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Adaptation of a Couple-Based HIV/STI Prevention Intervention for Latino Men Who Have Sex With Men in New York City

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Abstract
Predominantly Spanish-speaking Latino men who have sex with men (MSM) and their same-sex partners continue to be at high risk for HIV and STIs. Behavioral research has identified how relationship dynamics for male couples are associated with sexual risk behavior. Connect 'n Unite (CNU), an evidence-based HIV/STI prevention intervention originally created for Black MSM and their same-sex partners, was adapted for predominantly Spanish-speaking Latino MSM and their same-sex partners on the assumption that its key elements would be translatable while its efficacy would be retained. A systematic adaptation process utilizing qualitative methods was used, including intervention adaptation sessions with 20 predominantly Spanish-speaking Latino gay couples and 10 health service providers. The process included five steps: (1) engaging community stakeholders, (2) capturing the lived experiences of Latino gay couples, (3) identifying intervention priorities, (4) integrating the original intervention's social cognitive theory into a relationship-oriented, ecological framework for Latino gay couples, and (5) adapting intervention activities and materials. The adapted intervention, which we called Latinos en Pareja or Latinos in a Relationship, incorporates elements that effective HIV prevention interventions share, including: a solid theoretical foundation; emphasis on increasing risk reduction norms, sexual communication skills and social support for protection; and guidance on how to utilize available, culturally and linguistically appropriate services. The systematic adaptation approach used for a couples-based HIV prevention intervention also can be employed by other researchers and community stakeholders to adapt evidence-based interventions that promote wellness, linkage to care, and disease prevention for populations not originally targeted.

Keywords
couple-based HIV/STI prevention intervention, adaptation, Latino gay couples, Latino men who have sex with men, MSM

Introduction

According to the most recent Centers for Disease Control and Prevention (CDC) data, in 2011, Latinos in the United States represented 21% of new HIV infections (10,159) even though they constitute only 16% of the total U.S. population. Latino men who have sex with men (MSM) face an especially heavy burden, representing 72% (7,266) of all new HIV infections among Latinos (CDC, 2011; Kann, Lowry, Eaton, & Wechsler, 2012). For Latino men

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infected with HIV, the most common modes of transmission are male-to-male sexual contact and injection drug use (CDC, 2008; Tung, 2012). Rates of reported sexually transmitted infections (STIs) are also higher among Latinos than among non-Latino Whites (CDC, 2007). Several factors are associated with the HIV epidemic among Latino MSM, including substance abuse (Deiss et al., 2008; Finlinson, Colón, Robles, & Soto, 2006; Wilson, Díaz, Yoshikawa, & Shrout, 2009); depression (Poppen, Reisen, Zea, Bianchi, & Echeverry, 2004; Rhodes, Martinez, et al., 2013; Zea, Reisen, Poppen, & Bianchi, 2009); the presence of certain STIs (Deiss et al., 2008; Mitchell & Petroll, 2012); being in a same-sex relationship (Beougher, Gomez, & Hoff, 2011; Hoff & Beougher, 2010; Wheldon & Pathak, 2010); avoidance of HIV testing, counseling, and treatment out of fear of discrimination and/or immigration status (Martinez et al., 2011; Martinez et al., 2012); being less acculturated (North Carolina Department of Health and Human Services, 2004; Tung, 2012); poverty; migration patterns; and language barriers (Bianchi, 2007; Carballo-Diéguez, 1989; Dennis et al., 2013; Martinez et al., 2012).

In addition, domestic violence, which greatly affects Latino MSM, has been linked to a myriad health problems, including HIV risk behaviors and poor mental health outcomes (Ayala, Diaz, & Bein, 1999; De Vidas, 1999; Feldman, Ream, Díaz, & El-Bassel, 2007). The National Coalition of Anti-Violence Programs reported that recent immigrants accounted for approximately 24% of all domestic violence complaints made in 2008 by lesbian, gay, bisexual, or transgender persons nationwide. Latino immigrants made up the second largest group in the reports, followed by survivors of African descent. Most of these cases were among couples, either in casual or long-term relationships (National Coalition of Anti-Violence, 2008). Findings from a study of Puerto Rican gay men indicated that approximately 50% of the participants had experienced some form of violence in their intimate relationships. Furthermore, sexual coercion and violence were linked to HIV transmission (Madera & Toro-Alfonso, 2005).

Predominantly Spanish-speaking Latino MSM are disproportionately at risk for HIV (CDC, 2003; Johnson et al., 2002; Semaan et al., 2002). They are less likely to report: using a condom at most recent intercourse, seeking or accessing health services, and having a personal doctor and health insurance when compared with English-speaking Latino men or non-Latino men (Deschamps, Pape, Haffner, Hyppolite, & Johnson, 1991; North Carolina Department of Health and Human Services, 2004). In addition, there is evidence that suggests that less acculturated Latinos are more likely to engage in risky behaviors because of pre- and postmigration experiences including discrimination, stigma, and isolation (Hoebbel & Fals-Stewart, 2003; Stappenbeck, Hoebbel, & Fals-Stewart, 2004).

Although MSM represent the largest proportion of persons living with HIV in the United States (CDC, 2003), the number of rigorously tested, behavioral risk reduction interventions—a crucial component of the public health response to HIV—is lowest for MSM compared with other populations (Johnson et al., 2002; Martinez, Wu, Moya, et al., 2014; Rhodes et al., 2012; Semaan et al., 2002). There is evidence that a couples-based approach can be effective in promoting sexual risk reduction among populations at elevated risk for HIV (Hoebbel & Fals-Stewart, 2003; Stappenbeck et al., 2004). The *Connect* intervention was reported to be effective in reducing sexual risk behavior among mixed-gender couples at 3-month and 12-month intervals following the intervention (El-Bassel et al., 2003, 2005).

