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## Can additive measures add to an intersectional understanding? Experiences of gay and ethnic discrimination among HIV- positive Latino gay men

Carol A. Reisen<sup>1</sup>, Kelly D. Brooks<sup>2</sup>, Maria Cecilia Zea<sup>1</sup>, Paul J. Poppen<sup>1</sup>, and Fernanda T. Bianchi<sup>1</sup>

<sup>1</sup>Department of Psychology, George Washington University, Washington, DC

<sup>2</sup>Department of Psychology, Roger Williams University, Bristol, RI

### Abstract

The current study investigated a methodological question of whether traditional, additive, quantitative data can be used to address intersectional issues, and illustrated such an approach with a sample of 301 HIV-positive, Latino gay men in the U.S. Participants were surveyed using A-CASI. Hierarchical logistic set regression investigated the role of sets of variables reflecting demographic characteristics, gender nonconformity, and gay and ethnic discrimination in relation to depression and gay collective identity. Results showed the discrimination set was related to depression and to gay collective identity, as was gender nonconformity. Follow-up logistic regression showed that both types of discrimination were associated with greater depression, but gender nonconformity was not. Gay discrimination and gender nonconformity were positively associated with gay collective identity, whereas ethnic discrimination was negatively associated. Results are discussed in terms of the use of traditional quantitative data as a potential means of understanding intersectional issues, as well as of contributing to knowledge about individuals facing multiple structural inequalities.

### Keywords

intersectionality; Latino; gay; discrimination; depression; identity

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Latino gay men in the U.S. who have sex with men experience multiple simultaneous social identities, roles, and oppressions (Díaz, Ayala, Bein, Henne, & Marin, 2001; Díaz, Bein, & Ayala, 2006). The conceptual framework of intersectionality provides a way to understand such complex social conditions, identities, and phenomena (Cole, 2009). It posits that multiple social categories such as gender, sexual orientation, and ethnicity are not independent; rather, their meanings and consequences interact and mutually shape and affect each other (Collins, 1991; 2000; Crenshaw, 1994; Shields, 2008). Thus, the combination of social identities produces “qualitatively different meanings and experiences” (Warner, 2008, p. 454).

Most intersectional research has used qualitative methods, and the difficulty of adequately addressing complex, multi-faceted influences with quantitative methods has been discussed (e.g., Shields, 2008). In a thought-provoking article, Bowleg (2008) argued that the multidimensionality and interdependence inherent in an intersectional framework is

incompatible with the positivist view and statistical assumptions of quantitative research. Furthermore, she noted that quantitative research often fails to employ truly intersectional approaches, even when attempting to do so. For example, the examination of different types of discrimination experiences is seen as intrinsically additive in the assumption that one can separate—and then add or multiply—such experiences. Although we recognize that it is sometimes impossible for individuals belonging to multiple stigmatized social categories to know the aspect of identity that is the cause of discrimination or oppression (Pastrana, 2010; Weber & Parra-Medina, 2003), we argue that such separate measures can be analyzed in a manner that furthers understanding of the lived experience of multiply marginally individuals.

This study uses quantitative methods to examine associations of discrimination experiences and gender nonconformity with mental health and gay collective identity in a U.S. sample situated at the intersection of Latino ethnicity, gay sexual orientation, male gender, and positive HIV-serostatus. A major question is methodological: Can traditional, additive, quantitative data be used to increase understanding of the experience of a particular intersection of identities? Using data that were not originally conceptualized in an intersectional manner, we present an approach and findings that we believe could potentially contribute to intersectional thinking. We examine how discrimination experiences and gender nonconformity are related to a positive and a negative outcome among Latino, HIV-positive, gay men.

## Discrimination and Mental Health

Latino gay men encounter multiple sources of oppression in their daily lives, due to their stigmatized sexual orientation as well as their ethnicity. Gay men are frequent targets of prejudice and discrimination (e.g., Huebner, Rebchook, & Kegeles, 2004), including in the Latino community (Bauermeister, Morales, Seda, & González-Rivera, 2007; Bruce, Ramirez-Valles, & Campbell, 2008; Díaz et al., 2001). Furthermore, regardless of sexual orientation, Latinos in the U.S. face discrimination (Pérez, Fortuna, & Alegría, 2008).

Gender nonconformity puts gay men at additional risk for discrimination, harassment, and victimization, particularly as youth (D'Augelli, Grossman, & Starks, 2006; D'Augelli, Pilkington, & Hershberger, 2002; Landolt, Bartholomew, Saffrey, Oram, & Perlman, 2004). The stigma associated with effeminacy in men is also found within the gay community (Logan, 2010; Sánchez & Vilain, 2012; Skidmore, Linsenmeier, & Bailey, 2006; Taywaditep, 2001). In addition, anti-effeminacy has been found among Latinos in the U.S., as seen in attitudes about desirable characteristics of sexual partners in qualitative research with Brazilian, Colombian, and Dominican immigrant men who have sex with men (MSM) (Bianchi et al., 2010).

