

HIV Knowledge, Risk Behavior, Stigma, and Their Impact on HIV Testing among Asian American and Pacific Islanders: A Review of Literature

Soma Sen^a, Hoang Dung Nguyen^a, So Yung Kim^a, and Jemel Aguilar^b

^aSchool of Social Work, San Jose State University, San Jose, California, USA; ^bSchool of Social Work, University of Saint Joseph, West Hartford, Connecticut, USA

ABSTRACT

Asian American and Pacific Islanders (AAPIs) are the fastest growing population in the United States with documented increases in HIV rates. AAPIs are as likely as other racial/ethnic groups to engage in HIV-related risk behaviors, while being concomitantly less likely to have been HIV tested. Testing is a critical step in HIV prevention. Research points to various barriers to HIV-related testing including HIV knowledge and attitude and stigma. However, these factors and their impact among AAPIs are poorly understood. Myths about this population's "model minority" status compound AAPIs' sociocultural factors including English language proficiency, access to healthcare, and a culture of "silence" that negatively influences HIV-related research. In this article, the authors review the scientific literature on knowledge, risk behavior, and stigma to document the current state of research. Based on the review the authors offer a set of research, policy, and practice recommendations for social workers and other service providers working with AAPIs.

KEYWORDS

Social epidemiology of HIV/AIDS; health disparities and HIV/AIDS; HIV and AAPI

Introduction

Asian Americans and Pacific Islanders (AAPIs) make up about 6% of the total U.S. population and are among the fastest growing racial and ethnic groups in the country. More specifically, in the last decade, AAPIs alone or in combination with one or more races, increased 46% (U.S. Census, 2010). Although AAPIs are a growing population in the United States, surveillance data from 33 states conducted between 2001 and 2008 demonstrates relatively low HIV infection prevalence rates among AAPIs. Upon closer inspection of HIV surveillance data, the prevalence of HIV among AAPIs belies the climbing incidence of HIV in this same population. In fact compared to other racial and ethnic groups, AAPIs are the only group with a significantly increased incidence of HIV infection (4.4%; Adih, Campsmith, Williams, Hardnett, & Hughes, 2011).

Data from the Centers for Disease Control and Prevention (CDC; 2008a) indicated that AAPIs had the highest increase in HIV infection rates between 2001 and 2004, of all racial or ethnic groups (8.1% for males and 14.3% for females). Researchers at the CDC (2010) estimated that at the end of 2009 as many as 8,422 Asian Americans and 620 Pacific Islanders were living with HIV. Incidence rates from the CDC found the rate of HIV diagnosis among AAPIs increased between 2005 and 2010 from 6.1 to 6.5 per 100,000. Although some researchers and practitioners might overlook HIV prevention with the AAPI population because of its relatively low overall prevalence rates, studies suggest that the increases in HIV incidence rates are indicative of population-level changes in HIV risk behaviors.

Asian Americans and Pacific Islanders are as likely as other racial or ethnic groups to engage in HIV-related risk behaviors (Mercado, 2000; Wong, Campsmith, Nakamura, Crepaz, & Begley, 2004).

CONTACT Soma Sen, PhD, MSW, MA, Associate Professor  soma.sen@sjsu.edu  School of Social Work, San Jose State University, San Jose, CA 95192.

Hence, like other populations at risk for HIV in the general population, AAPI subgroups—including men who have sex with men (MSM), heterosexual women, and youth—are at increased risk for HIV seroconversion compared to other AAPI subgroups. On the surface, HIV prevention with AAPI populations may look the same as HIV prevention and programming needs for other populations.

Unlike other populations, empirical studies about HIV in the AAPI population are beginning to uncover the unique dynamics leading to the rise in transmission among this population. The AAPI population tends to be less aware of their HIV status in general because they are not being tested and HIV researchers typically omit AAPI populations or combination of AAPIs with other populations with low overall prevalence of HIV or AIDS from surveillance studies (Adih et al., 2011). Researchers such as Zaidi et al. (2005) and Bond, Lauby, and Batson (2005) point out that structural factors including lack of healthcare and access to HIV-related services are major barriers to testing among this population. These trends are alarming to begin with but become even more significant in light of the under-reporting and a lack of existing detailed surveillance data because these issues mask the true nature of the HIV epidemic in this population. Thus, when populations such as AAPIs show low prevalence rates while concurrently showing increases in incidence rates, prevention efforts need to focus on keeping the future HIV/AIDS cases low.

HIV testing is considered an essential component of comprehensive HIV prevention and education efforts (Trieu, Modeste, Marshak, Males, & Bratton, 2008). However, AAPIs are more likely than any other racial group to be at an advanced stage of AIDS disease and have opportunistic infections at the time of diagnosis thus suggesting the presence of barriers to HIV testing in the AAPI communities (CDC, 2010; Wong et al., 2004). It is quite possible that the annual increases in HIV infection along with low testing rates are masking the AAPI HIV infection rate at the national level.

HIV-related stigma is cited as significantly contributing to HIV risk among AAPIs by delaying HIV testing and care (J. J. Chin, Leung, Sheth, & Rodriguez, 2007). However, the complexity of HIV-related stigma at the general population level, let alone within AAPI communities, is poorly understood (Nyblade, 2006). It is also rare for HIV-related studies to provide disaggregated data focusing on subethnic groups within the broader AAPI category thereby making it difficult to develop nuanced and culturally specific analyses (Trieu et al., 2008; Zaidi et al., 2005). In this article, we review existing literature on HIV risk and HIV-related stigma among AAPIs to assess its effect on their HIV testing behaviors. Then, based on our synthesis of the literature, we provide social workers with research, policy, and practice implications.

Social epidemiology of HIV in the AAPI population

Asian American and Pacific Islander populations experience multiple barriers to HIV testing. More than one in five Asian Americans living with HIV does not know they are HIV+ (CDC, 2013b). Research also demonstrates that AAPIs are less likely than Whites to know their current CD4 count once diagnosed and are less knowledgeable about HIV-related services (Adih et al., 2011). Given the limited understanding of specific factors that promote or impede AAPIs seeking HIV-related help and testing, it is difficult for social work practitioners in public health settings to tailor intervention and prevention programming to meet the culturally specific needs of AAPIs and their various subgroups. Thus, further research is necessary to examine HIV risk and testing behaviors in this population. Additionally, understanding the nature and prevalence of HIV-related stigma within AAPI communities and its subgroups is a public health imperative to develop HIV prevention and stigma-reduction efforts in these communities.

Rather than continue with primarily epidemiological arguments about the prevalence or incidence of HIV among AAPIs, we set forth a social epidemiological argument that suggests a combination of social and structural factors that influence the prevalence and incidence of HIV among AAPIs. These individual and structural factors warrant equal attention to diminish these factors' influences on HIV transmission, prevention, and intervention.

Literature review

For the purpose of this review, we identified articles using the combination of keywords *HIV risk*, *HIV knowledge*, *Asian American*, *Asian Pacific Islander*, *HIV related stigma*, and *treatment*, and *prevention* (see Tables A1–A4 in the Appendix for a list and a brief description of the articles used in this review). Because there is a lacuna of research on HIV among AAPIs, we include research from the late 1990s and forward. The included studies are a mix of data-driven research, reports, literature reviews, and conceptual papers. We clustered the articles into four areas—HIV knowledge and beliefs, factors influencing HIV knowledge, HIV risk behavior and high-risk groups, and HIV related stigma—reflecting the themes that emerged from the body of research. In our initial examination, we noticed that some authors treat AAPI as a monolithic group, whereas others focus on specific subgroups—South East Asians, Asian Indians, Chinese, Vietnamese—or distinguish between American-born, foreign-born, or refugee populations. We include all of these studies in our analysis and indicate when authors or the research study identifies a subgroup of the AAPI population. Some conceptual papers, particularly the ones that focus on developing a theoretical framework on stigma, are based on the general population and are included in this review because the authors do not specify any particular ethnic group in their conceptual framework.