Connect 'n Unite (*CNU*), a couple-based intervention for stimulant-using Black MSM, was adapted to address the burden of HIV borne by Latino men in same-sex relationships. *CNU* is a four-session, couple-based HIV prevention intervention that itself was adapted from the original *Connect* intervention for heterosexual couples. *CNU* sessions cover several topics including self-care (e.g., information about HIV/AIDS, stimulant use, developing a self-care plan), communication (e.g., use of effective communication styles), relationship strengthening (e.g., identification of unwritten rules and sexual decision-making), and problem-solving for couples (e.g., identification of support mechanisms for each partner). Evidence supports the efficacy of a couple-based approach in increasing condom use and HIV testing while also decreasing harmful substance use among Black male couples (Wu et al., 2011). However, it is important to note that the evidence supporting the promise of couples-based HIV/STI prevention has been based primarily on research with heterosexual couples. The article describes the adaptation process that culminated with an adapted intervention for predominantly Spanish-speaking Latino MSM and their same-sex partners.

Method

Design

The *CNU* intervention was adapted and core components were refined (i.e., key activities, scripts, and homework assignments). The intervention is guided by social cognitive theory (Bandura, 1986) and a relationship-oriented ecological perspective (NIMH Multisite HIV/STD Prevention Trial for African American Couples Group, 2008).

The adaptation followed a multistage process: (1) engaging community stakeholders, (2) capturing the lived

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experiences of Latino gay couples, (3) identifying intervention priorities, (4) integrating the original intervention's social cognitive theory into a relationship-oriented ecological framework for Latino gay couples, and finally (5) adapting intervention activities and materials. Each of these steps is subsequently described. The adaptation process approach bears some similarity to the ADAPT-ITT model (Wingood & DiClemente, 2008), including the selection of community stakeholders to be involved in all stages of the adaptation process and pretesting the core components of the intervention with members of the targeted population. The study relied on the findings of the adaption process used for the *CNU* intervention for Black MSM in same-sex relationships (Wu, El-Bassel, McVinney, Fontaine, & Hess, 2010; Wu et al., 2011) as well as approaches used to adapt and modify other HIV prevention interventions for Latino MSM (O'Donnell, Stueve, Joseph, & Flores, 2014; Rhodes, Daniel, et al., 2013).

Sample

Couples were eligible for the *Latinos en Pareja* study if they met the following criteria: (1) both partners were 18 years or older; (2) both considered the other as their "main partner," which is operationalized as (a) a male with whom he has an ongoing sexual relationship over the prior 3 months; (b) considered a "boyfriend, domestic partner, spouse, ongoing lover, or regular partner"; and (c) stated an intention to remain together for at least 12 months; (3) at least one partner self-identified as Latino or Hispanic (i.e., a native or inhabitant of Latin America, a person of Latin American origin living in the United States, a person of Latin American descent born in the United States); (4) at least one partner had limited English proficiency, and both partners were proficient in Spanish; (5) at least one partner reported one or more unprotected acts of anal intercourse in the past year, within or outside the relationship; and (6) at least one partner reported using illicit substances or other drugs/substances not prescribed by a doctor that change mood or thinking in the past 3 months, or drinking more than 4 drinks in a single period or 14 drinks per week in the past 3 months. These or very similar criteria have been used in previous HIV intervention research studies (Wu et al., 2011). Criterion 4, which was related to participants' limited English proficiency, was assessed by asking: "Considering English and Spanish, mark the option that best represents your ability to read, speak, and write in these languages." Responses included: 1 = *Only Spanish*; 2 = *Spanish better than English*; 3 = *Both equally*; 4 = *English better than Spanish*; 5 = *Only English*. Participants answering 1 or 2 met the limited English proficiency criterion.

Potential participants (in conjunction with their main partners) were excluded as a couple if (1) either partner reported the occurrence of one or more incidents of severe intimate partner violence (IPV) within the relationship in the past year as assessed using the Revised Conflict Tactics Scale and reported being in fear or danger as a result of their participation in the study (Greenwood et al., 2002; Tjaden, Thoennes, & Allison, 1999; Waldner-Haugrud, Gratch, & Magruder, 1997; Waterman, Dawson, & Bologna, 1989) or (2) either partner had a language or cognitive impairment that would prevent comprehension of study procedures as assessed during the consent process. Those who disclosed IPV were first asked the following question to determine eligibility: "Would participating in a study that talks about drug and alcohol use, sex, or relationship issues cause you to be concerned about [partner's first name] putting you in danger?" If participant answered "yes," he or she was prompted with the follow-up question: "Given this concern, what could we do to maximize and monitor your safety if you agreed to participate?" In addition, participants were asked, "If we did the following (list of measures suggested by participant and the Principal Investigator [PI]), would you feel safe enough to participate in the study where we talk about drug and alcohol use, sex, and relationship issues with [partner's first name]?" Our rationale to include couples who reported IPV, but who were not in fear or danger, was based on feedback from community stakeholders indicating that IPV affected some of their clients and was an attempt to diversify the sample of couples based on their lived experiences. No adverse events were reported related to IPV.

Ethical Considerations

The study was approved by the New York State Psychiatric Institute Institutional Review Board. It also received a Certificate of Confidentiality from the National Institute of Mental Health.

Procedures

Recruitment. Recruitment was conducted through direct contact, social media, and via community-based organizations serving the needs of Latino MSM. Results have been published elsewhere (Martinez, Wu, Shultz, et al., 2014). Recruitment strategies were evaluated constantly and adjusted. The PI, coinvestigators, research assistant (RA), and consultants met weekly to revise and refine existing study protocols on recruitment, confidentiality, and handling adverse events during the recruitment process.

Screening Measures. The recruitment of a diverse group of couples, with different lived experiences and histories of alcohol and substance use, was required for a successful adaptation process and to strengthen the science of the

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adaptation approach and show validity of the findings. The screening instrument included items related to demographics, alcohol and substance use, sexual experiences and relationship characteristics.

Demographic characteristics included age; country of origin; sexual identity; language spoken, written, and read; and recruitment venue.

Problematic alcohol consumption was assessed using the National Institute on Alcohol Abuse and Alcoholism =assessment: binge drinking (more than four alcoholic drinks on the same occasion on at least 1 day in the past 30 days) and heavy drinking (more than four alcoholic drinks on the same occasion on each of 5 or more days in the past 30 days) (National Institute on Alcohol Abuse and Alcoholism, 2014).

