally, when interviewers asked for feedback to improve community outreach regarding HBV, many Cantonese-speaking participants advised placing more ads in Chinese newspapers and places that Chinese immigrant residents tend to congregate, such as the Chinatown district. The English-speaking participants concurred with these suggestions. English-speaking participants also proposed heightened engagement on various social media platforms. As one male participant noted:

I think the best way to reach me would be online like Facebook or—I don't know. In my generation a lot of people go on Facebook and like mostly online stuff. I guess... advertising online would work best.

While most interviewees recalled at least some information from the advertisements, a few respondents did not remember seeing any SFHBF campaign materials and did not actively seek screening, treatment, or further information from their doctors, or advice others to do so.

Getting serious about HBV: Which one deserves to die? The focus groups in 2009 were designed to identify factors that were preventing Asian Americans from seeking HBV screening as well as to identify effective messages that would later be used for the “Which One Deserves to Die?” campaign. The 2013 interviews assessed the effectiveness of this campaign by asking, “Which would be scarier to be diagnosed with: HBV or HIV, hypertension

(HTN), or diabetes mellitus (DM)?” Almost three-quarters (71.1%) of respondents believed that being diagnosed with HIV would be scarier than HBV (See Table 5). However, a clear majority of participants found HBV scarier than DM and HTN (63.2 percent and 68.4 percent, respectively). This was taken as an indicator that the “Which One Deserves to Die?” campaign had properly conveyed HBV's severity to the target population because most respondents clearly understood its potentially lethal health consequences.

Table 5.

HBV or HIV, Hypertension and Diabetes: Which is scarier? 2013 (n=38*)

Human Immunodeficiency Virus (HIV) vs. HBV	Hypertension (HTN) vs. HBV	Diabetes Mellitus (DM) vs. HBV
n (%)	n (%)	n (%)
HIV: 27 (71.1)	HTN: 11 (28.9)	DM: 12 (31.6)
HBV: 7 (18.4)	HBV: 26 (68.4)	HBV: 24 (63.2)
Equally Concerned = 3 (7.9)	Equally Concerned = 1 (2.6)	Equally Concerned = 2 (5.3)
Neither were a concern = 1 (2.6%)	Neither were are concern = 0 (0)	Neither were are concern = 0 (0)

*Two interviewees were not asked the series of questions and were not included in this table

Furthermore, by asking “Which would be more scary to be diagnosed with?” this study found that the more knowledgeable the respondents were about the disease, the less likely they were to fear it. For example, many perceived HTN and DM as being easier to treat and manage. A Cantonese-speaking interviewee stated:

Hep B is scarier because I think high blood pressure, you can control it. But Hep B, I don't know about how to—I've not heard of how you control it besides getting—besides the fact that it can't be cured with shots or something.

Similarly, another participant stated:

I think more hepatitis than diabetes. I'm not too worried about diabetes because if you just have a decent diet and you'll be okay. I know it will be hard though... I don't know much about Hepatitis B.

In contrast, five participants reported incorrect concerns regarding infection/transmission HBV. One immigrant stated:

I'm concerned because I'm afraid of contracting it from dirty chopsticks, bowls, plates, things like that. Then it's possible that I will spread it to my family."

Another Cantonese-speaking interviewee noted:

I have to pay attention about it. So like at home when we eat, we use serving spoons or chopsticks. When we go out, I'm very old-fashioned, I wash chopsticks, spoons, and dishes with tea and water with tea. Like at the restaurant. More sanitary.

While the results indicate that the SFHBF ads helped people understand the gravity of HBV, these ads did not address common misconceptions about transmission routes. Still, the study found that some participants were motivated by these ads to undertake health care-seeking behaviors. One interviewee, in fact, urged one of her family members to go to a local medical center for HBV screening after she saw the SFHBF ads.

When examining knowledge regarding HBV in 2009 and 2013, there were clear differences that indicated that the campaign was making a difference (See Table 3). In 2009, 22.2 percent of the respondents stated they had been vaccinated, while in 2013 46.2 percent of the respondents mentioned that they were vaccinated. Furthermore, in 2009 16.7 percent of participants were personally concerned about HBV and in 2013 this increased to 55.6 percent. Moreover, in 2009 33.0 percent shared their concerns regarding HBV with their friends, while in 2013 43.0 percent shared HBV information with their friends. When asked

where they received HBV information, 2009 respondents mentioned physicians and online sources; while in 2013 respondents mentioned physicians and advertisements such as those on the radio, TV and billboards. With these top sources of information for HBV, and the increase in knowledge and personal concerns regarding HBV, we can assume that the SFHBF campaign benefitted Asian Americans in San Francisco.

