

GRAHAM, LOUIS F., Dr.P.H. Examining the Psychosocial Health of Black Sexual Minority Men. (2010)
Directed by Dr. Robert E. Aronson. 113 pp.

Research suggests that Black sexual minority men (BSMM; i.e. non-heterosexual and non-straight) experience more depressive symptoms and anxiety disorders than their White gay and Black heterosexual counterparts. Little is known about the factors that influence the psychosocial health of BSMM. The limited research conducted with men who have sex with men and Black men in general suggests that ethnic and sexual identity development; exposure to violence, discrimination, and harassment (VDH); and coping skills may influence the psychosocial health of BSMM. The primary aim of this study was to examine the relationships between depression, anxiety, identity development (operationalized as Black identity achievement and internalized homonegativity), exposure to VDH, and coping skills.

A cross-sectional convenience sample of 61 BSMM completed a battery of assessments designed to explore these relationships. The average age of participants was 31 years old, 77% were homosexual, and 77% identified as gay. To assess statistical associations between dependent and independent variables multiple linear regression analysis was used to answer the following research questions:

1. Are internalized homonegativity and VDH significantly positively associated with depression and anxiety?
2. Is Black identity achievement significantly negatively associated with depression and anxiety?

3. Is there an interaction effect between internalized homonegativity and Black identity achievement on depression and anxiety?
4. Does coping skill level moderate the associations between depression and anxiety and internalized homonegativity, VDH, and Black identity achievement?

The construct internalized homonegativity is multifaceted, multidimensional, and nuanced, and therefore difficult to operationalize in appropriate sociocultural context. Thus, it is important that tools available to measure this construct have established validity and reliability for this specific subgroup. Thus, a secondary aim of this study was to evaluate construct validity and reliability among BSMM of the internalized homonegativity inventory (IHNI). This aim was achieved by establishing translation and criterion-relation validity.

The IHNI was minimally altered to better suit a specific subpopulation, BSMM. Factor analysis revealed a slightly better performance of the altered IHNI as compared to the original. Experience of VDH and internalized homonegativity explained a large portion of the variability in depression and anxiety scores, findings in line with other similar and related studies. A high percentage of the sample screened positive for likelihood of both depression and anxiety. Violence, discrimination, and harassment appeared to be chronic among participants in the current study. These findings offer further validation of the IHNI for use among BSMM and provides additional data on factors influencing the mental health of BSMM. Further validation research and investigation of factors influencing the psychosocial health of BSMM is needed.

EXAMINING THE PSYCHOSOCIAL HEALTH OF BLACK SEXUAL MINORITY
MEN

by

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A Dissertation Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Public Health

Greensboro
2010

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APPROVAL PAGE

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CHAPTER I

PROPOSAL

Introduction

Research suggests that Black sexual minority men (BSMM) experience more depressive symptoms and anxiety disorders than their White gay and Black heterosexual counterparts, groups that already experience higher rates than the general population. Little is known about the factors that influence the psychosocial health of BSMM. The limited research conducted with men who have sex with men (MSM) and Black men in general, suggests that ethnic and sexual identity development; exposure to violence, discrimination, and harassment (VDH); and coping skills may play particularly important roles in the psychosocial health of BSMM. The primary aim of this study was to examine the relationships between depression, anxiety, identity development (operationalized as Black identity achievement and internalized homonegativity), exposure to VDH, and coping skills. To assess statistical associations between dependent and independent variables multiple linear regression analysis will be used to answer the following research questions:

1. Are internalized homonegativity and VDH significantly positively associated with depression and anxiety?
2. Is Black identity achievement significantly negatively associated with depression and anxiety?

3. Is there an interaction effect between internalized homonegativity and Black identity achievement on depression and anxiety?
4. Does coping skill level moderate the associations between depression and anxiety and internalized homonegativity, VDH, and Black identity achievement?

The constructs to be examined are multifaceted, multidimensional, and nuanced, and therefore difficult to operationalize in appropriate sociocultural context. Thus, it is important that tools available to measure these constructs have established validity and reliability for this specific subgroup. We will gain additional insight and information on validity regarding the tools' usage with this particular group of Black men. A secondary aim of this proposed study is therefore to evaluate construct validity and reliability among BSMM of tools previously used with MSM and Black male populations in general to measure depression, anxiety, ethnic and sexual identity, VDH, and coping skills.

