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Are Cultural Values and Beliefs Included in U.S. Based HIV Interventions?

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Abstract

Objective—To determine the extent to which current U.S. based HIV/AIDS prevention and risk reduction interventions address and include aspects of cultural beliefs in definitions, curricula, measures and related theories that may contradict current safer sex messages.

Method—A comprehensive literature review was conducted to determine which published HIV/AIDS prevention and risk reduction interventions incorporated aspects of cultural beliefs.

Results—This review of 166 HIV prevention and risk reduction interventions, published between 1988 and 2010, identified 34 interventions that varied in cultural definitions and the integration of cultural concepts.

Conclusion—HIV interventions need to move beyond targeting specific populations based upon race/ethnicity, gender, sexual, drug and/or risk behaviors and incorporate cultural beliefs and experiences pertinent to an individual's risk. Theory based interventions that incorporate cultural beliefs within a contextual framework are needed if prevention and risk reduction messages are to reach targeted at risk populations. Implications for the lack of uniformity of cultural definitions, measures and related theories are discussed and recommendations are made to ensure that cultural beliefs are acknowledged for their potential conflict with safer sex skills and practices.

Keywords

HIV/AIDS; Intervention; Prevention; Culture

Introduction

Since the beginning of the HIV/AIDS crisis, the Centers for Disease Control and Prevention (CDC) and the research community have attempted to identify factors that have heighten HIV related transmission among individuals most at risk in the United States (CDC, 2001). According to the CDC, ethnic minorities, particularly African Americans (46%) and Latinos

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(17%), have been the most heavily impacted by HIV/AIDS (CDC, 2010). Also, men who have sex with men (MSM) accounted for 53% of the infected (Hall et al., 2008). These statistics suggest that identifying risk behaviors alone without fully understanding the context of individual, situational, and environmental factors that may be unique to these populations most at risk implies that current efforts in HIV related interventions might be incomplete. One important factor that has received little attention has been the identifying and addressing of cultural values and beliefs related to sexual practices and relationship expectations that may conflict with or compliment HIV prevention messages.

1.1. Role of Culture in HIV Risk Practices

Culture has provided rules and scripts about how to live and make decisions across the life course (Wyatt, 2009; Harper, 2007; Nobles, Goddard, & Gilbert, 2009). Cultural beliefs inform individuals, families and groups and are handed down from generation to generation (Mio, Barker-Hackett, & Tumambing, 2009). For example, the kinds of sexual behaviors that are deemed acceptable, when they should be engaged in and with whom, may be based on a number of factors. They include beliefs about sex that can influence how relationships are defined, when and how contraceptives and condoms are used, who should decide about and communicate with partners about sex and the expectations about personal responsibility for the consequences of these decisions (Dushay, Singer, Weeks, Rohena, & Gruber, 2001).

Much has been written about cultural beliefs that define the meaning and value of behaviors and guide the expression of sexuality that are often reinforced by customs and rituals (Ahrold & Meston, 2010) in international settings (e.g. Kostick, Schensul, Singh, Pelto, Saggurti, 2011). Indeed, investigators have focused some attention on how cultural beliefs continue to influence individual and relationship sexual decision-making (Wyatt, 2009). However, less is known about cultural beliefs and the behaviors influenced by them among African Americans and Latinos, which may contradict HIV prevention messages and consequently heighten risks for infection and transmission. Consequently, little information is available about how to integrate and reframe this potentially contradictory information in an HIV prevention or risk reduction intervention (Wyatt, Longshore, Chin, Carmona, Loeb, Myers et al., 2004). For example, while an individual possesses HIV knowledge, self-efficacy and skills to use condoms, other messages promoting interconnectedness in relationships (valuing the needs of one's partner over the individual) or sex for procreation rather than recreation may interfere with consistent condom use and suppress the disclosure of a same gender loving sexual orientation that may not be acceptable to families, religious institutions or partners who may assume a heterosexual orientation (Wyatt, 2009; Harper, 2007).

Cultural beliefs are important to acknowledge because they often define personal identity and lend meaning to a person's life (Nobles et al, 2009). Over the life-course, some cultural beliefs can be instructive or protective, and when not addressed, can also inadvertently be used to promote risky sexual practices (Kostick et al., 2011). HIV risks are heightened when populations are not provided with the necessary skills that are acceptable and consistent with what they have long believed.