An association between gay sexual orientation and mental health problems has been found in large U.S. studies that included Latinos (Cochran, Mays, Alegria, Ortega, & Takeuchi, 2007; Mills et al., 2004; Remafedi, French, Story, Resnick, & Blum, 1998; Russell & Joyner, 2001). A minority stress perspective explains this elevated risk for psychological distress among gay people in terms of stressors specific to being gay, such as discrimination and fear of rejection (Brooks, 1981; Meyer, 2003). A recent meta-analysis provided strong evidence of a negative effect of discrimination—of any type—on a variety of mental health indicators (Pascoe & Richman, 2009).

Thus, Latino gay men are at increased risk of psychological distress due to discrimination arising from their sexual orientation and ethnicity. Associations have been found between gay discrimination and negative mental health outcomes in mixed and Latino samples in the U.S. (D'Augelli et al., 2006; D'Augelli et al., 2002; Díaz et al., 2001; Díaz et al., 2006;

Huebner et al., 2004). In addition, gender nonconformity has been associated with psychological distress (D'Augelli et al., 2006; Skidmore et al., 2006), and this effect was mediated by anti-gay discrimination among Latinos (Sandfort, Melendez, & Diaz, 2007) and youth (Toomey, Ryan, Diaz, Card, & Russell, 2010). Poor mental health has also been linked to ethnic discrimination among Latinos, including gay men (Chou, Asnaani, & Hoffman, 2011; Díaz et al., 2001; Torres & Ong, 2010; Zea, Reisen, Poppen, Echeverry, & Bianchi, 2005).

A probability sample in three U.S. cities found that 36% of the Latino gay men reported experiences such as being called names or being beaten up because of their race or ethnicity (Ibañez et al., 2009). A separate measure capturing experiences of racism in the gay community included several less severe situations, such as feeling uncomfortable in a gay bar with white patrons or being turned down for sex due to ethnicity. Nearly three fifths of the Latino MSM reported experiencing this type of discrimination in the gay community (Ibañez et al., 2009). An understanding of the multiple challenges facing Latino gay men and others with intersecting stigmatized identities relative to sexual orientation and race/ethnicity is critical to effective and ethical clinical practice serving these individuals (Constantine, 2002; Sager et al., 2001; Wynn & West-Olatunji, 2009). Furthermore, it has been argued that counseling approaches should be informed by conceptual models addressing the complex influences of individuals' multiple social communities (Wynn & West-Olatunji, 2009). For example, Morales (1995) developed a model that focuses on the process of identity integration among Latino gay and bisexual men through five psychosocial states, highlighting the conflicting pressures and allegiances arising from the multiple aspects of identity, and he applied the model to counseling with couples and families.

## Discrimination and Group Identification

Although the negative impact of discrimination is pervasive and evident, qualitative research with an intersectional framework has shown that experiences of oppression can sometimes lead to a greater connection between a person and his or her community, and potentially to social action on behalf of the group (Pastrana, 2010). Previous research based on social identity and social categorization theories (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) indicated that experiences of group-based discrimination or devaluation can result in intensified identification with the group as a means of coping with the threat of rejection (Branscombe, Schmitt, & Harvey, 1999; Schmitt, Spears, & Branscombe, 2003). Similarly, ethnic identity functioned as a stress buffer moderating the depressive effects of discrimination among Latinos: depression on the day following discrimination experiences was less intense among individuals with greater Latino identity commitment (Torres & Ong, 2010). Better mental health has also been found to be associated with identification as gay among MSM (Mills et al., 2004) and with active involvement in the gay community among Latino gay men (Ramirez-Valles et al., 2005).

Individuals who are easily recognized as members of a stigmatized group are more likely to encounter discrimination; however, they may also develop a stronger identification with the group and thereby access social support from the group (Kaiser & Wilkins, 2010). Similarly, gay men who are more likely to be perceived as gay, such as more effeminate men, would be expected to experience more anti-gay discrimination—an effect that has been found (D'Augelli et al., 2006; D'Augelli et al., 2002; Landolt et al., 2004). In addition, such men would be likely to identify more strongly with the gay community.

## Quantitative Methods and Intersectional Research

Previous authors have suggested that structural equation modeling (SEM) provides a statistical approach that enables simultaneous consideration of multiple variables, which is compatible with an intersectional approach (DeBlaere, Brewster, Sarkees, & Moradi, 2010). We offer another strategy, hierarchical logistic set regression, which allows for an ordinal dependent variable and multiple, overlapping explanatory variables grouped together within sets, without assumptions about their independence, additive effects, or distributions. Because SEM requires a large sample size and often both model and equivalent model specifications (Kline, 2010), hierarchical set regression presents a useful alternative. In addition, the use of the logistic form of hierarchical set regression does not require normality of the predictors or outcomes, homoscedasticity across groups, or a linear relationship between predictors and outcomes (Tabachnick & Fidell, 1996).