HIV knowledge and beliefs

Overall, the AAPI population has a low level of knowledge about factors that lead to HIV transmission including misconceptions about what will prevent HIV transmission. As early as 1999, Shapiro, Radecki, Charchian, and Josephson noted that though Vietnamese immigrant college students reported low events of high-risk sexual behaviors, they also reported a low level of knowledge and concern about HIV/AIDS. Six years after the 1999 Shapiro et al. study, So, Wong, and DeLeon's (2005) study on Asian American college students found similar results. So et al. stated that participants demonstrated a low level of basic information regarding HIV transmission, risk, and prevention including mother-to-infant transmission and the HIV "window-period." Despite the low level of basic information regarding HIV transmission, risk, and prevention participants in the study, So et al. reported a 37% lifetime prevalence of unprotected sex as well as lifetime drug use associated with 30-day and lifetime sexual risk indices.

A similar trend is evident among Asian Indian adolescents born in the United States. Bhattacharya, Cleland, and Holland (2000) reported that though 86% of participants knew that unprotected sexual practices with an individual who is HIV+ could transmit HIV, 47% did not know that sharing a razor could also do the same. Additionally 27% and 14% of Asian Indian adolescents born in the United States believed that donating blood and taking blood tests could transmit HIV. Bhattacharya et al. also noted that some American-born Asian Indian participants believed that only gay men could contract HIV and that marriage could prevent HIV transmission.

Contextual factors might also enhance HIV prevention among the AAPI population (DiStefano et al., 2012). DiStefano et al. (2012) identified nine such factors that primarily embedded in cultural values that shape HIV risk prevention among young adults from Chamoro and Tongan communities in Southern California. Misinformation about HIV and otherization of people who are HIV+ were significant factors affecting HIV prevention efforts among this population. Respondents in the DiStefano et al. study indicated that heterosexuality was equivalent to monogamy, and therefore respondents believed that gay men and women were more at risk for HIV in comparison to their heterosexual counterparts, because gay men and women were assumed polyamorous. Other factors included concerns regarding premarital pregnancy, restricted intergenerational communication, family shame and privacy, gendered manifestations of religio-cultural norms, barriers that impeded access to sexual health resources, parental roles in prevention, community versus individual responsibility, and family or ethnic pride.

Factors influencing HIV knowledge and belief

Acculturation, education, and cultural perspectives on gender and sexuality are factors that influence AAPIs' level of HIV knowledge. Chung et al. (2007) found that levels of acculturation among

adolescents might influence parent–adolescent communication about sex. Parents avoiding sexual communication with adolescents were often unaware of their child’s sexual experiences and many times assumed that their children would not engage in sexual intercourse until marriage. The quality of parent–adolescent communication might be moderated by cultural beliefs of some Asian parents in that talking about sex with children encouraged early sexual behaviors. Not surprising, these family-level factors were noted as a barrier to recruiting Chinese American adolescents for a cross-sectional HIV study (Lee, Salman, & Wang, 2012). Similarly, Taiwanese immigrants who were acculturated reported higher levels of sexual activity and higher numbers of sexual partners.

Although acculturation influences HIV knowledge and beliefs through communication, cultural schemata about sexual intercourse and subsequent HIV knowledge and beliefs influence gender norms. Bhattacharya’s (2004) study of the commonalities in sexual norms among South Asian immigrants in the United States examined how gender roles and concepts of female virtue might influence HIV perceptions and beliefs and ultimately affect health-seeking behaviors. Traditional sexual norms in this community prevent women from engaging in discussions about condom use, which in turn may prevent discussion about sexual health and knowledge. Moreover, women who were married might mistakenly assume that they were protected against HIV because they assumed that marriage equated monogamy. Thus, despite high levels of HIV knowledge among AAPI women, their cultural schemata regarding condom use during heterosexual intercourse drove sexual behavior.

Gagnon, Merry, Bocking, Rosenberg, and Oxman-Martinez (2010) investigated the ways that men and women born in India, Sri Lanka, Pakistan, or Bangladesh and currently living in Montreal perceived power dynamics and migration affecting HIV knowledge, attitudes, and practices. Gagnon et al. found significant HIV-related knowledge gaps and stigmatizing attitudes toward people with HIV. Moreover, they reported that gender disparities in decision-making powers, in migrant South Asian communities, shape women’s HIV knowledge and beliefs. Women that reported higher power in their relationships also indicated more HIV knowledge. Huang, Wong, De Leon, and Park’s (2008) research extends the work by Gagnon et al. by building links between low levels of HIV knowledge, perceived HIV risk, and lower rates of HIV testing. Kellerman et al. (2002) posited that AAPIs tended to avoid HIV testing because of the fear of a positive test result and self-perceptions about HIV risks.

HIV risk behaviors and high-risk groups

Research regarding HIV risk behaviors and contextual factors among AAPIs find that certain subgroups such as youth, women, transgender individuals, and MSM are more at risk for contracting HIV. Among these subgroups, substance use is a notable facilitator of risk behaviors for certain populations including AAPI youth and MSM. As early as 1997, Hou and Basen-Engquist reported that AAPI youth were less likely to talk about HIV/AIDS compared to White youth. Even though AAPI youth were less likely to be experienced sexually as compared to White youth, they were more likely to engage in HIV-risk behaviors once sexually active.

Levels of acculturation affected HIV related knowledge and belief (as indicated in the previous section). So et al. (2005) suggested that acculturation might increase sexual risk behaviors among AAPI youth. So et al. noted that Asian American student acculturation was a combination of higher education, English language acquirement, and American entertainment that all associated with the higher likelihood of sexual activities. HIV risk behaviors noted in the study included alcohol and drug use before sex and a 37% lifetime prevalence of unprotected sex. Although the prevalence of lifetime anal sex was only 9%, 90% of those who had anal sex did so without a condom. Hahm, Kolaczyk, Lee, Jang, and Ng (2012) suggested that Asian American women in college or graduate school were more likely to engage in HIV risk behaviors including anal sex and sexual encounters with potentially risky partners. They stated that the college environment could provide a space where Asian American women experience sexual autonomy especially those who had been raised in sexually conservative environments. Research also posits that AAPI women experience different cultural factors that might facilitate HIV risk behaviors. D. Chin (1999) argued that sexual communication was limited because

sex was a taboo subject in AAPI cultures. Furthermore the accommodation of others and the concept of a romantic ideal inhibited AAPI women's ability to openly discuss HIV and safer sexual behaviors with male partners. AAPI female assessments of their partners HIV risk might also be inferential, which leads to a false sense of security and evaluation of risk. Power differentials in sexual relationships can also be an impediment to AAPI women's ability to use safer sexual practices. As previously stated, Gagnon et al. (2010) reported that women with lower levels of power in their relationships were less likely to ask their partners to use a condom during sexual intercourse.

Women that exchange sexual favors for money are well known for engaging in HIV-related risk behaviors. Nemoto, Operario, Takenaka, Iwamoto, and Le (2003), in their study on Vietnamese and Thai masseuses in San Francisco, found that only about one half of the participants reported being seen by a health professional during the previous 6 months and that almost all of them had been diagnosed with a sexually transmitted disease (STD). In a follow-up study on this sample investigating the HIV risks of this population, Nemoto, Iwamoto, Oh, Wong, and Nguyen (2005) noted inconsistencies regarding masseuses' use of condoms with their customers. Masseuses would often view their regular customers as less likely to have HIV than first-time customers and felt pressured into forgoing condoms when a first-time customer would threaten to leave.

Asian American and Pacific Islander transgender individuals constitute another HIV risk group that engages in HIV risk behaviors leading to disparities in HIV transmission in comparison to other risk groups. Hwang and Nuttbrock's (2007) study of male-to-female transgender sex workers in New York City reported that immigrant Asian transgender sex workers were sought out and paid more for their sex work in comparison to African American or Latina transgender sex workers. Clientele of transgender sex workers also use drugs, and often these workers use substances before sexual intercourse. In another study of 110 transgender AAPI women in San Francisco, Operario and Nemoto (2005) found that in a previous month, one fifth of participants reported unprotected receptive anal intercourse with a male partner, more than one half of their respondents reported using illicit drugs, almost one half reported being under the influence of substances while having sex, and 13% reported being HIV+. Undocumented Asian transgender sex workers were unlikely to seek social or medical services because of mistrust of the medical system and fear of deportation (Hwang & Nuttbrock, 2007).