The tools to be evaluated are : Center for Epidemiologic Studies Depression Scale (CES-D), State-Trait Anxiety Inventory (STAI), Black Racial Identity Attitudes Scale (RIAS-B), Internalized Homonegativity Inventory (IHNI), Perceived Ethnic Discrimination Questionnaire –Community Version (PEDQ-CV), and Brief COPE. This aim will be achieved by establishing translation and criterion-relation validity:

- a. To assess translation validity, face and content validity of all tools will be ascertained by a group of experts on the research advisory group.
- b. To evaluate criterion-related validity for all tools, exploratory factor analysis will be conducted.

This population-based prevention research on psychosocial health targets a particular underserved group, ethnic and sexual minority men. This systematic investigation of mental health is designed to contribute to generalizable knowledge related to factors that may influence depression and anxiety among BSMM.

The far reaching goal of this study is to collect information on health determinants that can inform public health action in vulnerable communities. This inquiry seeks to produce scientific evidence that will ultimately inform health and quality of life promotion related to identity development, VDH, and coping skills. The scientific results of this proposed inquiry will inform future research aimed at improving the mental health of BSMM. The proposed health disparities research project will produce data that can assist in achieving true improvements in people's lives.

The proposed investigation focuses on the CDC's Health Protection Goal: Healthy People in Every Stage of Life – All people, and especially those at greater risk of health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life (Increase the number of adults who are healthy and able to participate fully in life activities and enter their later years with optimum health). The proposed study addresses objectives 25 and 29: promote social, emotional, and mental well-being for adults; and prevent injury, violence, and suicide, and their consequences among adults. Better understanding mental health determinants among BSMM will enable providers and policy-makers to, effectively enhance psychosocial health, prevent mental disorders, and intervene early in cases of distress, all in an effort to extend quality of life and reduce mental illness and disability burdens in this vulnerable subpopulation. This

social determinants and disparities research project will aid public health agencies, organizations, and practitioners in decreasing mental health disparities among ethnic and sexual minority men, contribute to the psychosocial health disparities research agenda in this area, and disseminate useful information to administrators, minority and health disparity communities.

Literature Review

Depressive Distress and Anxiety among Black Sexual Minority Men (BSMM)

To date, although there are no available sample statistics of mental illness prevalence among BSMM in the United States (U.S.) that can accurately estimate a population parameter, current research suggests that BSMM are disproportionately burdened by depressive distress and anxiety disorders as compared to their gay and Black male referent groups. One study conducted by Cochran and Mays (1994) used the Center for Epidemiologic Studies-Depression scale (CES-D) (>15 cutoff score) to assess a point prevalence of depression among a non-random, nationally representative, with respect to geographic region, sample of BSMM (N=829; from 41 states - 25% west, 23% northeast, 19% mid-west, 15% south). The researchers found a 32.6% prevalence of depression among their sample, which is likely to be an underestimate given recent evidence indicating that the CES-D may not be an accurate screening tool for ethnic minorities (Perreira, Deeb-Sossa, Harris, & Bollen, 2005). Nevertheless, the mean score in the Cochran and Mays (1994) sample was 12.8, compared to lower depression estimates identified in other studies ...9.9 among gay men (Cochran, 1987; Miller, Selnes, McArthur, et al., 1990) and 9.8 among Black men (Vernon, Roberts, & Lee, 1982;

Thomas, Milburn, Brown, & Gary, 1988) fo in other previous studies using the CES-D. Further, other studies using the CES-D and the >15 cutoff score score have found a 25.9% prevalence among Blacks compared to 16.5% among Whites (Frerichs, Aneschensel, & Clark, 1981; Gary & Berry, 1985).

Another study by Cochran, Sullivan, and Mays (2003) found a 31% one-year prevalence of major depression and 17.9% one-year prevalence of panic disorder among gay and bisexual men in a U.S. population-based random sample using the Composite International Diagnostic Interview Short Form (CIDI) from the MacArthur Foundation National Survey of Midlife Development, prevalence 3.57 and 5.09 times ($p < .05$) more than that of heterosexual men in the study respectively (10.2%, 3.8%). Additionally, the investigators found higher levels of current and past psychological concerns among MSM compared to heterosexual men in the study; 17.8% and 20.4% of MSM self rated their own mental health as 'fair' or 'poor' at age 16 and at present age respectively. These percentages were 3.10 ($p < .05$) and 3.47 ($p < .05$) times greater than that of heterosexual men. This study is consistent with other previous studies concluding that MSM suffer greater lifetime prevalence rates of major depression and suicide symptoms than men reporting only female partners (Cochran & Mays, 2000a; Cochran & Mays, 2000b).

In 2002, suicide was the third leading cause of death among males ages 10 to 24, and males are four times more likely to commit suicide than females (NAMI, 2007). More than 90% of those who die by suicide have a diagnosable mental disorder (NIMH, 2005). According to the 2004 World Health Report, major depressive disorder is the leading

cause of disability in the U.S. and Canada among those between the ages of 15 to 44 (WHO, 2004).