Set regression applies the approach used in multiple regression with single independent variables to an analysis containing sets of independent variables (Cohen & Cohen, 1983). Similarly, logistic set regression is an extension of the traditional logistic regression that uses sets of variables rather than single independent variables. A set is a group of variables that are related in some substantive way. Frequently, the variables within a set are correlated (Cohen & Cohen, 1983), such as when a construct such as socioeconomic status is captured in a set containing education, income, and professional ranking.

Hierarchical logistic set regression enables an incremental approach, thus providing information about the additional explanation accounted for by each subsequent set. This method is useful for examining the impact of a particular variable set, while controlling for other sets that might be causally related to that set. For example, previous research suggests that gender nonconformity leads to greater experiences of discrimination (Sandfort et al., 2007; Toomey et al., 2010). The hierarchical approach allows one to investigate first the impact of gender nonconformity on an outcome, and then to control for gender nonconformity when examining the impact of discrimination experiences. The test of whether a set provides significantly greater explanation beyond the previous set is calculated as the difference in the  $-2 \log$  likelihood of the two models, distributed as a Chi-square with degrees of freedom equal to the difference in the degrees of freedom for the two models (Hosmer & Lemeshow, 1989).

In the hierarchical logistic set regressions of this study, we examine the relationships of the set of discrimination indicators (discrimination due to ethnicity and discrimination due to sexual orientation) to two separate outcome variables: depression and gay collective identity. Because the set reflects both the shared and the unique associations of the two discrimination indicators with the outcome variable, the experience of discrimination is treated as a whole. The inevitable misattributions arising from our additive questions are rendered less problematic. The approach is also consistent with the view that social identities and associated discrimination cannot be ranked in order of importance, because they vary depending on contextual circumstances (Warner, 2008).

This analysis is then followed by a traditional logistic regression containing all the individual variables of the sets, which enables us to examine the unique contribution of each, controlling for all other variables in the model. Obviously, this analysis is far from novel: it reflects a traditionally additive conceptualization. We argue, however, that the combination of the analytic strategies provides a fuller picture of the inter-relationships. We do not claim that the approach used here overcomes all the problems of doing quantitative intersectional research, but we present it as a possible way to gain insight into issues of importance in multiply marginalized groups, such as Latino gay men.

## Hypotheses

Model 1 concerns depression and encompasses Hypotheses 1 and 2. Hypothesis 1 posits that gender nonconformity will provide additional explanation of depression, beyond what is explained by the demographic set. Specifically, we anticipated that individuals who were more gender-nonconforming in self-presentation would be more depressed, in keeping with research on gender nonconformity (D'Augelli et al., 2006; Skidmore et al., 2006). Hypothesis 2 posits that the discrimination set will contribute to the explanation of depression beyond that achieved by the first two sets. In line with previous findings (D'Augelli et al., 2006; D'Augelli et al., 2002; Diaz et al., 2001; Diaz et al., 2006; Huebner et al., 2004), we expected that greater experiences of discrimination would be related to greater depression.

Model 2 focuses on gay collective identity and includes Hypotheses 3 and 4. Hypothesis 3 posits that gender nonconformity will provide additional explanation of gay collective identity beyond that afforded by demographic sets. Based on previous research with racial minorities (Kaiser & Wilkins, 2010), we anticipated that men whose presentation was more gender-nonconforming would be more likely to have greater gay identification. Hypothesis 4 is that the last set, which includes both discrimination variables, will provide additional explanation of gay collective identity, beyond what was explained by control variables and gender nonconformity. We anticipated that the set would make a significant contribution, but that the effect would be largely due to discrimination associated with being gay or effeminate, as previous findings have indicated a link between group-based discrimination and group identification (Pastrana, 2010).

An intersectional approach assumes that the combination of multiple characteristics or conditions can result in substantially different effects than those characteristics do separately; therefore, we included a final exploratory question concerning the interaction of gay discrimination by ethnic discrimination. In both models, follow-up logistic regression tested whether the interaction provided additional explanation of either depression or gay collective identity, after controlling for other variables in the model.

## Method

### Participants

The sample for this research consisted of 301 HIV-positive Latino gay men recruited for a study of disclosure of HIV status among Latinos in the U.S. (Zea et al., 2005). Participants were recruited from clinics, hospitals, and community agencies serving HIV-positive or gay men in New York City, Washington, DC, and Boston. Eligibility criteria required participants to be Latino/Hispanic, 18 years or older, HIV-positive, biologically male, and to have had sex with men.