Similar to all other racial or ethnic groups, MSM are the most vulnerable HIV risk group among AAPIs and constitute 67% of all AAPI men who are HIV+ (Huang et al., 2008). Data suggests that AAPI MSM's HIV risk behaviors include unprotected anal intercourse and unprotected anal intercourse with someone of unknown HIV status is increasing (McFarland, Chen, Weide, Kohn, & Klausner, 2004). Asian Americans and Pacific Islanders gay men experience different types of social discrimination, and their responses to discrimination may affect their well-being and sexual health. Wilson and Yoshikawa (2004) states that AAPI gay men who respond to social discrimination with self-attribution, meaning they blame themselves, are more likely to show more engagement with HIV risk behaviors in comparison to those who respond to discrimination with confrontation, avoidance, or social network-based interventions. Higher levels of experienced discrimination are associated with more frequent HIV risk behaviors. Yoshikawa, Wilson, Chae, and Cheng (2004) demonstrate that a combination of AAPI gay men's high level of experiences with discrimination including racism, homophobia, and anti-immigrant discrimination and fewer conversations with family about discrimination associates with more frequent unprotected anal intercourse.

Nemoto, Operario, Toho et al.'s (2003) qualitative study of AAPI MSM that aimed at identifying psychological, social, and cultural factors related to HIV risk reported that this group had unique psychological and behavioral risk factors tied to stigmas stemming from homophobia and racism, discomfort with sexuality, power dynamics, stereotypes about relationships with White men, substance use, perception of low HIV risk, and lower use of health and social services. All of these factors not only increase risk behaviors but also decrease HIV testing rates. For example, in a study on young AAPI MSMs in San Francisco, 24.4% of participants report never testing for HIV (Fisher et al., 2006). In another study, 10% of AAPI MSMs tested positive for HIV by blood testing conducted as part of behavioral surveillance survey in San Francisco, whereas only 6.1% knew or reported their positive

status (Do et al., 2005). These statistics are supportive of two trends in this population: (a) untested individuals can unknowingly infect another person thereby increasing incidence rates and (b) delayed testing can result in advanced AIDS diagnosis and acquisition of additional infections such as hepatitis, tuberculosis, and *Pneumocystis carinii*.

HIV-related stigma in the AAPI community

HIV-related stigma is a significant impediment to HIV testing among AAPIs (Vlassoff & Ali, 2011). Although there has been a rapid increase in social stigma research over the past two decades (Major & O'Brien, 2005), limited research related to stigmatized identities among AAPIs remains limited, especially concerning HIV-related stigma. The amorphous nature of HIV stigma creates conceptual and methodological challenges for researchers conducting population-level studies (Parker & Aggleton, 2003).

Compounding these challenges is Reidpath and Chan's (2005) position on popular discourse about stigma fueling the AIDS epidemic and their questioning of evidence on which this discourse is based. They argue that too much dependency on the explanatory power of the stigma obfuscates more difficult issues relating to the manner in which HIV spreads in populations and the social vulnerabilities it exploits. With no standard operational definition to guide the development of accurate measures of HIV stigma, Reidpath and Chan's assertion is a noted challenge to researchers interested in the relationship between HIV and stigma (Heijnders & Van, 2006; Nyblade, 2006). Supporting Reidpath and Chan's assertion is a meta-analysis of 22 interventions that strive to reduce HIV stigma that reveals increased HIV knowledge results in superficial changes in attitude and little alteration of deep-seated fears (Brown, Macintyre, & Trujillo, 2003).

Typically, psychology and sociology have been the two main disciplines that have contributed to contemporary explanations of stigma. Psychological frameworks draw on Goffman's (1963) classical analysis that defines stigma as "an attribute that is significantly discrediting" and leads to a "spoiled identity, thereby reducing the value of the individual possessing it in the eyes of the society" (p. 4). Stigma-reducing interventions employing Goffman's thinking focus on changing individual beliefs and attitudes. Parker and Aggleton's (2003) sociological framework argues that Goffman's understanding of stigma as an individual process is somewhat limiting and does not allow one to explore structural processes involved in reifying societal values. Sociological frameworks view stigma as a social process and explore how some individuals and groups come to be stigmatized socially. From the sociological viewpoint, collective cultures including AAPI require a community response rather than an individual one (Parker & Aggleton, 2003).

In addition to the absence of a standardized definition of stigma, debate surrounds the effect of stigma on the Acquired Immunodeficiency Syndrome (AIDS) epidemic. Early research on HIV stigma proposed a multidimensional stigma trajectory that evolved over time and in a relational process between an individual's disease course and the responses of friends, family, medical personnel, strangers, and broader society (Alonzo & Reynolds, 1995). More recent studies conceptualize HIV stigma in ways that acknowledges people who are at risk for or living with HIV might possess multiple stigmas due to being a racial or ethnic minority, substance user, or sex worker (Earnshaw, Bogart, Dovidio, & Williams, 2013; Reidpath & Chan, 2005).

This intersectional or layered framework for stigma presents a possible approach to understanding HIV stigma among AAPIs. Logie, James, Tharao, and Loutfy's (2011) study of intersectional stigma among women who are HIV+ in general and Asian women more specifically concludes that women who are HIV+ with multiple marginalized social identities experience multilevel forms of stigma and discrimination related to HIV, sexism, racism, homophobia, and transphobia. Similarly, a quantitative study using an HIV-related Stigma Scale to study gender and ethnicity differences associated with HIV-related stigma experienced by 1,026 individuals who are HIV+ in Canada reported statistically significant differences in HIV-related stigma based upon gender and ethnicity (Loutfy, 2012). Asian men and women showed higher stigma scores than Whites with Asian,

Latin American, or unspecified men reporting the overall highest HIV-related stigma scores (Loutfy, 2012).

Although some general population studies have examined the relationship between HIV stereotypes, individuals' risk perception, and frequency of HIV testing (Earnshaw, Smith, Chaudoir, Lee, & Copenhagen, 2012), as well as the relationship between HIV stigma and the desire to conceal testing interest when seeking health services (Young & Bendavid, 2010), it is unclear how the results of such studies translate for AAPI populations, specifically those considered at risk for HIV. Other limitations of research related to HIV stigma and testing behaviors among AAPIs have been the exclusion of non-English speaking participants, a lack of disaggregated data focusing on specific ethnic groups within AAPI, and the concern of substantial response bias due to culturally rooted stigma surrounding topics of sex and sexuality (Do et al., 2005; Trieu et al., 2008).

Researchers have also identified several culturally specific barriers to talking about HIV within AAPI communities, including cultural taboos against discussing private or sexual matters (Vlassoff & Ali, 2011), the association of HIV with drugs, homosexuality, and nonmarital sex (D. Chin & Kroesen, 1999), and the wishes of individuals who are HIV+ to shield family members from feeling humiliated or burdened (Yoshioka & Schustack, 2001). A longitudinal study of HIV stigma among AAPIs living with HIV cited ingrained cultural norms as contributing to this group's vulnerability to HIV stigma, as well as multiple layers of stigma related to sexual orientation, gender, and immigration status (Kang, Rapkin, & DeAlmeida, 2006). These cultural attitudes and behaviors, coupled with institutionalized barriers based on multiple stigmatized identities, have influenced access to care for AAPIs who are HIV+ faced with community misperceptions of HIV transmission and discrimination against people living with HIV (Kang, Rapkin, Springer, & Kim, 2003).

HIV testing is a critical, necessary step to detect, treat, and prevent virus acquisition. However, HIV testing rates among AAPIs are less than optimal. This is supported by the fact that more than one third of the AAPIs develop AIDS within a relatively short period after being diagnosed with HIV. As can be seen from the review of existing literature, more research needs to be conducted to better understand the various individual, family, and structural factors including HIV related stigma that influence HIV testing among AAPIs.