Substance use was assessed by sequentially asking participants to report whether during the prior 3 months they used methamphetamine, marijuana, cocaine in various forms, heroin/other opiates, tranquilizers, other club drugs and stimulants, and nonprescribed erectile dysfunction drugs.

Sexual risk behavior was assessed by asking participants to report the number of male sexual partners. This was followed by a series of questions that prompted the respondent to indicate the number of anal intercourse episodes and the times condoms were used.

Relationship characteristics were assessed by inquiring about length of relationship (dichotomized as 1-12 months or more than 12 months) and about any experience of IPV.

Health services providers completed a brief screening instrument before the session with questions about: gender; professional discipline; education; language spoken, written and read; percentage of Spanish-speaking clients; whether or not they had received any training in serving the health needs of Latino gay couples; major challenges affecting Latino gay couples; barriers with implementing the adapted intervention; and perceptions about the inclusion and integration of biomedical approaches in an adapted, couple-based, HIV/STI prevention intervention.

Data Collection and Analysis. The PI and/or the RA informed potential participants about the study, obtained verbal consent to be screened in a private setting/venue or over the phone, and conducted a screening interview to determine eligibility and willingness to participate. Once a potential participant's eligibility was established, he was asked to invite his main partner to participate. The partner had to contact the PI or the RA to accept invitation to join. Once the partner called or e-mailed the research staff, the PI or the RA conducted the screening. If both of them agreed to participate, they were invited and scheduled for the first intervention adaptation session.

Figure 1. Some of the research staff and community partners getting ready for the intervention adaptation sessions.

The PI and coinvestigators contacted directors from local organizations via phone or e-mail to recruit staff working with Latino gay couples or providing health services to Latino MSM. Directors were provided with information about the study (i.e., through e-mails with details about the study or by providing palm cards and flyers). The directors distributed these communications among staff as appropriate. Staff who showed interest called to inquire about study participation. For agencies with multiple interested providers, the research staff randomly selected one provider from each agency. Preference was given to those who provided direct services and/or referrals to Latino gay couples or Latino MSM. Some of the agencies included the Latino Commission on AIDS, Hispanic AIDS Forum, and Betances.

Prior to enrollment in the study (i.e., participation in the sessions) the PI obtained consent from all participants. The process involved a detailed, verbal description of the consent form's content which included reviewing the aims and procedures of the project, emphasizing the voluntary nature of the study, discussing the possible risks associated with study participation, addressing any privacy and confidentiality concerns, as well as providing participants with emergency contact information. This process was conducted in a group setting, giving the couples and health service providers time to review the terms.

Latino gay couples were then invited to join a series of three intervention adaptation sessions conducted in Spanish and lasting approximately 2 hours each (Figure 1). All the sessions were digitally audiorecorded. The data collection procedures consisted of three sessions with two cohorts, of 9 and 11 couples, respectively. The repeated process with a different set of couples in each cohort ensured the quality/fidelity of the adaptation process. The

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first two sessions involved "theater testing" of core components of the intervention (Wu et al., 2011). In the third session, participants gave feedback on ethical issues associated with participating in a couple-based HIV prevention intervention and the feasibility of a larger scale future study (e.g., eligibility/recruitment rates, attendance and retention rates, barriers to participating in the intervention, safety/adverse events, etc.).

"Theater testing" involved presenting and role-playing core components of the intervention, including key activities and their scripts and homework assignments. The PI and the cofacilitator asked participants for feedback on the scripts, handouts, and other materials. Five note-takers were present during the sessions and recorded any suggestions made by participants. Additional probing elicited particular needs or concerns of the participants that were not included in the intervention activities.

After the two cohorts completed the intervention adaptation sessions, data analysis was conducted. The recordings from the sessions were transcribed and supplemented with the notes made by the note-takers. Since the goal of this qualitative inquiry is to adapt an existing intervention for Latino gay couples, to avoid generating generalizable data, the implementing of an in-depth content analysis was not used (e.g., a grounded theory approach). Rather, the session notes were supplemented with additional transcripts from the recordings. Data from both cohorts were pooled for analysis. The process was guided by tagging and grouping information according to its relevance to specific intervention activities, both from across sessions with a single cohort as well as from across cohorts. Suggestions and recommendations from the two cohorts were grouped and tagged into the activities and homework assignments. For instance, in the "Relationship Myth Facts" exercise, the topic of IPV emerged and couples in both cohorts suggested including information about IPV in this activity; therefore, all information and themes related to IPV were grouped and incorporated into the exercise. Revisions to the core components of the intervention ended when the PI, coinvestigators, RA, and consultants reached a consensus that the resulting intervention had sufficiently incorporated the information gathered from the intervention adaptation sessions (i.e., what the majority of the couples suggested regarding changes to core components of the intervention). This analysis process has been previously used in other intervention adaptation studies (Wu et al., 2010; Wu et al., 2011).

The findings were presented to a single feedback/strategy session with 10 health service providers (i.e., counselors, social workers, and program and agency directors) from community-based organizations serving Latino MSM. The session with health service providers enabled a further understanding of structural barriers and ethical issues that may arise from participating in HIV prevention intervention studies.

Results

Characteristics of Latino Gay Couples

Our study sample consisted of 20 couples (a total of 40 participants) who completed the intervention adaptation sessions. Nine couples, that is, 18 participants, were part of Cohort 1. Eleven couples, that is, 22 participants, were part of Cohort 2. Participant characteristics are reported in Tables 1 and 2. The mean age of Cohort 1 was 35.61, and for Cohort 2 it was 39.23. A large number of study participants were from Mexico, Cohort 1 (N = 6, 34%) and Cohort 2 (N = 5, 23%), self-identified as gay, Cohort 1 (N =15, 83%) and Cohort 2 (N = 18, 82%), and were predominantly Spanish-speaking, Cohort 1 (N = 16, 89%) and Cohort 2 (N = 19, 86%). Transgender-identified, Cohort 1 (N = 2, 11%) and behavioral bisexual participants, Cohort 1 (N = 1, 6%) and Cohort 2 (N = 4, 18%), were well-represented. Participants were recruited from community-based organizations (N = 6, 33% in Cohort 1 and N = 4, 20% in Cohort 2) and social media (N = 8, 45% in Cohort 1 and N = 2, 10% in Cohort 2) and relied on participants' referral (N = 4, 22% in Cohort 1 and N = 16, 70% in Cohort 2).