The mean age for the sample was 41 years (s.d.= 8.9), with a range from 23 to 62. The vast majority of participants were immigrants: only 9% reported being born in the United States. Participants came from over 20 countries, with the largest concentrations from Puerto Rico (20.2%), Colombia (16.6%), Mexico (10.6%), Venezuela (7.0%), and El Salvador (6.6%). Education level varied, with 22% reporting less than a high school degree, 32% having finished high school, a GED, or trade school, and the remaining participants completing at least some college. Income was low: 71% of participants earned less than \$800 per month and only 3% earned more than \$2,400.

## Procedure

Computer-assisted self-interview technology with audio enhancement (A-CASI) and touch-screen responding was used to administer the survey. Depending on their preferences, participants completed the survey in English or Spanish, at research institutions or recruitment sites, and individually or in small group sessions of up to five participants. They received a written consent form (in both English and Spanish), which was also presented and discussed orally. Those choosing to participate then signed the form. Participants were reimbursed \$50 for completing the survey and, \$15 for transportation, and were given information about local HIV/AIDS resources. The study was approved by and conducted in compliance with the university's Internal Review Board. Additional details regarding procedures for survey administration, translation of items, and measure development can be found in previous articles (Zea et al., 2005; Zea, Reisen, Poppen, Bianchi, & Echeverry, 2007).

## Measures

The present article focuses on a subset of the data concerning discrimination, gender nonconformity, mental health, and gay identity. Questions were translated and back-translated to ensure language equivalence, and were reviewed by native speakers from different Spanish-speaking countries to ensure universal Spanish. Survey measures relevant to the current analyses include the following:

**Gay discrimination**—A 7-item scale adapted from Díaz et al. (2001) assessed experiences of discrimination due to being gay or effeminate, including being made fun of, being beaten up, or losing a job. Sample items include: “As an adult, how often were you made fun of or called names for being homosexual or effeminate?” and “How often have you lost a job or a career opportunity for being homosexual?” Response options ranged from 1 (never) to 4 (many times). Cronbach's alpha for responses to items on the gay discrimination scale was .77.

**Ethnic discrimination**—A 7-item scale based on the National Survey of Functional Health (Ren, Amick, & Williams, 1999) was used to assess experiences of discrimination due to race or ethnicity in different situations. A sample item is, “How often have you experienced unfair treatment, been prevented from doing something, or been made to feel inferior because of your race or ethnicity at school?” Similar wording was used in questions concerning six other situations: getting a job, at work, getting medical care, getting housing, from the police or in court, on the street or in a public setting. A Likert response scale ranged from never (1) to many times (4). Cronbach's alpha for responses to items on the scale was .90.

**Gender nonconformity**—Four items created by the authors assessed gender nonconformity in self-presentation. This scale was conceptualized as capturing nonconformity to hegemonic masculinity in the areas of gender and sexual orientation presentation, and it assessed the extent to which participants perceived themselves as presenting as masculine and heterosexual. The items reflected concerns voiced by participants in our previous qualitative work with Latino gay men. Using a 5-point scale (1 = strongly agree, 5 = strongly disagree), participants rated their agreement with the following statements: “I see myself as a masculine man,” “My mannerisms are feminine,” “I can pass as a heterosexual guy,” and “People can tell I'm gay.” A scale score was computed with items reverse-scored as needed so that higher scores indicated greater gender nonconformity. Cronbach's alpha for responses to items on this scale was .76.

**Depression**—Participants completed the short form of the Beck Depression Inventory (BDI; Beck & Beck, 1972; Beck, Steer, & Garbin, 1988), a 13-item scale in which higher scores indicated greater depression, with a response range from 1 to 4. The short form has been shown to be highly correlated with the long form of the BDI, to have concurrent validity with other depression measures, and to have construct validity with other indicators related to depression (Beck et al., 1988). Moreover, responses to items on the short form have previously been found to be internally consistent in a sample of Latino gay men and lesbians in the U.S. (Zea et al., 1999). In the current study, Cronbach's alpha for responses to items on this depression scale was .91.

**Gay collective identity**—Luhtanen and Crocker (1992) described the concept of collective identity as reflecting a person's self-concept based on social group membership. Based on this conceptualization, we developed a 7-item scale of gay collective identity. Some items were modified from Luhtanen and Crocker's (1992) collective self-esteem scale to apply specifically to gay men (e.g., "Being gay is an important part of who I am"). For other items, we tried to capture the feeling about the social group by using wording that we had heard from Latino gay male participants in our previous qualitative research (e.g., "I like to be in communities that are predominantly gay"). Items were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items were reverse-scored as needed, and a scale score was computed in which higher scores indicated more positive gay collective identity. Cronbach's alpha for responses to items on this scale was .78.