These examples highlight the need for culturally based interventions (Kostick et al., 2011). In fact, some researchers have proposed that even though culturally based interventions may include some of the core conceptual elements found in interventions promoting the acquisition of condom use skills alone (Solomon, Card, & Malow, 2006), culturally based programs can significantly reduce HIV related risk behaviors (Dushay et al., 2001; El Bassel, et al., 2010; Wyatt, et al, 2004). It is possible that when cultural values, beliefs and behaviors are addressed in interventions, they can mediate or moderate risk related outcomes.

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In this paper, we systematically assessed the degree to which current U.S. based HIV interventions addressed some of the cultural beliefs and behaviors of groups at risk for HIV/AIDS by focusing on interventions that included populations by ethnicity, gender, and sexual orientation. Accordingly, we make recommendations for the effective use of culture in domestic interventions within the context of HIV risk reduction and health promotion.

1.2. The Definitions and Conceptualization of Culture

There are three problems that can potentially limit the inclusion of how cultural beliefs that influence behaviors can contradict or compliment HIV/AIDS prevention and risk reduction messages in research:

1. Investigators have often assumed that individuals subscribe to one set of cultural beliefs. However, many values are derived from more than one set of cultural beliefs and are influenced by contextual and environmental factors beyond the control of the individual. This is the case for African American MSM or women of color whose partners use IV drugs. Importantly, is it also common to find little mention of the sample for which the intervention is intended and the cultural beliefs to which they ascribe (Mak et al., 2007).
2. Some beliefs from one cultural group may overlap with other beliefs and/or contradict HIV prevention and risk reduction messages (Nemoto, 1998). There is a lack of understanding that cultural beliefs and values are multifaceted and reach beyond ethnic group affiliation (e.g. age, past and current socioeconomic status, religious beliefs, gender, and sexual identity). Culture extends beyond the individual to encompass the environment and context of risk taking practices.
3. Importantly, there has been little attention given to how culture should be defined and implemented in interventions (Nobles et al., 2009). While behavioral scientists use broad definitions of cultural bound information, there is less clarity about how they are defined (Mio, Trimble, Arrendondo, Cheatham & Sue, 1999). For example, the following terms are often incorrectly used interchangeably: cultural competence, cultural sensitivity, culturally appropriate, cultural congruence, culturally based, culturally tailored, or cultural relevance (Mio et al., 1999; Carballo-Dieguez et al., 2005). Problematic to the inclusion of culture in HIV interventions is that it is an abstract construct with many definitions that broadly emphasize the shared behaviors, life styles, language, norms, values and experiences and history that characterize a group of people and are transmitted from one generation to the next, providing guidance and scripts for living (Mio et al., 1999). Clearly the definition of what culture is and how it is to be used in HIV interventions is nebulous at best.

A clear understanding of how culture is currently being addressed in HIV/AIDS interventions is needed, particularly with groups at risk for disease transmission (Weeks et al., 2009).

Method

We reviewed the extant literature to: 1) identify interventions by target populations (i.e., heterosexuals, MSM, substance abuse, and transgenders); and to 2) determine if cultural beliefs that may protect or place racial/ethnic populations at risk were defined, operationalized and measured.

We conducted a systematic review of research articles from 1988 to May 2010 for behavioral, biobehavioral, and psychosocial HIV prevention and/or risk reduction interventions conducted in the U.S. using electronic databases (PubMed, PsychINFO,

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EBSCO Plus and Journals at OVID). Keywords included *HIV, AIDS, interventions, risk reduction*, *sexual risk*, *drugs, sexually transmitted diseases (STDs)* and *HIV risk*. Following the pattern of how HIV was first reported, research studies were categorized based upon their target population and/or risk behavior. In an effort to compare the HIV prevention and/or risk reduction interventions, we assessed for the inclusion of six major variables (See Table 1), that were consistent with the guidelines of the CDC's HIV/AIDS Prevention Research Synthesis (PRS) - Compendium of HIV Prevention Interventions with Evidence of Effectiveness (CDC, 2001). These variables included:

1. The target sample
2. Sexual Orientation/Gender
3. HIV/AIDS prevention or risk reduction focus
4. Criteria of Relevance: Interventions examining sex-related behaviors (e.g. using condoms), drug-related behaviors (e.g. sharing needles), HIV testing (e.g. being tested) and health outcomes (e.g. incidence and prevalence rates of HIV, AIDS, STDs) were included.
5. Criteria for Methodological Rigor: Interventions using random assignment by individual or group, control groups (experimental design), quasi-experimental (wait-listed controls) and post-intervention data were included. Modeling the CDC's PRS project, we reviewed for random assignment with comparison group and non-random assignment and comparison group using a non-biased method and the inclusion of pre-post data.
6. Theory Based and Cultural Components: While the CDC did not include this as a criteria, studies were explored to assess if they mentioned or defined *culture*, included the role of culture in the theory, conceptual framework or principles that were guiding the interventions, and/or assigned culture as a mediator, moderator or an outcome variable. Other critical culture related variables assessed included ethnicity, nationality, country of origin, language used in interventions (e.g., bilingual). Authors that mentioned the inclusion of a cultural concept were contacted and requested to provide more information regarding how cultural beliefs were defined or operationalized.

Results: Interventions by Target Populations or Risk Behaviors

Table 1 summarizes the results of our literature review based upon behavioral, bio-behavioral and psychosocial interventions by target populations or risk behaviors.

1. **Cultural Beliefs are Overlooked**: Out of the 166 interventions identified, 132 (66%) of the HIV interventions made no mention of cultural beliefs or descriptions of their staff who might be trained to understand different ways of thinking about HIV risk practices.
2. **Cultural Beliefs are not Defined**: Out of the 166 interventions identified, only 34 (21%) of the HIV interventions included some aspect of culture as defined above. Out of these 34 interventions, 16 targeted heterosexually identified persons, eight targeted substance abusers, eight targeted gay/bisexual individuals and two targeted transgendered populations. For the interventions targeting heterosexual individuals, 13 of the 16 studies discussed both the importance of assessing culture and included various terms to describe the interventions that addressed some aspect of cultural beliefs. Only six of the eight substance abuse interventions targeted a specific racial/ethnic group, five for African Americans and one for Latinos. Seven of the eight interventions for substance abusers targeted a specific gender. All eight

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interventions specific for gay/bisexual populations mentioned ethnic groups but failed to define the cultural elements of the intervention, despite six studies having a significant number of ethnic minorities in their sample. Neither of the two interventions for trangendered persons were race/ethnic specific nor did they address cultural issues. Additionally, they were not methodologically rigorous with both lacking randomization and only one being theory-based.

3. **Culture is Monolithic**: In reporting the efficacy of interventions, most research did not address the interaction of messages that could be communicated by ethnic group affiliation, gender, sexual identity and orientation. In total, there were only nine interventions targeting heterosexual individuals that considered multiple aspects of culture such as race/ethnicity and gender. Of these, six targeted solely African Americans, one targeted Latinos, one targeted Haitians and one was for multiple ethnic groups. Of the interventions aimed at reducing substance abuse, only five embodied the complexity and multidimensionality of culture and were methodologically rigorous and theory based. Three interventions addressed the multidimensional aspects of culture (i.e., race/ethnicity and gender) for MSM, but no studies addressed ethnicity, sexual identity, gender, and sexual orientation for transgendered populations.

Based on the few current culturally based interventions (e.g., El-Bassel et al., 2010; Kostick et al., 2011; Needle et al., 2003; Wyatt, et al, 2004), we recommend the following 11 steps in the process of integrating cultural beliefs that influence sexual behaviors and relationships in future HIV prevention and risk reduction intervention research:

Essential Investigator Skills

Step 1

Investigators must be *culturally competent* in understanding cultural norms, values, beliefs and behaviors of the targeted population. Cultural competence includes having the knowledge and understanding of a specific culture necessary to effectively communicate and interact within it (Mio et al., 1999). Investigators must be able to integrate cultural concepts into an intervention to complement HIV prevention messages. Hiring ethnic and sexual minorities as outreach workers to recruit and facilitate interventions should be equaled with cultural competence. The type of competence has to be taught and updated regularly, just as strategies on HIV/AIDS prevention and risk reduction need to address contemporary issues that may influence behavior.

Step 2

Investigators should clarify what role culture related factors such as race, ethnicity, gender, and sexual orientation play in targeting specific populations at risk.