Most of the participants in Cohorts 1 and 2 reported problematic alcohol consumption, 67% and 71%, respectively. Some participants reported substance use: marijuana use (N = 3, 17% in Cohort 1 and N = 7, 32% in Cohort 2), powdered cocaine and heroin (N = 3, 15% in Cohort 1 and N = 1, 6% in Cohort 1, respectively), and other club drugs (N = 7, 39% in Cohort 1 and N = 10, 45% in Cohort 2). None of the participants in Cohort 1 reported cocaine use and none in Cohort 2 reported heroin use. Mean number of anal sexual intercourse acts in the past 3 months was 34.83 in Cohort 1 and 23.73 in Cohort 2. Mean number of acts where a condom was used from start to finish in the past 3 months was 17.83 in Cohort 1 and 11.50 in Cohort 2. Most of the participants reported at least one act of unprotected anal intercourse in the past 3 months (N = 14, 78% in Cohort 1 and N = 14, 64% in Cohort 2). In addition, most of the participants reported being in a relationship for more than 12 months (N = 10, 55% in Cohort 1 and N = 13, 59% in Cohort 2). Some participants reported IPV (N = 4, 22% in Cohort 1 and N = 4, 18% in Cohort 2).

Characteristics and Observations From Health Service Providers

Characteristics of health service providers are reported in Table 3. Most providers identified research and public

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Table 1. Descriptive Demographic Characteristics of Latino Gay Couples.

Characteristics	$M \pm SD$ or n (%)	
	Cohort 1 (N = 9 couples; 18)	Cohort 2 (N = 11 couples; 22)
Age (years)	35.61 (8.16)	39.23 (8.78)
18-24	1 (6)	1 (5)
25-34	8 (44)	5 (23)
35-44	5 (28)	8 (35)
45-54	4 (22)	7 (32)
≥55	0	1 (5)
Country of origin		
Mexico	6 (34)	5 (23)
Central America		
Salvador	0	1 (4)
Honduras	3 (17)	1 (4)
Guatemala	1 (5)	1 (4)
South America		
Ecuador	0	1 (4)
Colombia	0	6 (27)
Peru	0	1 (4)
Venezuela	3 (17)	1 (4)
Caribbean		
Cuba	3 (17)	2 (11)
Puerto Rico	1 (5)	2 (11)
Dominican Republic	1 (5)	1 (4)
Sexual identity		
Gay	15 (83)	18 (82)
Bisexual	1 (6)	4 (18)
Transgender and transexual	2 (11)	0
Language spoken, written, and read		
Only Spanish	7 (39)	8 (36)
Spanish better than English	9 (50)	11 (50)
Both equally	2 (11)	3 (14)
English better than Spanish	0	0
Only English	0	0
Recruitment venue		
Community-based organization	6 (33)	4 (20)
Hispanic AIDS Forum	0	2 (10)
Betances	2 (11)	2 (10)
BOOM! Health	2 (11)	0
Latino Commission on AIDS	2 (11)	0
LGBT Center		
Social media	8 (45)	2 (10)
Facebook	8 (45)	0
Grindr	0	2 (10)
Friend	2 (11)	8 (35)
Couple Referral	2 (11)	8 (35)

Table 2. Other Descriptive Characteristics of Latino Gay Couples.

Characteristics	$M \pm SD$ or n (%)	
	Cohort 1 (N = 9 couples; 18)	Cohort 2 (N = 11 couples; 22)
Problematic alcohol consumption		
None	6 (33)	5 (23)
Binge	8 (45)	9 (41)
Heavy	4 (22)	8 (36)
Marijuana use in the past 3 months		
Yes	3 (17)	7 (32)
No	15 (83)	15 (68)
Powdered cocaine use in the past 3 months		
Yes	0	3 (15)
No	18 (100)	19 (85)
Heroin use in the past 3 months		
Yes	1 (6)	0
No	17 (94)	22 (100)
Party and club drugs		
Yes	7 (39)	10 (45)
No	11 (61)	12 (55)
Number of sexual partners in the past 3 months	3.11 (2.61)	2.91 (3.22)
0 or 1 partner	7 (39)	12 (55)
>1 partner	11 (61)	10 (45)
Number of anal sexual intercourse acts in the past 3 months	34.83 (27.83)	23.73 (20.15)
Number of acts where a condom was used from start to finish in the past 3 months	17.83 (19.13)	11.50 (11.49)
Risky sexual behavior in the past 3 months		
Reported at least one act of unprotected anal intercourse	14 (78)	14 (64)
Did not report unprotected anal intercourse	4 (22)	8 (36)
Length of relationship		
1-12 months	8 (45)	9 (41)
>12 months	10 (55)	13 (59)
Intimate partner violence		
Reported severe intimate partner violence at least one time	4 (22)	4 (18)
Did not report severe intimate partner violence	14 (78)	18 (82)

health as their main disciplines. All were proficient in Spanish. Most of them reported that between 75% and 100% of their clients were predominantly Spanish-speaking. However, few had had training on gay Latino relationship dynamics and their related health challenges.

When asked to identify the major challenges affecting Latino gay couples, they indicated legal issues, substance

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Table 3. Characteristics and Observations From Health Service Providers.