**Demographic variables**—Four demographic variables reflected age (in years), education, income, and region of birth. Education was assessed with eight categorical responses ranging from "did not finish grammar/elementary school" to "graduate degree." Because it was difficult to determine an appropriate ordering of some of the educational categories (e.g. vocational school vs. high school or GED), in the analyses education was dichotomized as less than college and at least some college. Monthly income was assessed with seven categorical responses ranging from less than \$400 to more than \$4001. For the analyses, the first two categories were collapsed in order to create six-point spread in increments of \$800. Region of birth was reflected in three dummy variables that indicated if the person was born in South America, Central America or Mexico, or the Caribbean. The reference group included those born in the U.S.

## Results

Descriptive analyses investigated bivariate relationships among the variables. Spearman correlations, presented in Table I, were used to examine several potential control variables. Age, education, income, and region of birth were assessed for their relationships to depression and gay collective identity. In the hierarchical logistic set regressions, we used only those control variables that had significant bivariate relationships to the outcome. Education was correlated with both depression and gay collective identity, and therefore it was included as a control variable in both logistic regressions. In addition, age and region of birth were used as control variables in the analysis of gay collective identity, because of their significant bivariate relationships. As anticipated, the two indicators of discrimination were highly correlated with each other ( $r=.59$ ).

We performed logistic regression with ordinal outcomes because neither depression nor gay collective identity was normally distributed, even after various transformations were applied. The ordinal variables had four levels and Spearman correlations of .90 with their corresponding original continuous variable. There were no missing data on the variables used in the analyses.

Hierarchical logistic set regression examining associations between three sets of explanatory variables and depression was performed to test Hypotheses 1 and 2. In keeping with analytic strategies for hierarchical regression (Cohen & Cohen, 1983), the order of entry of sets was determined conceptually and based on presumed causal priority. As indicated in top portion of Table II, the overall model for Set 1 containing the demographic variable of education was significant ( $\chi^2(1) = 4.60, p < .05$ ), with higher education associated with less depression. In the second step, the overall model including Set 2 was also significant ( $\chi^2(1) = 10.26, p < .01$ ), as was the change in the -2 Log Likelihood ( $\chi^2(2 - 1) = (824.0 - 818.7) = 5.3, p < .05$ ), indicating that gender nonconformity added to the explanation of depression. Those men who presented as less masculine and more overtly gay were more likely to be depressed. This finding supported Hypothesis 1. The third step tested Hypothesis 2 and involved the addition of Set 3 containing the two discrimination variables. Again, the overall model was significant ( $\chi^2(1) = 44.25, p < .0001$ ), as was the change in the -2 Log Likelihood ( $\chi^2(4 - 2) = (818.7 - 783.0) = 35.7, p < .0001$ ). Thus, as hypothesized, the inclusion of discrimination experiences provided additional explanation of depression, beyond the aspects of depression already explained by the demographic characteristics and gender nonconformity.

The bottom portion of Table II shows the final model including all variables from the three sets in a simultaneous logistic regression. Because this analysis reflects the unique association of each variable to depression controlling for all other variables in the model, the findings for each of the two discrimination variables, for example, can be interpreted as arising from the portion of the relationship to depression that is not shared with the other. In contrast, the hierarchical set approach showed the joint association of the two variables with depression, including both their shared and unique contributions. Results indicated that greater experiences of discrimination, both due to sexual orientation and due to ethnicity, were associated with greater depression. Education was also significantly related to depression, with higher education associated with lower depression. Gender nonconformity was not significant in this model, indicating that it did not have a unique contribution to the explanation of depression in a model that also included the discrimination variables. It is important to note that interpretation of the results from the simultaneous logistic regressions requires caution because of the high inter-correlations among members of a set.

Because the findings concerning gender nonconformity were consistent with the mediational model described in the literature (Sandfort et al., 2007; Toomey et al., 2010), we performed follow-up analysis to determine if the data replicated the finding that gay discrimination mediates the effect of nonconformity on depression. Using the approach described by Baron and Kenny (1986) but adapting it to logistic regression, we tested four simultaneous logistic models controlling for education and found that: 1) greater gender nonconformity was related to greater depression (Wald  $\chi^2(1) = 5.51, p < .05$ ); 2) greater gender nonconformity was related to greater gay discrimination (Wald  $\chi^2(1) = 17.10, p < .0001$ ); 3) greater gay discrimination was related to greater depression (Wald  $\chi^2(1) = 29.32, p < .0001$ ); and 4) the association between gender nonconformity and depression was not significant (Wald  $\chi^2(1) = 1.14, p = .29$ ) when gay discrimination was also an explanatory variable in the model. These four conditions met the criteria to demonstrate mediation, and thus replicated the previous research.