Step 3

Investigators should conduct research with adequate samples in order to formulate conclusions with regard to within and/or across ethnic group, gender, and sexual orientation comparisons or cite small samples as a research limitation.

Step 4

Investigators need to bridge alliances and partnerships with community members who would be best suited to disseminate culturally appropriate and congruent interventions and risk reduction messages (Kostick et al., 2011).

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Essential Research Methods

Step 5

Studies should include measures of life experiences and context pertinent to groups at risk for HIV/AIDS. For instance, perceived racism/discrimination, unfair treatment, medical mistrust, institutional discrimination, or unintended negative consequences of health/help seeking need to be assessed, as they may act as mediators or moderators to safer sex behavioral outcomes. Historically, these factors have and continue to lead to health disparities in health care utilization and access (Solomon, Card, & Malow, 2006). Some improvements have been noted. Bates et al., (2007) and Needles et al., (2003), have outlined an assessment method (Rapid Assessment, Response, and Evaluation-RARE) that is efficient and effective in identifying those groups that are most at risk for HIV/AIDS. More importantly, this method assesses cultural factors in a culturally appropriate way and quickly identifies the most pertinent cultural issues.

Step 6

We recommend the development of *culturally congruent* interventions that are based on strengths, resilience and beliefs of the targeted groups at risk in HIV interventions. Cultural congruence is defined as any thought, belief or practice that is consistent with the practices of a particular group (Mio et al., 1999). Resilience-based factors may influence and support health promotion overall, and the development of healthy people and relationships (Solomon et al., 2006; Wyatt, 2009).

Step 7

Investigators need to incorporate and acknowledge the history and socialization of how cultural beliefs can influence behaviors and how they can be reframed to complement HIV prevention and risk reduction messages. Strategies commonly used in qualitative studies to assess aspects of culture, need to be highlighted. For example, asking individuals what their parents told them about sex and relationships or the religious beliefs communicated about specific sexual practices can be useful. Asking how participants address any contradictions between what they were told and their current behaviors can illicit information that needs to be acknowledged and addressed as components to HIV risk reduction skills (Wyatt, 2009).

Essential Research Designs

Step 8

Attention to whether cultural beliefs moderate or mediate an outcome is important in order to help identify subgroups or to change the knowledge, attitudes, or behavior of the populations most at risk (Kraemer, Kiernan, & Essex, 2008).

Step 9

There are also aspects of cultural beliefs and values that need to be considered within the context of developmental stages. Measures of cultural/ethnic identity should be considered for all stages of life, as experiences change over time and by circumstance and situation (Helms, 2007). Because some cultural beliefs that influence behaviors are constantly changing and are influenced by current social, economic, religious, and political context (Whaley & Davis, 2007), new methods of communicating and defining identity that evolve with age (e.g., adolescence or seniors), circumstance (e.g., incarceration or an abusive relationship, histories of sexual or physical violence) and survival factors (e.g., trading sex for food, drugs or favors) are necessary.

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Step 10

It is equally important to obtain information about *immigration and acculturation* of all ethnic groups being impacted by HIV. Attention to *nativity status* (country of origin) is an important factor to consider with regard to access to care and health disparities. Lack of access to public health information and care, and attitudes of health care providers need to be continuously incorporated into studies that focus on barriers to behavior change.

Step 11

Among groups that are *not native English speakers*, there needs to be consistent and universal guidelines requiring translation into other languages. There are terms that represent sexual anatomy, sexual behaviors and practices that may or may not convey the same meaning in English as they do in other languages. While interventions can be adapted for other populations, the optimal strategy is to develop and pilot interventions for ethnic groups to ensure that linguistic needs and culturally specific risk and protective factors are identified and addressed (Kelly et al., 2000).

Discussion

This review included 166 interventions that met our study criteria. Interventions were reviewed for their inclusion and definition and/or integration of cultural values, attitudes, or beliefs that could contradict or compliment HIV prevention messages. Rather than to report on intervention outcomes, this review illustrated that while there is often mention of some component of culture, the variation in definitions and extent to which cultural concepts were addressed or incorporated in interventions were included in fewer than 34 of the 166 U.S. based interventions. There was diversity in cultural definitions, as well as a lack of discussion of the use of cultural beliefs. This may have been due to the limited attention to measurement and constructs that are currently being used related to cultural beliefs in HIV/AIDS research (Multisite Group, 2008). An optimal future strategy would be to increase education around these important factors and how they affect health outcomes and to prioritize the development of measures, theories and the implementation of cultural constructs in HIV/AIDS research. This issue is even more important today as biomedical therapies, which have been tested in clinical trials throughout the world, are being targeted for U.S. ethnic and sexual minorities with little attention to the ethical and political ramifications (Leibowitz, et al, 2011). The unavailability of these therapies for people with economic and health care restraints can increase both cultural and historical beliefs that minorities are to be studied but will not receive the care that others receive (Wyatt, 2009).