Characteristics	*M* ± *SD* or *n* (%)
Age, years	35.80 (8.66)
Gender	
Male	8 (80)
Female	2 (20)
Professional discipline	
Research	3 (30)
Public health professional	3 (30)
Wellness and HIV tester/counselor	1 (10)
Case manager	2 (20)
Outreach coordinator	1 (10)
Education	
Some college	2 (20)
Bachelor's degree	2 (20)
Master's degree	5 (50)
PhD/MD	1 (10)
Language spoken, written, and read	
Only Spanish	0
Spanish better than English	3 (30)
Both equally	4 (40)
English better than Spanish	3 (30)
Only English	0
Spanish-speaking clients, %	
0-25	1 (10)
25-50	1 (10)
50-75	0
75-100	8 (80)
Training on serving Latino gay couples	
Yes	2 (20)
No	8 (80)
Major challenges affecting Latino gay couples[a]	
Legal issues (e.g., documentation status, marriage equality, police harassment)	9 (21)
HIV and sexually transmitted infections	6 (15)
Mental health	5 (12)
Intimate partner violence	5 (12)
Childhood sexual abuse	7 (17)
Substance use and/or excessive alcohol consumption	7 (17)
Other	
LGBT stigma	1 (3)
Discrimination within LGBT community	1 (3)
Barriers with implementing adapted intervention[a]	
Limited provider time with patients	5 (31)
Uncertainty about intervention requirements	6 (37)
Limited training	3 (18)
Other	
Recruitment strategies	1 (7)
Legal issues and concerns	1 (7)
Biomedical interventions[a]	
Pre-exposure prophylaxis (PrEP)	10 (26)
Postexposure prophylaxis (PEP)	6 (16)
Medical male circumcision	2 (6)
HIV self-testing kit	5 (13)
Male and female condoms	5 (13)
Treatment as prevention (TasP)	9 (23)
Other	
Substance use prevention	1 (3)

[a]Providers could choose more than one. At the time of the study, none of their agencies had provided HIV self-testing kits or PrEP to their clients.

use and/or excessive alcohol consumption, childhood sexual abuse, HIV and STIs, mental health, and IPV. When asked about the potential barriers to participation in the adapted intervention, they highlighted limited provider time with patients and uncertainty about eligibility requirements. Providers pointed to pre-exposure prophylaxis (PrEP), postexposure prophylaxis, access to HIV self-testing kits, male and female condoms, and treatment as prevention as relevant biomedical interventions for this population. At the time of the study, none of their agencies had provided HIV self-testing kits or PrEP to their clients.

Adaptation Process

Quotes include pseudonyms to protect the identity of participants.

Step 1: Engaging Community Stakeholders. Key concepts in community organization and community-building practice were used to guide the study: critical consciousness, community capacity building, interactive theme selection, and participation and relevance feedback (Goodman et al., 1998). The feedback and guidance of 10 community stakeholders, from the development of recruitment materials to data analysis and strategies, was incorporated into a strategy to disseminate study findings. Specifically, community stakeholders developed culturally and linguistically appropriate recruitment materials that were used in a wide range of venues. Based on feedback from community stakeholders and consultation with the research staff, additional questions were included in the screening instrument to diversify the sample.

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Step 2: Capturing Lived Experiences of Latino Gay Couples. Community stakeholders and research staff developed the guides for the intervention adaptation sessions. The final questions included in the guides were drafted with the intention to capture the needs of our targeted population and to respond to the adaptation methodological approach. Couples were asked to identify lived experiences and mediators that are known to have an impact on health outcomes. Some of these questions included the following: "What does a healthy community look like?" "What factors contribute to a healthy community?" "Tell me about the local gay community?" "What do you think are the most important issues facing your community in New York City?" "What do you think are the major health issues (or risks) for predominantly Spanish-speaking Latinos in same-sex relationships?"

Step 3: Identifying Intervention Priorities. Participants were also introduced to the nominal group technique (Boddy, 2012), which has been used to adapt HIV prevention interventions for Latino MSM before (Rhodes, Daniel, et al., 2013). Participants identified several challenges and prioritized five major issues: mental health, IPV, HIV and STIs, problematic drug and alcohol consumption, and legal problems such as criminal charges and domestic violence complaints, for example,

> When you call the police for domestic violence between two men, the police don't take it seriously, they don't treat it the same as heterosexual couples. (Juan, Cohort 2)

and documentation status, for example,

> Many people won't go and seek out services because they are afraid it will affect their immigration status . . . for fear of being found out as undocumented individuals, they don't seek help. (Pedro, Cohort 2).

The five priority issues identified by participants were later included in the intervention activities and homework assignments. For instance, legal concerns such as those outlined above are now part of the intervention. The adapted intervention provides guidance on how to navigate local counseling, testing, and care services with reference to legal eligibility requirements. Other priorities identified by participants included housing and job assistance, which also are included in the adapted intervention through referrals.

Step 4: Integrating Social Cognitive Theory Into a Relationship-Oriented Ecological Framework for Latino Gay Couples. The *Latinos en Pareja*–adapted conceptual framework integrates components of social cognitive theory (Bandura, 1986) into a relationship-oriented ecological framework (Bronfenbrenner, 1979; Figure 2). The original *Connect* intervention for heterosexual couples and the adapted the *CNU* HIV prevention intervention for African American MSM and their same-sex partners were also guided by social cognitive theory (Bandura, 1986; El-Bassel et al., 2001; El-Bassel et al., 2003; Wu et al., 2010). Thus, following the same theoretical model as *CNU*, intervention activities are designed to increase the following among participants to reduce risky behaviors: *information and knowledge*, which underline accurate appraisal of risks and risk behavior; *outcome expectancies*, which are the perceived costs and benefits of certain behaviors; *social and self-regulatory skills*, which enable one to recognize triggers of risk and enact risk reduction, including reinforcement of health-promoting behaviors; *self-efficacy*, which is the belief in one's ability to implement desired or chosen behaviors; and *social support*, which refers to reciprocal interpersonal influences that increase, decrease, or sustain certain behaviors and behavioral patterns (Table 4).