Table III shows the analyses for gay collective identity. Again, the top portion of the table shows the results of the hierarchical logistic set regression. The demographic set, which was entered in the first step, included both age and education. The overall model was significant ( $\chi^2(2) = 20.71, p < .0001$ ), as was the overall model for step 2, which also included the region of birth set ( $\chi^2(5) = 27.83, p < .0001$ ). Although region of birth is also demographic characteristic, the three dummy variables reflecting region of birth were entered in a



separate set (Set 2), in keeping with a common use of the set approach (Cohen & Cohen, 1983). The change in the  $-2 \text{ Log Likelihood } (\chi^2(5 - 2 = 3) = (803.3 - 795.7 = 7.6), p < .06)$  was not quite significant, thus indicating that the set reflecting region of birth failed to provide substantial explanation of gay collective identity beyond that achieved by Set 1. Set 3, including the single variable of gender nonconformity, was added in the next step. Again, the overall model was significant ( $\chi^2(6) = 40.74, p < .0001$ ), as was the change in the  $-2 \text{ Log Likelihood } (\chi^2(6 - 5 = 1) = (795.7 - 781.8 = 13.9), p < .0001)$ , thus supporting Hypothesis 3 that gender nonconformity would provide additional explanation of gay collective identity beyond the demographic characteristics. Finally, in step 4, the discrimination set was entered. The overall model ( $\chi^2(8) = 52.63, p < .0001$ ), and the change in the  $-2 \text{ Log Likelihood } (\chi^2(8 - 6 = 2) = (781.8 - 767.3 = 14.5), p < .001)$  were significant. This finding supported Hypothesis 4, that the set of discrimination variables would contribute to the explanation of gay collective identity, beyond gender nonconformity and demographic characteristics of age, education, and country of birth.

The bottom portion of Table III gives the results from the simultaneous logistic regression for individual variables from all four sets. Results indicated that greater experiences of gay discrimination and gender nonconformity were associated with higher gay collective identity, whereas discrimination due to being Latino was associated with lower gay collective identity. Moreover, younger age and higher education were associated with stronger gay identity. None of the region of birth variables showed significant unique relationships with gay collective identity.

Additional analyses were performed to examine whether there was a multiplicative effect of the two types of discrimination. The interaction of gay and ethnic discrimination was included as an additional variable in both simultaneous logistic regressions. The interaction was not significantly associated with either depression or gay collective identity.

## Discussion

Calls for more quantitative, intersectional research have been issued, sometimes in the same articles that explicate the inherent challenges to capturing truly intersectional conceptualizations with quantitative methods (e.g., Bowleg, 2008; Cole, 2009). The current study represents an attempt to use existing quantitative data to address intersectional issues. The study was not originally conceived within an intersectional framework, and the variables used were additive in nature. Despite these conditions, we believe that the data presented here provide some insight relevant to a group rooted in social categories of Latino ethnicity and gay sexual orientation, and therefore the study supports the idea that it is possible to use additive, quantitative data to increase understanding of intersectional issues.

Consistent with previous research, this study supported the minority stress explanation, which argues that the stigma and inferior social status experienced by individuals belonging to minority-group social categories can lead to mental and emotional distress (Brooks, 1981; Meyer, 2003). The men in this study were vulnerable to stigmatization and negative bias based on multiple aspects of their social identities: sexual orientation, ethnicity, and HIV status. In addition, to varying degrees they were gender non-conforming in their self-presentation. Findings indicated that experiences of discrimination were related to depression, as has been reported previously (Chou et al., 2012; Díaz et al., 2001; Díaz et al., 2006; Huebner et al., 2004; Torres & Ong, 2010). Moreover, both types of discrimination contributed to this result, as both were related to depression in the model examining the effect of individual variables controlling for all other variables in the model. This finding is consistent with previous research linking discrimination experiences and negative mental health, regardless of the type of the discrimination (Pascoe & Richman, 2009).

Gender nonconformity, indicated by less masculine and more overtly gay self-presentation, was associated with greater likelihood of depressed mood in the hierarchical set model, which is also consistent with a minority stress perspective; however, the relationship was not significant in the simultaneous model including discrimination experiences. Our results replicated an explanation of this finding from the literature (Sandfort et al., 2007; Toomey et al., 2010): gay discrimination mediated the relationship. Thus, gender nonconformity was associated with increased gay discrimination, which in turn was associated with greater depression.

We argue that findings from the analysis of gay collective identity illustrate the type of contribution to understanding intersectional issues that is possible even when using an additive conceptualization of experiences of discrimination due to different social categories. As predicted based on Kaiser and Wilkins (2010), those men who were more gender nonconforming in their self-presentation as masculine and heterosexual would tend to be seen as more prototypically gay, and they showed stronger gay collective identity. In addition, we found greater gay collective identity among those individuals who reported more experience of gay discrimination. This finding is consistent with social identity theory (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which describes group identification as a way of preserving a positive sense of self in the face of negative reactions to one's social group.