Implications for social work

Surveillance data reports that HIV diagnosis among AAPIs has significantly increased, whereas these trends are reversing among other racial or ethnic groups. HIV testing is a critical, necessary step to detect, treat, and prevent acquisition of HIV. The CDC (2013a) acknowledges that challenges to HIV prevention in AAPI communities persists despite current prevention efforts across the nation. Men who have sex with men are particularly vulnerable to contracting HIV. More specifically, AAPI MSMs accounted for 61% of new AAPI HIV diagnoses between 2001 and 2008 (Adih et al., 2011). Unfortunately, one third of the AAPIs develop AIDS within a relatively short period of being diagnosed with HIV. Therefore, it is not surprising that some researchers state that HIV testing rates among AAPIs are less than optimal. Timely healthcare including testing practices is crucial to prevent and treat HIV in this population. Thus, it is a public health imperative to design and select interventions congruent with the unique cultural, linguistic, and prevention needs of AAPIs. This literature review indicates that the current state of knowledge concerning HIV risk and testing behaviors among AAPIs is limited. The true benefit of public health initiatives to promote HIV testing can be more effective if the sociocultural factors identified in the literature review are incorporated into HIV interventions. Asian Americans and Pacific Islanders gay and bisexual men and women also engage in substance abuse, which is reported frequently among this population as a precursor to contracting HIV. The low percentage of substance users tested for HIV suggests that current outreach efforts in the San Francisco Bay area might not reach all AAPI substance users.

Cultural barriers such as level of acculturation, homophobia, and family reputations might also inhibit AAPI motivation to seek HIV testing or treatment. For example, the CDC (2013b) identified how the “model minority” stereotype, that Asians generally have high educational and economic success, lead researchers to assume that AAPI populations had quality healthcare and good overall health. This contributes to the limited number of empirical studies on HIV among AAPIs. In the following section, we outline social work research, policy, and practice implications based on the current of state of research.

Implications for social work research

Primary areas of intervention identified through this review included the development of culturally grounded theoretical models for assessment and culturally appropriate measures of behavior modifications. Additional focus areas were the increased understanding of individual and community-level factors impeding HIV testing with specific focus on subethnic groups, and finally comprehensive and culturally accurate measures of HIV-related stigma including multilayered stigma arising out of the intersectionality of multiple minority identities. Health-related behaviors are embedded in sociocultural and environmental contexts. Thus, to change AAPI’s help-seeking and testing behaviors, it is necessary to identify individual and sociocultural factors impeding such behavior. Given that the AAPI culture is collective in nature, studies by Bhattacharya (2004) and DiStefano et al. (2012) call for a developmental and ecological model for assessment that focuses on community and individual factors equally. D. Chin (1999) gives primacy to the individual’s cognitive structure and argues for an inductive model of risk assessment based on cultural and sexual risk schemata. Hou and Basen-Engquist (1997) and Lin, Simoni, and Zemon (2005) indicate the need for culturally grounded measures of behavior change. Additionally, Lin et al. suggest incorporating cultural factors into health behavior models.

Further complicating assessment and measurement is the paucity of AAPI subgroup analysis. Therefore, more pilot studies and other basic research within AAPI subethnic communities, as well as identification of culturally relevant data collection methods, are necessary. Studies that combine ethnography with quantitative methodologies might be better suited to help gather and analyze more culturally relevant data for AAPI subethnic groups. For example, ethnographic data could elucidate information on specific cultural, familial, spiritual, psychosocial, and other contextual factors related to the social and familial experiences and perceptions of HIV risk of AAPIs. Studies by Nemoto et al. (Nemoto et al., 2005; Nemoto, Operario, Toho et al., 2003) are great examples of potential methodologies that weave together ethnographic and quantitative data. Additional studies on hard-to-reach AAPI populations that are rich and in-depth can help researchers identify correlates of HIV testing behavior and inform larger, quantitative surveys.

For researchers studying HIV among AAPIs, HIV-related stigma is an impediment to recruitment and data collection as Lee et al. (2012) demonstrated in their study on Chinese American youth and HIV. Stigma is a complex phenomenon that is not well understood in the general population and is even less understood in the AAPI community where HIV-related stigma is compounded by other stigmatizing identities. Researchers such as Brown et al. (2003), Logie et al. (2011), Reidpath and Chan (2005), and Vlassoff and Ali (2011) identify a paucity of understanding of the overlapping, multiple levels of stigma that impede effective prevention and intervention programming for this population. Thus, research into understanding HIV relates stigma within this community is needed. Nyblade (2006) suggests that models for understanding stigma can capture stigma related discrimination at individual and at societal levels.

Conceptualizing how stigma manifests in the larger AAPI community requires research on stigmatized subgroups within AAPI communities including intravenous drug users, MSM, and transgender individuals. Additionally, correlating the manifestation of stigma in the AAPI and the identification of specific barriers to HIV testing and care faced by the most vulnerable at-risk AAPIs can lead to new and innovative interventions. Given the exponential increase in new HIV diagnoses among

AAPI MSM, future research targeting HIV stigma, risk behavior, and testing behavior among AAPIs should aim at the intersectional stigma and social discrimination experienced by AAPI MSM.

Implications for social work policy

Although AAPIs are often stereotyped as the “model minority” and are assumed to have access to healthcare, 17% of AAPIs lack health insurance and do not have access to adequate medical treatment and healthcare services (Zaidi et al., 2005). This is further compounded by the fact that there is a dearth of reliable epidemiological data on this population; therefore, research funding and other resources are often funneled to other at risk groups. The National HIV/AIDS Strategy’s Federal Implementation Plan has three primary goals: (a) reducing the number of people who become infected with HIV, (b) increasing access to care and optimizing health outcomes for people living with HIV, and (c) reducing HIV-related health disparities (Office of National AIDS Policy, 2010). To achieve these goals, the Plan calls for efforts to support surveillance activities to better characterize HIV among AAPIs (CDC, 2013a). Social workers practicing at community-based organizations or public health departments can play a crucial role in supporting such efforts. Ryan White CARE Act was the primary funding source for state and county public health departments prior to the implementation of the Affordable Care Act (ACA). It is crucial that social workers gain familiarity with these current public health policies and proposed laws including healthcare and immigration reforms as well as the shifts in funding related to HIV that result from ACA. The primary goals of the ACA with respect to HIV are to reduce HIV prevalence and health disparities, increase linkage to care, increase access to care among people living with HIV, and coordination of services (The White House, 2010). Social workers can act as policy advocates and collaborate with other key stakeholders to reach these goals. It is important to note that social workers can also serve on HIV Planning Councils at the county level and advocate for AAPI population’s HIV-related needs. Social workers can also advocate for AAPIs who are HIV+ on a broad policy and community systems level as well as within individual community-based organizations. For example, Kang et al.’s (2003) study on undocumented Asians who are HIV+ underscores the need for healthcare policies to integrate HIV treatment into primary care. Policy advocates can also counter immigration-related stressors that delay timely access to HIV screening services.

Implications for social work practice

Social change is the ultimate goal of social work and in this case, *social change* is defined as reducing incidence rates of HIV among AAPIs. This review of literature suggests interventions that target either the individual (microlevel) or the community (macrolevel) or both. At a microlevel, a majority of interventions aim to use self-efficacy and individual agency to affect behavior modifications (DiStefano et al., 2012; Gagnon et al., 2010; Lin et al., 2005). Nemoto, Operario, Takenaka et al. (2003) and Yoshikawa et al. (2004) demonstrate the need to integrate individual counseling and mental health interventions into behavior change. Hahm et al.’s (2012) study of second-generation Chinese, Korean, and Vietnamese women found a correlation between child maltreatment and HIV risk. Therefore, these research results stress the urgency of identifying victims of multiple child maltreatment to provide culturally appropriate interventions. Similarly when working with AAPI MSM, Nemoto, Operario, Toho et al. (2003) and Yoshikawa et al. (2004) suggest addressing the unique psychosocial and behavioral HIV risk factors such as dual stigma, discomfort with sexuality, power dynamics, stereotypes about relationships with White men, disclosure of HIV status, substance use, and use of social services. Concerning disclosure of HIV+ status, Yoshikawa and Schustack (2001) recommend that service providers explore, with clients, ways to facilitate disclosure and provide HIV knowledge to family members through translating informational material into the family language.