Conclusions

Priority needs to be given to the development of guidelines that define the role of beliefs and values by ethnic, cultural, or other groups as they relate to HIV sexual and drug risk behaviors (NIMH Multisite, 2008). While some may argue that cultural beliefs are less important to risk reduction, their role will never be fully assessed if these components are not adequately studied. HIV/AIDS research and those who conduct, review, and fund it need to prioritize a more in depth inclusion of powerful components of cultural beliefs related to the ethnicity, gender and sexual orientation of populations most at risk in order to fully strengthen the HIV prevention and risk reduction arsenal.

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Table 1

HIV Interventions that Address Culture*

	Target Sample	Sexual Orientation (SO) and/or Gender	HIV/AIDS Prevention or Risk Reduction Focus	Criteria of Relevance	Criteria of Methodological Rigor	Theory-Based	Culture as a Mediator, Moderator, or Outcome Variable	Assessment of Ethnicity	Assessment of Language
HETEROSEXUAL									
DeMarco et al. (2009)	Inner-city Boston; 47% White, 26% African American, 10% Latino or Hispanic, 2% Caribbean Black, 12% Bi- or Multiracial, .8% Cape Verdean, .8% Haitian, 2% Other	100% women; SO not specified	Yes	Yes	Pre/Post (not random)	No	Mentioned culture (specific), not assessed	Not assessed /mentioned	Not assessed, English only (specified)
Diallo et al. (2010)	100% Black (African American, African, or Caribbean)	SO not specified; 100% women	Yes	Yes	Yes	No	Mentioned culture (specific), not assessed	Not assessed (reported as self-identified_	Not assessed, English only (specified)
DiClemente & Wingood. (1995)	African American women 100% African American	SO-Not Targeted 100% Female	Yes	Yes	Yes	Social Cognitive Theory; Theory of Gender and Power	Culturally and gender tailored interventions are stressed	Not assessed and/ or reported	Not assessed and/ or reported
Harvey et al, (2004)	Hispanic couples 100% Hispanic	Heterosexual Couples 50% Male 50% Female	Yes	Yes	Yes	Integrated Behavioral Change and IMB	Mediator	Not assessed and/ or reported	Predominantly Spanish

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Hobfoll, Jackson, Lavin, et al. (2002)	Inner City Women 55% African American 42% White 3% other	SO-Not Targeted 100% Female	Yes	Yes	Yes	Social Cognitive Theory	Cultural sensitivity is stressed	Not assessed and/ or reported	Not assessed and/ or reported
Jemmott & Jemmott. (1992)	Inner City Black Adolescent Females 100% Black	SO-Not Targeted 100% Female	Yes	Yes	Not Random-Pre/Post Test	Social Cognitive Theory	Cultural sensitivity is stressed	Not assessed and/ or reported	Not assessed and/ or reported
Jemmott, Jemmott, et al. (1992)	Inner City Black Adolescent Females 100% Black	SO-Not Targeted 100% Female	Yes	Yes	No	Social Cognitive Theory	Cultural sensitivity is stressed	Not assessed and/ or reported	Not assessed and/ or reported
Kalichman, et al. (1993)	Urban African American Women 100% African American	SO-Not Targeted 100% Female	Yes	Yes	Yes	Utilized health services videotapes	Mediator (reports intervention as culturally tailored)	Not assessed and/ or reported	Not assessed and/ or reported
Kalichman, Rompa & Coley. (1996)	Inner-City African American Women 100% African American	SO-Not Targeted 100% Female	Yes	Yes	Yes	Social Learning & Cognitive Behavior	Need for culturespecific interventions is expressed	Not assessed and/ or reported	Not assessed and/ or reported
Malow et al. (2009)	100% Haitian; Adolescents; Little Haiti, Miami	SO not specified; 70% Women, 30% Men	Yes	Yes	Yes	IMB Model; BART (Cognitive Behavior Risk-Reduction)	Mentioned/defined culture (specific), not assessed	Not assessed and/or reported	Not assessed and/or reported