It is interesting to note, however, that ethnic discrimination was negatively related to gay identity when we looked at its unique contribution by controlling for all other variables in the model: those participants who reported more experiences of discrimination due to being Latino had lower gay collective identity. Latino gay men face ethnic discrimination not only in the larger society, but also in the gay community (Ibañez et al., 2009). Moreover, a Latino gay man who is made to feel unwelcome in a gay bar might make any of several attributions about the cause, including ethnic discrimination, class bias, anti-effeminacy, but not gay discrimination. Based on social identity theory (Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), one would expect that discrimination experiences encountered within the gay community would serve to lessen a Latino man's identification with the prototypical gay community, which is perceived as predominantly White and Anglo, but presumably to strengthen his identification with the Latino community or the Latino gay community.

This cross-sectional study cannot explicate the underlying mechanisms and therefore answer the question of whether ethnic discrimination results in lower gay collective identity due to an increase in the prominence of Latino identity over gay identity or to a decrease in gay identity itself. Experimental research, however, suggests that both processes occur. Experiences of disrespect from other members of one's group have been shown to lessen investment in the group (Branscombe, Spears, Ellemers, & Doosje, 2002), thus indicating that ethnic discrimination encountered within a gay context could reduce identification with the gay community. Other experimental work has shown that discrimination increases identification with the targeted group, which in turn leads to greater collective self-esteem relative to that group (Jetten, Branscombe, Schmitt, & Spears, 2001). Thus, a Latino gay man facing ethnic discrimination in the gay community would be likely to experience stronger Latino identification and ultimately greater collective self-esteem as a Latino.

This study, despite its additive nature, illustrates the complexity of intersecting social categories and the importance of context. Within the larger gay community, Latino gay men may find that their ethnicity is salient, different, and sometimes devalued. Similarly, within broader Latino culture, gay men may feel stigmatized or experience a sense of being "other." A result may be less connection to the social groups associated with each aspect of

identity. A man may turn to the gay community for support for sexual and some types of social issues, but turn to the Latino community for comfort in other aspects of social and cultural life. Another possible response, however, would be increased identification with the Latino gay community, which encompasses both the Latino and gay aspects of social identity. Greater involvement or affiliation with the Latino gay community could serve as a buffer against disrespect toward either Latinos or gay men.

The approach of investigating intersectional effects through statistical interactions has been promoted (Cole, 2009), but the interaction of discrimination due to sexual orientation and discrimination due to ethnicity was not related to either depression or gay collective identity. It is often difficult to demonstrate statistical interactions in intersectional research, due to stronger associations between main effects and the outcomes (Bowleg, 2008), as well as to the difficulty of attributing experiences to specific aspects of identity which are “confounded in individuals” (Cole, 2009, p.177). Moreover, by virtue of its multiplicative nature, an interaction term would magnify measurement error resulting from this type of confounding.

The findings of this study are consistent with the conceptual model of identity integration proposed by Morales (1996) for application in clinical practice. The model recognizes that Latino gay men are faced with conflicting pressures supporting or inhibiting identification with different aspects of their authentic selves, depending on acceptance within various contexts. Moreover, the men may experience anxiety in keeping their multiple communities separate. The goal of therapy is to help Latino gay men come to an integrated sense of self, a process which could entail an increased multi-cultural perspective and greater understanding of environmental stresses and rewards related to different components of their identity.

There are several limitations of this study. First, the Latino gay men in this study were all HIV-positive, which presents an additional challenge (Herek, Capitanio, & Widaman, 2002), but we did not have a measure of perceived or experienced HIV stigma. In addition, positive serostatus carries an elevated risk for depression (Ciesla & Roberts, 2001) and may increase gay identification because of the HIV services and social support provided by the gay community to people living with HIV (Knight, 2005). Another limitation to generalization arises from the possibility that both depression and group identification increase the likelihood of reporting discrimination, in which case these relationships would be bi-directional.

Additional limitations are related to characteristics of the sample. Despite statistical control for region of birth, the diverse cultural contexts experienced by Latinos from different countries may have affected the findings in ways that we were unable to detect. In addition, participants were recruited from gay and HIV-related organizations and therefore are likely to be gay-identified and not representative of the larger population of men who have sex with men (MSM). In contrast to the men in this study, MSM who do not identify as gay might respond to homonegativity or gay stigma by lessening their contact and affiliation with the gay community.

Despite these limitations, this study demonstrates that traditional additive measures and quantitative analysis can provide information concerning the experience of multiply marginalized individuals. We recognize the very real challenges to doing truly intersectional quantitative research, and we present this work as an example of a way of examining intersectional questions with fundamentally additive data. Qualitative approaches can capture the complex and intricate meanings, relationships, and consequences arising from multiple social categories; we believe that quantitative approaches have the potential to support intersectional knowledge by demonstrating some specific patterns of associations that could be generalized to others with similar group memberships. Despite the challenges,

future research should incorporate both qualitative and quantitative methods to address intersectional questions.