Macrointerventions that primarily take the form of community-based organizing or agency-level change can stem the rising number of AAPI who are HIV+. DiStefano et al. (2012) posit that when working with the Pacific Islander youth, enhanced community-led educational programs and

engagement of community leaders to facilitate intergenerational dialogues can counteract taboos that obstruct prevention. Chung et al. (2007) identify acculturation as a key factor when working with AAPI youth and their families. Chung et al. suggest that interventions targeting adolescent sexual health might need to be tailored to acculturation or immigration factors. Nemoto et al. (2005) suggest that when intervening with Asian masseuses who engage in sex work, social workers should focus on altering massage parlor policies and work environments as a strategy to bring about change.

A majority of interventions that target the individual and the community must aim to increase HIV education and awareness as well as integrate sociocultural factors including spiritual, legal, and economic contexts into multilevel interventions (Bhattacharya, 2000; Bhattacharya et al., 2000). Such holistic efforts can also include stigma-reducing strategies. To that end, social workers can be guided by Heijnders and Van's (2006) study on HIV-related stigma in the general population in which effective strategies start at an individual level and then use individual empowerment to increase critical consciousness at mezzo- and macrolevels. The ultimate goal of these multilevel interventions can reduce HIV stigma in the AAPI community. Huang et al. (2008) suggest using linguistically appropriate HIV prevention campaigns. Hwang and Nuttbrock (2007) promote culturally specific alternative methods of intervention. Gagnon et al. (2010) combine both these ideas to demonstrate that when targeting AAPI women, it might be beneficial to have sexually transmitted infection (STI)/HIV information available in one's language and to use other educational strategies that consider women's power, which might improve HIV knowledge, attitude, and practices. We can also draw important practice implications from Loutfy et al.'s (2012) study on people of color who are HIV+ when working with AAPIs. More specifically, social workers designing such intervention strategies should be aware of and challenge any racist and sexist stereotypes.

Whether an intervention targets an individual AAPI or the AAPI population, clinicians can engage clients in organic or ethnographic-based processes in which they collaborate with social workers to identify the sociocultural features that underpin HIV risk and testing behaviors while paying special attention to stigma. Green (1998) highlights the importance of cultural salience in problem definition and intervention selection. He refers to *cultural salience* as:

what may be salient for clients, their way of comprehending and working with a problem, the "commonness" of their common sense As "knowers" their experience is rich in matters that I know little or nothing of, but about which I need greater familiarity so I can better meet their needs. (p. 166)

Therefore, as social service providers engage in cross-cultural service provision, it is imperative that we understand micro- and macrolevel factors that influence risk and testing behaviors among AAPIs.

Following are some of the guidelines that social service providers can keep in mind when working with this specific population:

- Have the perspective that a client will be able to provide an "emic" perspective of HIV risk and testing behaviors. To that end, an ethnographic assessment might be a more appropriate tool to use while working with clients.
- Investigate the cultural context of such behaviors. Be aware of one's social position as a practitioner and researcher. Comprehensive understanding of highly sensitive matters such as sexual behaviors among AAPIs may be difficult to obtain and may be time consuming. Earning and building community trust is essential. Besides "mistrust" of outsiders, there could be other barriers such as language, culture, socioeconomic status, and HIV related stigma.
- Explore the individual and collective impact of multilayered stigma in this population.
- Be cognizant of the variability and diversity among the various subethnic groups.
- Understand the power of sociocultural constructs such as family, spirituality, stigma, and their impacts on HIV risk and testing behaviors.
- Be aware of one's own biases and cultural construct of not only AAPIs but also AAPIs that engage in HIV risk behaviors.

Conclusion

Although AAPIs have low HIV prevalence rates compared to other racial/ethnic minority groups, they have the highest estimated annual percentage increase in diagnosis rates. This disparity can be explained by late diagnosis and entry into care. HIV testing is a critical step in diagnosis and linking individuals to medical care. However, HIV testing rates among AAPI are less than optimal. Current knowledge regarding HIV risk and testing behavior among AAPIs is limited. This article provides a review of current literature and outlines some research, policy, and practice implications for social workers.

References

- Adih, W. K., Campsmith, M., Williams, C. L., Hardnett, F. P., & Hughes, D. (2011). Epidemiology of HIV among Asians and Pacific Islanders in the United States, 2001–2008. *Journal of International Association of Physicians in AIDS Care*, 10(3), 150–159. doi:10.1177/1545109711399805
- Alonzo, A. A., & Reynolds, N. R. (1995). Stigma, HIV and AIDS: An exploration and elaboration of a stigma trajectory. *Social Science & Medicine*, 41(3), 303–315. [http://dx.doi.org.libaccess.sjlibrary.org/10.1016/0277-9536\(94\)00384-6](http://dx.doi.org.libaccess.sjlibrary.org/10.1016/0277-9536(94)00384-6)
- Bhattacharya, G. (2004). Healthcare seeking for HIV/AIDS among South Asians in the United States. *Health & Social Work*, 29(2), 106–115.
- Bhattacharya, G., Cleland, C., & Holland, S. (2000). Knowledge about HIV/AIDS, the perceived risks of infection and sources of information of Asian-Indian adolescents born in the USA. *AIDS Care*, 12(2), 203–209.
- Bond, L., Lauby, J., & Batson, H. (2005). HIV testing and the role of individual- and structural-level barriers and facilitators. *AIDS Care*, 17, 125–140.
- Brown, L., Macintyre, K., & Trujillo, L. (2003). Interventions to reduce HIV/AIDS stigma: What have we learned? *AIDS Education & Prevention*, 15(1), 49–69.
- Centers for Disease Control and Prevention. (2008a). *HIV/AIDS among women* [Fact sheet]. Retrieved from <http://www.cdc.gov/hiv/topics/women/resources/factsheets/pdf/women.pdf>
- Centers for Disease Control and Prevention. (2008b). Trends in HIV/AIDS diagnoses among men who have sex with men — 33 states, 2001–2006. *Morbidity and Mortality Weekly Reports*, 57(25), 681–686. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5725a2.htm>
- Centers for Disease Control and Prevention. (2010). *HIV surveillance report, Vol. 22*. Retrieved from <http://www.cdc.gov/hiv/topics/surveillance/resources/reports>
- Centers for Disease Control. (2013a). *Effective HIV surveillance among Asian American, Native Hawaiian, and Other Pacific Islander*. Retrieved from http://www.cdc.gov/hiv/pdf/policies_13_238558_hivsurveillance_nhas_v6_508.pdf
- Centers for Disease Control and Prevention. (2013b). *HIV infection among Asians in the United States and dependent areas*. Retrieved from <http://www.cdc.gov/hiv/risk/raciaethnic/asians/>
- Chin, D. (1999). HIV-related sexual risk assessment among Asian/Pacific Islander American women: An inductive model. *Social Science & Medicine*, 49(2), 241–251. doi:10.1016/S0277-9536(99)00111-2
- Chin, D., & Kroesen, K. W. (1999). Disclosure of HIV infection among Asian/Pacific Islander American women: Cultural stigma and support. *Cultural Diversity and Ethnic Minority Psychology*, 5(3), 222–235. doi:10.1037/1099-9809.5.3.222
- Chin, J. J., Leung, M., Sheth, L., & Rodriguez, T. R. (2007). Let's not ignore a growing HIV problem for Asians and Pacific Islanders in the U.S. *Journal of Urban Health*, 84(5), 642–647. doi:10.1007/s11524-007-9200-8
- Chung, P. J., Travis, Jr, R., Kilpatrick, S. D., Elliott, M. N., Lui, C., Khandwala, S. B., . . . Schuster, M. A. (2007). Acculturation and parent-adolescent communication about sex in Filipino-American families: A community-based participatory research study. *Journal of Adolescent Health*, 40(6), 543–550.
- DiStefano, A. S., Hui, B., Barrera-Ng, A., Quitugua, L. F., Peters, R., Dimaculangan, J., & Tanjasiri, S. P. (2012). Contextualization of HIV and HPV risk and prevention among Pacific Islander young adults in Southern California. *Social Science & Medicine*, 75(4), 699–708.
- Do, T. D., Chen, S., McFarland, W., Secura, G. M., Behel, S. K., MacKellar, D. A., . . . Cho, K. (2005). HIV testing patterns and unrecognized HIV infection among young Asian and Pacific Islander men who have sex with men in San Francisco. *AIDS Education & Prevention*, 17(6), 540–554.
- Earnshaw, V. A., Bogart, L. M., Dovidio, J. F., & Williams, D. R. (2013). Stigma and racial/ethnic HIV disparities: Moving toward resilience. *American Psychologist*, 68(4), 225–236.
- Earnshaw, V. A., Smith, L. R., Chaudoir, S. R., Lee, I. C., & Copenhaver, M. M. (2012). Stereotypes about people living with HIV: Implications for perceptions of HIV risk and testing frequency among at-risk population. *AIDS Education and Prevention*, 24(6), 574–581.
- Fisher, R., Chen, S., Truong, H. M., Knapper, K. B., Klausner, J. D., Choi, K., & McFarland, W. (2006). Trends in sexually transmitted diseases, sexual risk behavior, and HIV Infection among Asian/Pacific Islander men who have sex with men, San Francisco, 1999–2005. *Sexually Transmitted Diseases*, 33(10), 1–3. doi:10.1097/01.olq.0000237854.25406.ad