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Nyamathi, Leake, Flaskerud, Lewis & Bennett. (1993)	Impoverish African American and Latina Women 81% African American 19%Latina	SO-Not Targeted 100% Female	Yes	Yes	Yes	Comprehensive Health Seeking & Coping Paradigm	Defines cultural sensitivity	Ethnically matched interviewers	Bilingual-Spanish
O'Donnell, O'Donnell, et al. (1998)	African American & Hispanic Men attending an STD clinic 62% African American 38% Hispanic	SO-Not Targeted 100% Male	Yes	Yes	Yes	Utilized Healthy People 2000	Mediator (reports intervention as culturally appropriate)	Not assessed and/ or reported	Not Assessed Bilingual-Spanish
Peragallo N et al (2005)	Latina Women 85% Mexican 15% Puerto Rican	SO-Not Targeted 100% Female	Yes	Yes	Yes	Social Cognitive Theory	Mediator	Yes	Yes
Williams et al.(2008)	HIV positive; African American, Latino	MSM and 59% MSMW; 100% male; 58% selfidentified homosexual/gay, 29% bisexual, 9% straight/ heterosexual, 4% undecided/not defined	Yes	Yes	Yes	Social Learning Theory	Assessed (culturally congruent social context)	Not assessed (reported as selfidentified)	Not assessed, English only (specified)

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Wingood et al (2004)	HIV–positive Women 84.2% African American	SO-Not Targeted 100% Female	Yes	Yes	Yes	Social Cognitive Theory and Theory of Gender and Power	Culturally and gender tailored interventions are stressed	Not assessed and/ or reported	Not assessed and/ or reported
Wyatt GE et al. (2004)	Ethnically diverse women with histories of childhood sexual abuse. 54% African American 6% White 40% Latina	SO-Not Targeted Female 100%	Yes	Yes	Yes	Treatment Engagement Model	Mediator	Not assessed and/ or reported	Yes
DRUG USE									
Braithwaite et al. (2005)	Soon-tobe released Male Inmates 69% African American 26% White 5% Hispanic	SO-Not Targeted 100% Incarcerated Males	Yes	Yes	Yes	Social Cognitive Theory	Not Assessed	Yes	Not assessed and/ or reported
Nobles et al. (2009)	100% African American	100% Women; SO not assessed and/or reported	Yes	Yes	Pre/Post (not random)	No	Mentioned as a core of intervention, not necessarily assessed	Not assessed/mentioned	Not assessed and/or reported
Robles et al. (2004)	Hispanic Injection Drug Users 100% Hispanic	SO-Not Targeted 89% Male 11% Female	Yes	Yes	Yes	Miller's Motivational Interviewing	Not Assessed	Yes	Not assessed and/ or reported

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Shoptaw et al. (2005)	Gay and Bisexual Men (GBM) 80% White 13% Hispanic 2.5% African American 3% Asian American 1% Native American	Gay and Bisexual 100% Male	Yes	Yes	Yes	Cognitive Behavioral Treatment (CBT), Contingency Management, and Gay-specific CBT	Mediator - Culture was defined as gay culture and was incorporated in one treatment condition	Randomization balanced by ethnicity	Not assessed and/ or reported
Sterk, Theall, & Elifson (2003)	African American Female Drug Users 100% African American	Heterosexually Active 100% Female	Yes	Yes	Yes	Social Cognitive; Reasoned Action; Planned Behavior; Transtheoretical; Gender and Power	Reports intervention as being culturally specific	Not assessed and/ or reported	Not assessed and/ or reported
Sterk, Theall, Elifson, & Kidder (2003)	African American Female Injection Drug Users 100% African American	Heterosexually Active 100% Female	Yes	Yes	Yes	Social Cognitive; Reasoned Action; Planned Behavior; Transtheoretical; Gender and Power	Reports intervention as being culturally specific	Not assessed and/ or reported	Not assessed and/ or reported
Sterk, Theall, & Elifson (2006)	African American Female Drug Users 100% African American	Heterosexually Active 100% Female	Yes	Yes	Yes	Social Cognitive Theory, Reasoned Action, Planned Behavior, Transtheoretical Model, Theory of Gender and Power	Reports intervention as being culturally specific	Not assessed and/ or reported	Not assessed and/ or reported
Wechsberg (2004)	African American Female Crack Users 100% African American	SO-Not Targeted 100% Female	Yes	Yes	Yes	NIDA HIV Prevention Intervention	Mediator	Not assessed and/ or reported	Not assessed and/ or reported
SAME SEX									