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**Table 1**  
**Spearman Correlations, Means, and Standard Deviations (N=301)**

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Age											
2. Education	-.05										
3. Income	-.05	.30									
4. Born in South America	.00	.19	.10								
5. Born in Central America Or Mexico	-.11	-.12	-.08	-.41							
6. Born in the Caribbean	.13	-.09	-.11	-.49	-.38						
7. Gender nonconformity	.07	-.13	-.11	-.18	.15	.03					
8. Gay Discrimination	.06	.16	-.03	.04	.02	-.02	.22				
9. Ethnic Discrimination	.09	-.01	-.14	-.06	.03	.04	.15	.59			
10. Depression	.09	-.13	-.10	-.03	.03	.03	.13	.27	.36		
11. Gay Collective Identity	-.12	.26	.07	.15	.03	-.13	.13	.25	-.02	-.05	
<i>M</i>	40.95	.45	1.44	.34	.25	.31	2.44	2.14	1.83	1.51	3.71
<i>SD</i>	8.88	.50	.83	.48	.43	.46	.90	.68	.81	.50	.81
Range	23-62	0-1	1-6	0-1	0-1	0-1	1-5	1-4	1-4	1-4	1-5

\*  $p < .05$ ;

\*\*  $p < .01$ ;

\*\*\*  $p < .001$ ,

\*\*\*\*  $p < .0001$



**Table 2**  
**Logistic Regressions Predicting Depression (N=301)**

Primary analysis: Hierarchical Logistic Set Regression				
Sets and Included Variables	2 log L	Model <sup>2</sup>	Change in -2 log L	
Step 1: Demographic set Education	824.0	<sup>2</sup> (1) = 4.60 *		
Step 2: Gender nonconformity set Gender nonconformity	818.7	<sup>2</sup> (2) = 10.26 **	5.3 *	
Step 3: Discrimination set Gay discrimination, Ethnic discrimination	783.0	<sup>2</sup> (4) = 44.25 ***	35.7 ***	
Follow-Up Analysis: Simultaneous Logistic Regression				
Variable	Coefficient	Wald $X^2$	Adjusted Odds Ratio	95% C.I.
Intercept 4	-3.33	50.61 ***		
Intercept 3	-1.99	20.43 ***		
Intercept 2	-1.07	6.13 *		
Education	-0.57	6.54 *	0.57	0.37 – 0.88
Gender nonconformity	0.14	1.36	1.15	0.91 – 1.47
Gay discrimination	0.49	5.70 *	1.63	1.09 – 2.43
Ethnic discrimination	0.53	10.21 **	1.70	1.23 – 2.36

\*  $p < .05$ ;

\*\*  $p < .01$ ;

\*\*\*  $p < .0001$

Note: Odds Ratios are the effect sizes in logistic regression.

**Table 3**  
**Logistic Regressions Predicting Gay Collective Identity (N =301)**

Primary Analysis: Hierarchical Logistic Set Regression				
Sets and Included Variables	2 log L	Model <sup>2</sup>	Change in -2 log L	
Step 1: Demographic set Age, Education	803.3	<sup>2</sup> (2) = 20.71 ****		
Step 2: Region of birth set South America, Central America & Mexico, Caribbean	795.7	<sup>2</sup> (5) = 27.83 ****	7.6	
Step 3: Gender nonconformity set Gender nonconformity	781.8	<sup>2</sup> (6) = 40.74 ****	13.9 ****	
Step 4: Discrimination set Gay discrimination, Ethnic discrimination)	767.3	<sup>2</sup> (8) = 52.63 ****	14.5 ***	
Follow-Up Analysis: Simultaneous Logistic Regression				
Variable	Coefficient	Wald X <sup>2</sup>	Adjusted Odds Ratio	95% C.I.
Intercept 4	-2.89	16.53 ****		
Intercept 3	-1.86	7.08 **		
Intercept 2	-0.52	0.56		
Age	-0.03	4.34 *	0.98	0.95 – 1.00
Education	0.79	12.15 ***	2.20	1.41 – 3.43
Born in South America	0.65	2.78	1.91	0.89 – 4.11
Born in Central America or Mexico	0.36	0.82	1.44	0.65 – 3.17
Born in Caribbean	0.05	0.02	1.05	0.49 – 2.27
Gender nonconformity	0.36	8.03 **	1.44	1.12 – 1.84
Gay discrimination	0.83	15.04 ****	2.28	1.50 – 3.47
Ethnic discrimination	-0.46	7.16 **	0.63	0.45 – 0.89

\*  $p < .05$ ;

\*\*  $p < .01$ ,

\*\*\*  $p < .001$ ;

\*\*\*\*  $p < .0001$

Note: Odds0 Ratios are the effect sizes in logistic regression.