- Gagnon, A. J., Merry, L., Bocking, J., Rosenberg, E., & Oxman-Martinez, J. (2010). South Asian migrant women and HIV/STIs: Knowledge, attitudes and practices and the role of sexual power. *Health & Place*, *16*(1), 10–15.
- Goffman, E. (1963). *Stigma: Notes on the management of a spoiled identity*. New York, NY: Simon & Schuster.
- Green, J. W. (1998). *Cultural awareness in the human services: A multi-ethnic approach* (3rd ed.). Boston, MA: Allyn and Bacon.
- Hahm, H. C., Kolaczyk, E., Lee, Y., Jang, J., & Ng, L. (2012). Do Asian-American women who were maltreated as children have a higher likelihood for HIV risk behaviors and adverse mental health outcomes? *Women's Health Issues*, *22*(1), e35–e43.
- Heijnders, M., & Van, D. M. (2006). The fight against stigma: An overview of stigma-reduction strategies and interventions. *Psychology, Health & Medicine*, *11*(3), 353–363.
- Hou, S., & Basen-Engquist, K. (1997). Human immunodeficiency virus risk behavior among white and Asian/Pacific Islander high school students in the United States: Does culture make a difference? *Journal of Adolescent Health*, *20*(1), 68–74.
- Huang, Z. J., Wong, F. Y., De Leon, J. M., & Park, R. J. (2008). Self-reported HIV testing behaviors among a sample of Southeast Asians in an urban setting in the United States. *AIDS Education & Prevention*, *20*(1), 65–77.
- Hwang, S. J., & Nuttbrock, L. (2007). Sex workers, fem queens, and cross-dressers: Differential marginalizations and HIV vulnerabilities among three ethnocultural male-to-female transgender communities in New York City. *Sexuality Research & Social Policy*, *4*(4), 36–59.
- Kang, E., Rapkin, B. D., & DeAlmeida, C. (2006). Are psychological consequences of stigma enduring or transitory? A longitudinal study of HIV stigma and distress among Asians and Pacific Islanders living with HIV illness. *AIDS Patient Care & STDs*, *20*(10), 712–723.
- Kang, E., Rapkin, B. D., Springer, C., & Kim, J. H. (2003). The “demon plague” and access to care among Asian undocumented immigrants living with HIV disease in New York City. *Journal of Immigrant Health*, *5*(2), 49–58.
- Kellerman, S. E., Lehman, J. S., Lansky, A., Stevens, M. R., Hecht, F. M., Bindman, A. B., & Wortley, P. M. (2002). HIV testing within at-risk populations in the United States and the reasons for seeking or avoiding HIV testing. *Journal of Acquired Immune Deficiency Syndromes*, *31*, 202–210.
- Lee, Y., Salman, A., & Wang, F. (2012). Recruiting Chinese American adolescents to HIV/AIDS-related research: A lesson learned from a cross-sectional study. *Applied Nursing Research*, *25*(1), 40–46.
- Lin, P., Simoni, J. M., & Zemon, V. (2005). The health belief model, sexual behaviors, and HIV risk among Taiwanese immigrants. *AIDS Education & Prevention*, *17*(5), 469–483.
- Logie, C. H., James, L., Tharao, W., & Loutfy, M. R. (2011). HIV, gender, race, sexual orientation, and sex work: A qualitative study of intersectional stigma experienced by HIV-positive women in Ontario, Canada. *PLoS Medicine*, *8*(11), e1001124.
- Loutfy, M. R., Logie, C. H., Zhang, Y., Blitz, S. L., Margolese, S. L., Tharao, W. E., . . . Raboud, J. M. (2012). Gender and ethnicity differences in HIV-related stigma experienced by people living with HIV in Ontario, Canada. *PLOS One*, *7*(12), 1–10.
- Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, *56*, 393–421.
- McFarland, W., Chen, S., Weide, D., Kohn, R., & Klausner, J. (2004). Gay Asian men in San Francisco follow the international trend: Increases in non-protected anal intercourse and sexually transmitted diseases, 1999-2002. *AIDS Education & Prevention*, *16*(1), 13–18.
- Mercado, M. M. (2000). The invisible family: Counseling Asian American substance abusers and their families. *The Family Journal*, *8*, 267–272.
- Nemoto, T., Iwamoto, M., Kamitani, E., Morris, A., & Sakata, M. (2011). Targeted expansion project for outreach and treatment for substance abuse and HIV risk behaviors in Asian and Pacific Islander communities. *AIDS Education & Prevention*, *23*(2), 175–191.
- Nemoto, T., Iwamoto, M., Oh, H. J., Wong, S., & Nguyen, H. (2005). Risk behaviors among Asian women who work at massage parlors in San Francisco: Perspectives from masseuses and owners/managers. *AIDS Education & Prevention*, *17*(5), 444–456.
- Nemoto, T., Operario, D., Takenaka, M., Iwamoto, M., & Le, M. N. (2003). HIV risk among Asian women working at massage parlors in San Francisco. *AIDS Education & Prevention*, *15*(3), 245–256.
- Nemoto, T., Operario, D., Toho, S., Bao, D., Vajrabukka, A., & Crisostomo, V. (2003). HIV risk and prevention among Asian/Pacific Islander Men who have sex with men: Listen to our stories. *AIDS Education & Prevention*, *15*, 7–20. doi:1521/aeap.15.1.5.7.23616
- Nyblade, L. (2006). Measuring HIV stigma: Existing knowledge and gaps. *Psychology, Health & Medicine*, *11*(3), 335–345.
- Office of National AIDS Policy. (2010). *National HIV/AIDS strategy for the United States*. Retrieved from <https://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>
- Operario, D., & Nemoto, T. (2005). Sexual risk behavior and substance use among a sample of Asian Pacific Islander transgendered women. *AIDS Education & Prevention*, *17*(5), 430–443.
- Parker, R., & Aggleton, P. (2003). HIV and AIDS-related stigma and discrimination: A conceptual framework and implications for action. *Social Science & Medicine*, *57*(1), 13–24.