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	Target Sample	Sexual Orientation (SO) and/or Gender	HIV/AIDS Prevention or Risk Reduction Focus	Criteria of Relevance	Criteria of Methodological Rigor	Theory -Based	Culture as a Mediator, Moderator, or Outcome Variable	Assessment of Ethnicity	Assessment of Language
Bull et al. (2004)	Men who have sex with men	Men who have sex with men 100% Male	Yes	Yes	Yes	CDC's AIDS Community Demonstration Projects	Not Assessed	Not assessed and/ or reported	Not assessed and/ or reported
Carballo-Dieguez et al. (2005)	Latino Gay and Bisexual Men (LGBM) 100% Latino	Gay and Bisexual 100% Male	Yes	Yes	Yes	Empowerment Theory & Freire's Pedagogy of the Oppressed (Empowerment Theory)	Mediator - reports curriculum was culturally based	Not assessed and/ or reported	Yes
Choi et al. (1996)	Asian/ Pacific Islander (API) men who have sex with men (MSM) and Drug Using 100% API	Men who have sex with men (MSM) 100% Male	Yes	Yes	Yes	Theory of Reasoned Action, Health Belief Model, Social Cognitive	Mediator - reports culturally tailored skills for API MSM with a culturally appropriate curriculum	Yes 37% Chinese 34% Filipino 10% Japanese 8% Vietnamese 11% Other	Not assessed and/ or reported
Patterson, Shaw, & Semple (2003)	HIV-positive Individuals 65% White 15% African American 12% Hispanic 8% Other	SO-Not Targeted but assessed 91% Male 9% Female 85% Gay or Bisexual	Yes	Yes	Yes	Social Cognitive Theory	Not Assessed	Not assessed and/ or reported	Not assessed and/ or reported
Peterson et al (1996)	African American Gay and Bisexual Men 100% African American	Men who have sex with men 100% Male	Yes	Yes	Yes	AIDS Risk Reduction Model (ARRM)	Mediator - reports interventions as culturally tailored	Not assessed and/ or reported	Not assessed and/ or reported

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Rhodes (2004)	Men who have sex with men 70.2% White 11.3% Mixed 9.9% African American 6.6% Latino 1.9 Native/Aboriginal	Men who have sex with men 100% Male	Yes	Yes	No	No	Not Assessed	Not assessed and/ or reported	Not assessed and/ or reported
Wilton et al. (2009)	MSM; 100% Black/African American	78.1% selfidentified as gay/homosexual, 18.3% bisexual, 1.2% heterosexual/straight, 2.4% unsure; 100% Men	Yes	Yes	Yes	Behavior Changes Theory, Social Cognitive Theory, Behavioral Skills Acquisition Model, Transtheoretical Model and Decisional Balance Model	Mentioned as a target of intervention, not necessarily assessed	Not assessed/mentioned	Not assessed and/or reported
Wolitski et al. (2005)	HIV-positive Gay and Bisexual Men 50.6% White 23.1% African American 17.4% Hispanic /Latino 1.1% Native American 1.1% Asian/Pacific Islander 6.7% Mixed/Other	Men who have sex with men 100% Male	Yes	Yes	No	Behavioral Theory	Not Assessed	Not assessed and/ or reported	Not assessed and/ or reported
TRANSGENDER									

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Bockting, Rosser, & Coleman (2005)	Transgendered Individuals	SO-Not Targeted 100% Transgender (maletofemale & femaleto-male)	Yes	Yes	No	Sexual Health Model	Not Assessed	Not assessed and/ or reported	Not assessed and/ or reported
Nemoto et al. (2005)	Transgendered Individuals SO-Not Targeted	100% Transgender (maletofemale)	Yes	Yes	No	No	Not Assessed	Not assessed and/ or reported	Not assessed and/ or reported

*This review was conducted in Los Angeles, California between 2003 and 2010.