Analysis of lived experiences was conducted through the lens of the relationship-oriented ecological perspective (Wang, Matthew, Chiu, Yan, & Bellamy, 2007; Wu et al., 2011). Analysis of the data suggests that Latino MSM and their same-sex partners identified and prioritized ontogenic, microlevel, exolevel, and macrosystemic factors affecting health outcomes and lived experiences. Ontogenic factors, which refer to personal factors that are unique to one's development histories and experiences, included perceptions about machismo and gender roles for men, intent to use condoms, language barriers, sexual abuse, and self-reported health status including nutrition and mental health. In particular, machismo seemed to greatly affect couples' communication, for example,

> Even when we are gay men, we are still a part of the macho Latin culture, which influences our way of communicating—making us think that there has to be a winner and a loser in an argument. (Carlos, Cohort 1).

Microlevel factors, that is, interactional and structural factors that are part of the immediate intimate relationship context in which risky sexual activity or protective behaviors take place, included infidelity, lack of trust in relationship, family issues related to disclosure of sexual identity, IPV, and the impact of drug and problematic alcohol consumption on sexual risk in the relationship. Exolevel factors, which refers to external elements or buffers affecting the relationship, included discrimination from health providers and social service institutions, labor and employment discrimination, mistreatment from both the mainstream and Latino communities regarding race and sexual identity, and lack of social support. Macrosystemic factors, which encompass broad cultural

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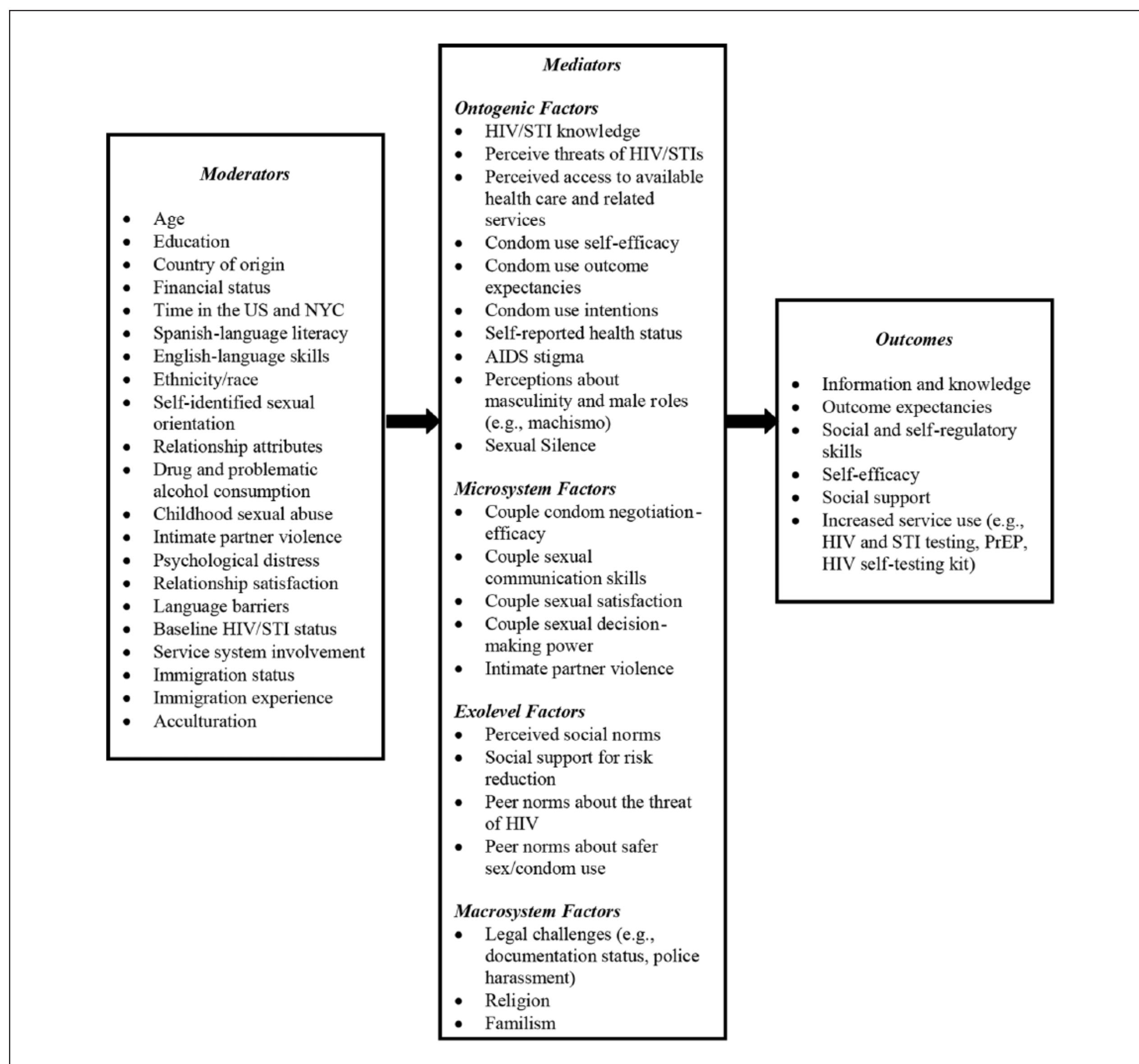

Figure 2. *Latinos en Pareja*–adapted conceptual model.
Note. STI = sexually transmitted infection; PrEP, preexposure prophylaxis.

values and belief systems that shape and interact with all the other analytical factors, included stigma, legal challenges based on immigrant documentation status as well as interactions with local law enforcement (e.g., experiences with the "stop and frisk" policy from the New York City Police Department), "familism" or the cultural value that places emphasis on the connection to nuclear and extended family members for support, emotional connectedness, familial honor, loyalty and solidarity, and finally religion.

Step 5: Adapting Intervention Activities and Materials. Adapting an existing intervention with multiple sessions, where each session also contains multiple exercises, presented a challenge due to the sheer number of activities that had to be systematically revised. However, through theater testing, participants were introduced to intervention activities and assignments.