- Reidpath, D. D., & Chan, K. Y. (2005). A method for the quantitative analysis of the layering of HIV-related stigma. *AIDS Care*, 17(4), 425–432.
- Shapiro, J., Radecki, S., Charchian, A. S., & Josephson, V. (1999). Sexual behavior and AIDS Related knowledge among community college students in Orange County. *California Journal of Community Health*, 24(1), 29–43.
- So, D. W., Wong, F. Y., & DeLeon, D. M. (2005). Sex, HIV risks, and substance use among Asian American college students. *AIDS Education and Prevention*, 17(5), 457–468.
- The White House. (2010). *National HIV strategy for the United States*. Retrieved from <https://www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf>
- Trieu, S. L., Modeste, N. N., Marshak, H. H., Males, M. A., & Bratton, S. I. (2008). Factors associated with the decision to obtain an HIV test among Chinese/Chinese American community college women in Northern California. *Californian Journal of Health Promotion*, 6(1), 111–127.
- U.S. Census Bureau. (2013). *Asians fastest-growing race or ethnic group in 2012* [Press release]. Retrieved from <http://www.census.gov/newsroom/releases/archives/population/cb13-112.html>
- Vlassoff, C., & Ali, F. (2011). HIV-related stigma among South Asians in Toronto. *Ethnicity & Health*, 16(1), 25–42. doi:10.1080/13557858.2010.523456
- Wilson, P. A., & Yoshikawa, H. (2004). Experiences of and responses to social discrimination among Asian and Pacific Islander gay men: Their relationship to HIV risk. *AIDS Education & Prevention*, 16(1), 68–83.
- Wong, F. Y., Campsmith, M. L., Nakamura, G. V., Crepaz, N., & Begley, E. (2004). HIV testing and awareness of care-related services among a group of HIV-positive Asian Americans and Pacific Islanders in the United States: Findings from a supplemental HIV/AIDS surveillance project. *AIDS Education & Prevention*, 16(5), 440–447.
- Yoshikawa, H., Wilson, P. A., Chae, D. H., & Cheng, J. F. (2004). Do family and friendship networks protect against the influence of discrimination on mental health and HIV risk among Asian and Pacific Islander gay men? *AIDS Education & Prevention*, 16(1), 84–100.
- Yoshioka, M. R., & Schustack, A. (2001). Disclosure of HIV status: Cultural issues of Asian patients. *AIDS Patient Care & STDs*, 15(2), 77–82.
- Young, S. D., & Bendavid, E. (2010). The relationship between HIV testing, stigma, and health service usage. *AIDS Care*, 22(3), 373–380.
- Zaidi, I. F., Crepaz, N., Song, R., Wan, C. K., Lin, L. S., Hu, D. J., & Sy, F. S. (2005). Epidemiology of HIV/AIDS among Asians and Pacific Islanders. *AIDS Education & Prevention*, 17, 405–417.

Appendix

Table A1. Findings about HIV Knowledge and Belief among Asians.

Author & Year	Asian Population	Methodology	Findings Related to HIV Knowledge and Beliefs
Bhattacharya, Cleland, & Holland, 2000	Asian Indian adolescents born in the United States with emigrated parents	Survey	86% knew that having unsafe sex with a person infected with HIV could transmit HIV 47% did not know that sharing a razor with a person who is HIV + could do so. 27% and 14% believed that donating blood and taking blood tests could transmit HIV respectively
DiStefano et al., 2012	Chamoro and Tongan communities in Southern California	Focus groups and key informant interviews	Themes identified include misinformation and otherization, family shame and privacy, gendered manifestations of religio-cultural norms, barriers impeding access to sexual health resources, parents' role in prevention, community vs. individual responsibility.
Shapiro, Radecki, Charchian, & Josephson, 1999	College students from a relatively affluent multi-ethnic community in California	Survey	Student's knowledge of HIV disease is relatively high, but Asians demonstrate lower HIV knowledge There are significant differences in HIV knowledge and sexual permissiveness as a function of ethnicity and religion HIV knowledge per se does not confer a protective effect against high-risk behavior. HIV knowledge is an enabling factor for students' comfort level with asking about their partner's sexual histories and requesting a partner's HIV test
So, Wong, & DeLeon, 2005	Heterosexual Asian American college students	Survey	Most students have inadequate HIV knowledge. Acculturation is positively associated with HIV knowledge

Table A2. Factors Affecting HIV Knowledge and Beliefs among Asians.

Author & Year	Asian Population	Methodology	Findings Related to factors Affecting HIV Knowledge and Beliefs
Bhattacharya, 2004	Bangladesh, India, and Pakistan immigrants	Literature review	Factors impeding health-seeking behavior in general and HIV in particular are: Stigma, sexual norms, family norms and traditions, illness beliefs, spiritual views
Chung et al., 2007	Filipino American families	Survey	Most adolescents (72%) agreed with traditional Asian values Bivariate analysis indicated less parent – adolescent communication about sex to be associated with less adolescent agreement with traditional Asian values and more adolescent English use In multivariate regressions, these associations were largely explained by adolescent perceptions of parent knowledge about their whereabouts and activities
Gagnon, Merry, Bocking, Rosenberg, & Oxman-Martinez, 2010	Men and women born in India, Sri Lanka, and Pakistan or Bangladesh and residing in Montreal.	Survey	Knowledge gaps and stigmatizing attitudes were found The HIV testing rate in the sample adults is 30.8%, lower than the median HIV testing rate in the U.S. adult population by state, lower than that of the general adult testing rate in the study city, and lower than that of the AAPI MSM population.
Huang, Wong, DeLeon, & Park, 2008	Non-MSM AAPIs.	Survey	A low sexually transmitted infection (STI) testing rate as a proxy for low perceived sexual risks and a dearth of HIV knowledge were associated with the low HIV testing rate.
Lee, Salman, & Wang, 2012	Chinese American adolescents from Chinese American communities in a U.S. Midwest state	Survey	Sexual problems or concerns are a taboo topic in Chinese culture, Some adolescents are unaware and deny HIV/AIDS risks, Chinese culture encourages an authoritarian parenting style
Lin, Simoni, & Zemon, 2005	Taiwanese immigrant students	Online survey	More educated individuals tend to be nonheterosexual, have a higher number of sexual partners, and more frequent sexual intercourse

Note. MSM = men who have sex with men; AAPI = Asian American and Pacific Islanders.



Table A3. HIV Risk Behavior and High-Risk Groups among Asians.

Author & Year	Asian Population	Methodology	Findings Related to HIV Risk Behavior or High-Risk Groups
D. Chin, 1999	Asian American and Pacific Islander (AAPI) women	In-depth interviews	Cultural schemata influence sexual risk schemata, which in turn influence whether condoms or HIV tests are requested. The cultural values of reticence regarding sex, the accommodation of others, and a traditional romantic ideal inhibit open discussion with partners about HIV as well as requests for safer sex behaviors. AAPI women tended to engage in nonexplicit, inferential assessments of partners' risk, which may contribute to an illusory sense of control and safety.
Gagnon, Merry, Bocking, Rosenberg, & Oxman-Martinez, 2010	Men and women born in India, Sri Lanka, Pakistan, or Bangladesh yet residing in Montreal.	Survey	Asians in the sample demonstrate gaps in their HIV related knowledge and endorse stigmatizing attitudes against people with HIV
Hahm, Kolarczyk, Lee, Jang, & Ng, 2012	Chinese, Korean, Vietnamese, age 18–35, unmarried, and who identified themselves as children of immigrants	Computer-assisted survey	15% of the sample reported having sex at age 16 or before, yet almost 60% had ever engaged with potentially risky sexual partners. Sexual abuse and other forms of maltreatment are not associated with HIV risk behaviors among Asian American women. A higher education level was associated with increased odds of HIV risk behaviors, including ever having had anal sex and ever having potentially risky sexual partners
Hou & Basen-Engquist, 1997	White and Asian/Pacific Islander (API) adolescents	Secondary analysis of Youth Risk Behavior Survey	There were no significant differences in the age of initiating sex, the number of lifetime partners, the proportion of being currently sexually active, and condom use behavior. APIs engage in HIV risk behaviors once they became sexually experienced and have an even greater number of recent partners if they are currently sexually active. Use of alcohol or other drugs before sex and condom use is significantly related.
Huang, Wong, DeLeon, & Park, 2008	Non-MSM AAPIs	Survey	HIV testing rate among non-men who have sex with men (MSM) AAPIs is lower than the median HIV testing rate in the U.S. adult population, lower than that of the general adult testing rate, and lower than that of the AAPI MSM population. A low sexually transmitted infection testing rate is a proxy for low perceived sexual risks and a dearth of HIV knowledge is associated with the low HIV testing rate.
Hwang & Nuttbrock, 2007	Southeast Asian MTF sexworkers in New York City	Ethnography	Asian MTF sexworkers are at a higher HIV risk than their White counterparts and at less risk than their Black and Latino counterparts.