Discussion

Overall, our results suggest that changing knowledge, attitudes, beliefs, and motivations among Asian Americans regarding HBV stems from increased efforts to raise awareness about the severity of HBV infection and decrease stigma regarding HBV screening and treatment. According to 2013 participants, the campaign was widely effective in disseminating facts and information broadly to Asian Americans on the severity of HBV. Similar to other studies conducted with Asian Americans, the 2009 focus group participants' responses revealed misinformation about HBV transmission routes and confusion about the different types of viral hepatitis (Shiau et al., 2012; Yoo et al., 2012; Taylor et al., 2006). Focus group participants perceived stigma as a significant factor in the lack of communication about HBV diagnosis and disclosure to family and friends; responses are comparable to previous studies (Carabez et al., 2014; Yoo et al., 2012). One of the primary stigma associated with HBV, as revealed by the participants in the focus groups, is its transmission through sexual activity. Other diseases transmitted through sexual activity are also highly stigmatized in the Asian American community and can pose challenges to health education efforts directed towards safe sex practices (Kang, Rapkin, Remien, & Mellins, 2005). Focus group participants shared that saving face became a defense mechanism for those diagnosed with HBV, to prevent the loss of social and economic capital. Other studies have found that Asian Americans are worried about salvaging their self-image and reputation in the event of an HBV diagnosis and protecting their family members and friends from being embarrassed, hurt, or ashamed due to HBV

seropositivity (Carabez et al., 2014; Yoo et al., 2012).

Based upon the 2013 in-depth interviews, it is possible that the participants' awareness of HBV was impacted by the SFHBF campaign. Some participants exhibited initiative by asking their physicians about screening and vaccination, and/or promoting screenings and vaccinations for others. In addition, participants recounted increasing concern about HBV as a result of the "Which One Deserves to Die?" campaign, which encouraged individuals to seek HBV screening and vaccination. Previous studies of Asian Americans and HBV education efforts found that presenting direct messages through innovative, culturally tailored and crafted health education materials such as ethnic-specific photonovels (Lee, Yoon, Chen, & Juon, 2013) and events featuring prominent Asian Americans living with HBV (Yoo et al., 2012) were helpful as methods to increase awareness and motivate individuals to seek treatment or screening for HBV. Culturally and/or linguistically tailored media has proven to effectively outreach through establishing cultural familiarity and recognition (Kreps, 2006). Although 2013 participants had an increased awareness of the importance of HBV screening and vaccinations than 2009 participants, misinformation still existed regarding transmission and HBV, which is reflective of what other studies have shown among their Asian American respondents (Carabez et al., 2014; Shiau et al., 2012).

Limitations

One limitation of this study is the use of different inclusion criteria between the 2009 and 2013 samples. The 2009 sample included only those who had not been screened and therefore were more likely to lack awareness compared to the 2013 sample, where screening status was not an inclusion criteria. Due to funding limitations, only small sample sizes were interviewed, and only English and Cantonese-speakers were included. Since the 2009 sample was not followed over time, the findings could not establish longitudinal causality between the SFHBF campaign and increased awareness and concern about HBV. Finally, the two differing

qualitative approaches (i.e. focus groups in 2009 and in-depth interviews in 2013) further limited the ability to conduct longitudinal analyses.

Conclusion

Although this was a qualitative assessment of the campaign at two points in time, the findings indicate that the SFHBF campaign has provided a benefit by providing heightened knowledge and awareness of HBV screening and vaccination among Asian American in San Francisco. Advertising and awareness through the "Which One Deserves to Die?" campaign between 2009 and 2013 had positive impact. Compared with 2009 participants, most 2013 participants knew that a vaccine for HBV existed and that serious health consequences could result from untreated HBV. In addition, compared with 2009 participants, 2013 participants were more personally concerned about HBV and were more willing to share information regarding HBV with family and friends. Future studies are needed to examine whether the knowledge of HBV's serious health consequences generated by the SFHBF campaign translated into greater action by the San Francisco Asian American community to seek HBV prevention information, screenings, vaccinations, and links to care. Gaps still remain regarding educating Asian Americans about transmission and prevention. Ultimately, increasing self-efficacy in the areas of prevention, screening, and treatment among high-risk immigrant populations using culturally and linguistically appropriate interventions is the next step to decreasing HBV disparities among Asian Americans.

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