Participants suggested using direct language for couples, including "mi pareja," "amigos," and "mi esposo." These were useful suggestions to ensure the use of inclusive terminology that takes into account how Latino gay couples define their own relationships in the intervention activities and assignments. In addition, couples were presented with the "Strengthening Communication" exercise. As part of this exercise, couples suggested the inclusion of

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Table 4. *Latinos en Pareja* Modules and Theoretical Constructs.

Modules	Title	Theoretical constructs
1	Introduction to Self-Care	Information/knowledge: self-care in the context of HIV and STI and substance abuse, cultural values that affect the health of Latino MSM and Latino gay couples, impact of intimate partner violence on couples, process of seeking public health services; Outcome expectancies: protecting ourselves and our relationship
2	Communication	Information/knowledge: HIV and STI knowledge, introduce effective communication techniques; Outcome expectancies: acquiring and using condoms and biomedical prevention tools (PrEP, TasP, HIV self-testing kit); Self-efficacy: introducing STEPS to successful goal-setting, positive reinforcement
3	Relationship Strengthening	Information/knowledge: increasing couple's knowledge about power and decision making; Behavioral skills: discussing sex and condom use with sexual partners; Outcome expectancies: exploring alternative safer sex activities; Social support: strengthening couple's safety guidelines
4	Couple Problem Solving	Information/knowledge: exploring perceptions about substance abuse and identifying support for each partner; Outcomes expectancies: increasing safer sex negotiation skills, acquiring skills for dealing with triggers to substance abuse and sexual risk; Self-efficacy: diminishing unhealthy network ties; Social support: identifying social support networks

Note. PrEP = pre-exposure prophylaxis; TasP = treatment as prevention; MSM = men who have sex with men; STI = sexually transmitted infection.

cultural differences in communication styles and language tones and how that might affect communication in the relationship. In the activity regarding "Myths," couples suggested the inclusion of new myths to increase knowledge and information, including IPV, familism, legal issues, gender expression, and stereotypes. In addition, couples suggested the inclusion of PrEP and HIV self-testing kits as well as social media components in the intervention. While they raised some concerns over the side effects of medicine and its long-term impact on health in the case of PrEP, and confidentiality issues and reactions to a positive self-result in the case of the HIV self-testing, they thought that comprehensive information and knowledge about the new biomedical interventions in the earlier sessions could lead to an uptake of these in the later sessions, for example,

> To have self-testing available at any moment, and participants can take it or not take it whenever they want to—as long as the test is accompanied with information and referrals to counseling services. (Domingo, Cohort 1)

Specifically, most of the participants believed that the inclusion of the HIV self-testing kit in the intervention would be an effective tool toward care, for example,

> If I had access to self-test 20 years ago when I saw a friend die of AIDS, I would have gotten tested. But it was the fear and shame of having a doctor tell you to your face, 'You have AIDS, you puto (faggot).' That kept me from going and getting tested. (Yudel, Cohort 1).

Health service providers from a wide range of local AIDS-service agencies provided feedback on the structural barriers to access care and to participating in the study (e.g., suggested updates to couples referral process) and the intervention, as well as the ethical issues and challenges associated with working and serving predominantly Spanish-speaking Latino MSM. Several barriers to participation in the intervention were identified, including isolation of the targeted population from health services, retention, machismo, and the potential challenges with adherence to PrEP. Providers also identified strategies to retain individuals in the intervention and promote adherence to ARV, for example,

> Betances has 93% adherence in patients who use ARV [antiretrovirals], we follow up with them through the phone and maintain a client-centered approach to care and PrEP should be promoted as an incentive to being part of the project, people should have proper knowledge about it. (Health Service Provider, Betances).

Discussion

The enactment of the Affordable Care Act and Medicaid expansion in many states will ensure access to health and HIV care for many. In addition, the U.S. National HIV/AIDS Strategy, issued in 2010, articulates the government's commitment to addressing the HIV epidemic. The National Institutes of Health asked the Institute of Medicine to evaluate current knowledge of the health status of LGBT populations. The Institute of Medicine

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responded with a strong call to advance the understanding of health needs among this population to improve research methods for collecting and analyzing data and increase participation of sexual and gender minorities in research. The commitment from these two agencies to advance research that promotes wellness is a major step in the right direction for combating the HIV epidemic and will make a positive public health impact in LGBT populations.

However, several challenges still lie ahead. The CDC estimates that approximately 1.1 million Americans are living with HIV, and that only one out of four HIV-positive people are successfully navigating the HIV care continuum and getting the full benefits of treatment. Therefore, providing linkage to care and building networks with community stakeholders to reach vulnerable populations are priorities. In addition, while the Affordable Care Act has benefited many uninsured individuals and provide care for those affected by HIV/AIDS, undocumented immigrants are excluded from the act and are still in need of health care services. Thus, the development of new effective methods and interventions to improve delivery of HIV care and promote HIV prevention among high-risk and vulnerable groups is another public health priority. New efforts are needed that combine behavioral and biomedical interventions to prevent new infections among those at highest risk of HIV acquisition.

The *Latinos en Pareja* study represents a promising prevention intervention with the potential to fill a critical gap in HIV treatment, prevention, and linkage to care. All the couples involved expressed their desire to contribute to a couple-based approach that promotes health and wellness, for example,

> I have never seen a couple-based program—they usually focus on the individual gay man and We need to help Latino gay couples with having a long-term healthy relationship and provide tools to deal with HIV. (Sebastian, Cohort 2)

Latinos en Pareja incorporates elements that effective HIV prevention interventions share, including (1) incorporating locally collected ethnographic data and tailoring content to a defined audience; (1) having a solid theoretical foundation; (3) hosting multiple sessions; (4) increasing risk reduction norms, sexual communication skills for couples, and social support; and (5) clarifying how to use available culturally and linguistically appropriate services (Darbes, Kennedy, Peersman, Zohrabyan, & Rutherford, 2001; Herbst et al., 2005; Herbst et al., 2007; Janz et al., 1996; Johnson et al., 2008; Lyles, Crepaz, Herbst, & Kay, 2006; Lyles et al., 2007; Vergidis & Falagas, 2009; Williams, Ramamurthi, Manago, & Harawa, 2009). In light of the new biomedical advances and feedback from Latino gay couples, the intervention includes biomedical approaches, including building a comprehensive approach to care by ensuring that participants are aware of, have knowledge about, and have access to PrEP, treatment as prevention, and HIV self-testing kits. The intervention also incorporates biomarkers for STI and social media tools.