McFarland, Chen, Weide, Kohn, & Klausner, 2004	AAPI MSM	Survey	AAPI MSM are under-represented among AIDS cases (2.7%) with respect to their estimated makeup in the gay community of San Francisco (4.5%). However, recent trends in unprotected anal intercourse (UAI) and sexually transmitted diseases suggest a reversal in the relative risk for HIV among AAPI MSM compared with White MSM. Starting from lower levels in 1999, UAI with multiple partners, UAI with multiple partners of unknown HIV serostatus, the incidence of male rectal gonorrhea, and the incidence of early syphilis among AAPI MSM surpassed levels among White MSM by 2002.
Nemoto, Operario, Takenaka, Iwamoto, & Le (2003)	Asian American masseuses in San Francisco	Environmental scan	Difficult work conditions contributed to HIV risk including multiple sex customers each workday, long working hours, physical and verbal abuse from customers, economic pressures, and poor access to health care. Inconsistent condom use for vaginal sex with customers is positively associated with fatalistic ideas and weak norms toward practicing safe sex with customers.
Nemoto, Iwamoto, Oh, Wong, & Nguyen, 2005	Asian women masseuses in San Francisco	Focus group and in-depth interview	Economic pressure as well as subjective evaluation of customers for the risk of HIV/STD infection increase unprotected sexual behaviors among Asian masseuses. Massage parlor owners and managers do not establish a clear policy for condom use at their parlors. Male customers often manipulate their intention not to use a condom while negotiating with masseuses.
Nemoto et al., 2003	AAPI MSM	In-depth Interview	Six themes were identified: (a) dual-identity status, (b) coming out and disclosure issues, (c) relationships and dating, (d) substance use, (e) sexual risk reduction strategies, and (f) health and social services.
Yoshikawa, Wilson, Chae, & Cheng, 2004	AAPI MSM	Survey	Experiences of anti-immigrant discrimination are associated with higher rates of secondary-partner unprotected anal intercourse. Conversations about discrimination with gay friends and with family are associated with lower levels of primary-partner UAI. Combined low levels of discussion with family about discrimination and high levels of experienced discrimination is associated with higher rates of UAI.

Note. MTF = Male to Female Transgendered; STD = sexually transmitted disease.



Table A4. HIV-Related Stigma.

Author & Year	Population	Methodology	Findings Related to HIV-Related Stigma and Asian Americans and Pacific Islanders
Alonzo & Reynolds, 1995	General population	Theory development	HIV/AIDS is analyzed in terms of a stigma trajectory that has four phases: (1) At-risk: pre-stigma and the worried well; (2) Diagnosis: confronting an altered identity; (3) Latent: living between illness and health; and (4) Manifest: passage to social and physical death. Some stigma reduction interventions appear to work. Many gaps in stigma research remain especially in relation to scale and duration of stigma's impact.
Brown, Macintyre, & Trujillo, 2003	General population	Literature review	The general population is increasingly tolerant of persons living with HIV/AIDS. Women are acutely aware of and affected by the stigma attached to HIV. Decision to disclose is influenced by fears about being stigmatized, concerns about disappointing or burdening others, and concerns about discrimination. People at risk for HIV might not undergo testing because of perceived low risk, fear of results, and fear of needles.
D. Chin & Kroesen, 1999	Asian American & Pacific Islander (AAPI) women	Interview data and social network analysis	Prior HIV testing is typically associated with older age, gay sexual orientation, history of sexually transmitted disease, higher lifetime number of sexual partners, and higher acculturation.
Do et al., 2005	495 API men who have sex with men (MSM), age 18–29 years from San Francisco	Survey and interview	Stigma typically co-occur. Stigma interventions should target modifiable structural level factors such as economic and community empowerment as well as trust at the structural level.
Earnshaw, Bogart, Dovidio, & Williams, 2013	Racial/ethnic minorities at risk of and living with HIV	Theory development	Stigma interventions should target modifiable individual level factors such as in-group identities and increased contact with people living with HIV, and enhanced social support and adaptive coping.
Earnshaw, Smith, Chaudoir, Lee, & Copenhaver, 2012	HIV negative individuals receiving methadone maintenance at a clinic in the northeastern United States	Survey	HIV stigma is associated with HIV testing via the mediator of perceived HIV risk. Prejudice, discrimination, and objective HIV risk are not associated with perceived HIV risk.
Heijnders & Van, 2006	General Population	Literature review	The effective strategies for stigma reduction are primarily at the individual levels and the community level. Such level and single-target group approaches are not enough to reduce HIV and other health related stigma significantly.
Kang, Rapkin, & DeAlmeida, 2006	Convenient sample of 44 HIV-seropositive Asians and Pacific Islanders in New York City from 2002 to 2004	Semi-structured interviews	Social rejection and perceived interpersonal insecurity are associated with changes in self-esteem. Dread is associated financial insecurity and discretionary disclosure. Effective stigma reductions efforts should: (1) recognize multiple layers of stigma based sexual orientation, gender, and immigration status; and (2) address both individual and structural constraints that perpetuate HIV-stigma among API in the United States.
Kang, Rapkin, Springer, & Kim, 2003	16 undocumented Asians who are HIV + living in New York City	Focus groups	Access to care is affected by the Asian community's misperception about HIV transmission, discrimination towards individuals living with HIV, immigration related stressors, and difficulty navigating service systems.

Logie, James, Tharao, & Loufy, 2011	104 women who are HIV + in Ontario, Canada	Survey	Stigma and discrimination are attributed to HIV-related stigma, sexism and gender discrimination, racism, homophobia and transphobia, and involvement in sex work. Coping strategies include social networks and support groups as well as challenging stigma It is crucial to understand the overlapping, multilevel forms of stigma to better inform stigma prevention efforts, public health policies, and access to HIV related care targeting minority women who are HIV + . Among men and women Asian American had intermediate total stigma scores. Asian men reported the highest HIV-related stigma scores. Measures at the general population level are unambiguous about the cause of the stigmatizing behavior Highlights the manner in which stigma feeds upon, strengthens and reifies existing inequalities of class, race, gender and sexuality. Individualistic modes of stigma are limited Programmatic approaches in which the resistance of stigmatized individuals and communities is used as a resource for social change Blaming stigma gives too much weight to individual behavioral change as the answer to HIV prevention. This view neglects the more difficult problems relating to the manner in which HIV spreads in populations, the social vulnerabilities HIV exploits, and the ways in which individuals within subpopulations interact with each other and with members of other subpopulations. History of HIV tested was associated with relationship status and partner communication. Toronto's South Asian community has a high level of HIV-related stigma South Asian families were said to harbor the most stigma, often rejecting members who were HIV + . Differences were noted between first- and second-generation South Asian migrants in knowledge about, and stigma toward, HIV. Women living with HIV were found to be particularly disadvantaged and stigmatized, which led many people living with HIV to conceal their illness and avoided HIV-related services. Three focal issues that serve as a barriers to disclosure to family members include protection of family from shame, protection of family from obligation to help, and avoidance of communication regarding highly personal information.
Loufy et al., 2012	1,026 individuals who are HIV + living in Ontario, Canada	Survey	
Nyblade, 2006	General Population	Literature review	
Parker & Aggleton, 2003	General Population	Theory development	
Reidpath & Chan, 2005	General Population	Theory development	
Trieu, Modeste, Marshak, Males, & Bratton, 2008 Vlassoff & Ali, 2011	Chinese/Chinese American college students in northern California South East Asians in Toronto	Survey, focus groups, secondary analysis Focus groups	
Yoshika & Schustack, 2001	HIV + Asian Americans and immigrant men	Narrative interviews	
Young & Bendavid, 2010	General population. 86,899 outpatient visits	Survey	Stigma might have behavioral correlates and people might attempt to avoid HIV stigma by seeking a psychological cover for HIV testing.

Copyright of Social Work in Public Health is the property of Taylor & Francis Ltd and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.