The intervention adaptation sessions also served as an assessment tool for the needs and experiences of Latino gay couples. Participants identified unique factors that affect health outcomes among this population. In particular, familism played a key role in shaping the experiences of Latino gay couples. One strength of familism is that it may protect against psychological distress (Garza & Watts, 2010; Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987). However, most of our sample participants also described the way that the family structure could become a force of rejection and shame brought about the inability to live up to family's expectations due to their sexual identity, for example,

> I have a lot of friends who are here, alone, undocumented and they can't communicate with family because their family doesn't accept the fact that they are gay. This is a very unique challenge that is specific to our community. (Julian, Cohort 1)

In addition, the intervention adaptation sessions went beyond "adaptation" and "assessment" as couples were able to share information and strategies to better address their own needs and concerns, including effective communication techniques, for example,

> Another way to listen effectively is to give feedback to your partner, a small recap of what you just heard, and asking little questions to clarify what the other partner is saying. (Dagoberto, Cohort 1)

One particular topic highlighted by the couples that was not part of the original *Connect n' Unite* intervention was the issue of IPV. While reducing IPV is not one of the major aims of the intervention, the topic now has been integrated into the adapted intervention through intervention activities and homework assignments. In addition, the relationship between IPV and HIV risk behaviors and sexual health outcomes is explored. There are clear challenges in addressing this concern as part of the intervention, including potential ethical and safety issues. However, the presence of a trained facilitator to moderate the adapted intervention and the nonintrusive way topics are incorporated into the intervention activities help minimize any potential harms.

Participants in the intervention adaptation sessions were connected to resources and programs in the

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community. For instance, the cofacilitator, a community partner running care coordinator programs at a New York-based AIDS service organization, the Latino Commission on AIDS, introduced self-disclosed HIV-positive participants to a newly implemented program at Latino Commission on AIDS called "Positive Relationships for HIV-positive Individuals." In addition, all participants received a list of updated social services and health resources in the community written in Spanish, including information about legal aid agencies and food pantries. Participants also benefited from the sessions by connecting to other couples; in particular, those in the second group suggested and developed a "talent resource" list where they shared their contact information and skills for networking purposes. Couples also inquired about the possibility of receiving a certificate of completion as a reflection of completing the three sessions. The PI followed up with the participants and provided them with an acknowledgment certificate for completion of the sessions.

The session with providers also served as a venue to disseminate preliminary findings from the study, including quantitative findings from the 241 screenings conducted. Health service providers acknowledged the need to promote new biomedical interventions including PrEP, deliver culturally and linguistically appropriate services, and expressed confidence in the feasibility of the implementation of the intervention, for example,

> More education in Spanish should be delivered to Latino gay couples. Research like this are very important for us providers and the Latino community as whole since we are updated about the latest advances in science and prevention strategies. (Health Service Provider, Harlem United)

Issues with time and budgetary constraints associated with many efforts to adapt evidence-based interventions were overcome. Building on the previous success of our research team in adapting interventions for Latino MSM and Latinas (Martinez, Roth, Kelle, Downs, & Rhodes, 2014) and same-sex couples (Wu et al., 2010), the recruitment, engagement and adaptation of a couple-based HIV prevention intervention, and dissemination of the study findings was completed in just 6 months. The research team, composed of culturally compontent members and a self-identified gay Latino immigrant as the PI, relied on the existence and availability of experts in couple-based HIV prevention approaches and adaptation processes, as well as community stakeholders from diverse backgrounds who were available and willing to lend support to the project. All these factors contributed to the successful adaptation of the intervention for Latino couples and, furthermore, point to the promise of conducting future research that will respond to the health disparities faced by this particular group.

Limitations

Although an attempt was made to preserve the key components of the original intervention, there is no guarantee that the adaptation preserved the efficacy demonstrated in its original form. Given the qualitative nature of the study, the data are dependent on the interactions between couples in the focus groups and the group facilitator and cofacilitator. To minimize this limitation, two diverse cohorts of couples were recruited to run through the adaptation sessions, thereby allowing us to collect information/suggestions not provided by the first cohort. Finally, the providers recruited from health service organizations may not be representative of all providers who serve Latino MSM and sexual minority immigrants in the city even though their agencies are among the largest. Our research and community partners are currently working on a subsequent grant to obtain preliminary evidence and insight regarding the feasibility of the adapted intervention (e.g., recruitment, retention) and its potential efficacy. The adaptation process and the subsequent pilot testing represent crucial first steps in the trajectory of providing service providers and community-based organizations with a couple-based HIV/STI prevention intervention to serve the needs of Latino MSM and their same-sex partners.

Conclusions

To our knowledge, this is the first report in the empirical literature regarding the adaptation of an evidence-based intervention for Latino MSM and their same-sex partners. In the United States, the HIV epidemic continues to be a major health concern affecting Latino MSM and Black MSM, particularly young MSM in inner cities and men in same-sex relationships. Therefore, this project sought to develop a collaborative approach to adapt a couple-based HIV/STI prevention intervention for Latino MSM and their same-sex partners. Latino gay couples provided culturally and linguistically appropriate information that enabled the successful adaptation while still maintaining the core components of the original intervention. Participants in this adaption study strongly supported the resulting intervention and stressed the need for further couple-based biomedical HIV prevention interventions, especially for serodiscordant couples. Despite the logistical challenges identified by health providers in the potential implementation of the intervention, including limited time and uncertainty about intervention requirements, the adapted intervention was perceived as relevant and timely by Latino gay couples and providers to address key health disparities affecting the target community. The systematic adaptation approach described in this article can be similarly used by other researchers and community stakeholders to adapt other evidence-based

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interventions that promote wellness and disease prevention among vulnerable populations.

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