Identity Development

Racial and sexual identities are multifaceted concepts with many dimensions (Sell, 1997). Crawford, et al. (2002) used the Minority Ethnic Identity Measure (MEIM) to operationalize racial identity development among a sample of African American gay and bisexual men. The researchers found that African American gay and bisexual men who possessed more positive and integrated self-identity as African American and gay reported lower levels of psychological distress and higher levels of life satisfaction and self-esteem than their counterparts who reported less positive and integrated African-American and gay identity.

The MEIM is based on one of the most prominent African-American identity development models proposed by Cross and colleagues. The model is known as and posits that as African Americans become aware that they are oppressed, their attitudes toward themselves, their own group, other ethnic minority groups, and members of majority cultures take shape in a way that leads to a central sense of self (Cross, 1995). According to this model, the most psychologically healthy phase of functioning for African Americans is called Integration (Crawford et al., 2002). In the Crawford et al., (2002) study, of the four modes of ethnic-racial acculturation (marginalization, separation, assimilation, and integration), those who had achieved Integration had a mean score of 3.26 on the Life Satisfaction Survey (LSS) (1=little to no life satisfaction, 4=high life

satisfaction) which was statistically significantly different from those who were categorized into Marginalization with a mean LSS score of 2.74.

Racial identity development predicted 23% of the variability in life satisfaction. Every single unit increase (from marginalization to integration) on the MEIM corresponded to a .24 increase in LSS. The authors concluded that the more African American gay and bisexual men are able to integrate and embrace positive self-attitudes toward their racial-ethnic and sexual identities, the more likely they are to value themselves, safeguard their health, and experience higher degrees of personal satisfaction. Troiden (1993) proposed the most well-received model of sexual identity development, which suggests that the healthiest stage of functioning is the Committed state.

The Committed state exemplifies embracing an identity that matches sexual desire and emotional feelings, perceiving a “non-traditional” or “alternative” identity as legitimate and not inferior to a heterosexual identity, thus commencing and sustaining same-sex love relationships – divulging this identity to the general public. This process commonly known as “coming out” is especially difficult for BSMM and often contributes to psychological distress until successful, healthy, and complete sexual identity is achieved (Troiden, 1979). Meyer (1995) used an Internalized Homophobia scale IHP and a ‘closeted’ item to operationalize sexual identity development in a study which found that every one unit increase in IHP corresponded to a .21 increase in suicidality ($p < .001$) and that being ‘closeted’ corresponds to a .09 increase in suicidality. Although this study did not examine at differences by race, a study by Grov, Bimbi, Nanin, and Parsons

(2006) found that only 61.8% of African American MSM in their sample were 'out' to their parents compared to 76.8% of White MSM ($p < .001$), which given findings in the Meyer study on the relationship between being closeted and suicidality, evidence suggest that BSMM may be at increased risk. Additionally, a study by Mills, Paul, Stall, Pollack, Canchola, et al., (2004) found that non-queer (i.e., no sexual identity indicated or straight identified) sexually identified MSM in their sample had a 39% depression prevalence rate ($CES-D > 15$) that was statistically significantly different from queer sexually identified MSM who had a 28% depression prevalence rate ($p < .001$). Given the aforementioned description of sexual identity development, these results are suggestive in that those MSM who have not reached the 'committed' state may be at increased risk for depression.

Homonegativity. The notion of internalized homophobia was first coined and introduced by mental health practitioners as a different means by which to consider homo- and bi-sexual persons' suffering connected to their sexual orientation. As an alternative to viewing them as being inflicted with a disorder, practitioners could think about the influence that a homophobic, heterosexist society has on the development of homo- and bi-sexual people. As identified by Shidlo (1994), internalized homophobia is a valuable concept for theorizing matters of development, psychopathology, psychotherapy, and prevention with homo- and bi-sexual persons. However, homophobia has been critiqued as an inadequate term because it refers expressly to the clinical fear and avoidance (phobia) of homosexuals and as such does not sufficiently incorporate the cultural attitudes and beliefs that promote and support the devaluation and hatred of

homo- and bi-sexual persons (Herek, 1994; Shidlo, 1994). This is not to say that homophobia is not useful or should not be considered, but that fear and avoidance alone may not accurately describe what we often intend.

It has been assessed then that homonegativity is a more descriptive and appropriate term and recasting of the construct being considered. In particular, the designates “homonegativity” and “internalized homonegativity” are more suitable than homophobia and internalized homophobia because the former labels also include societal and individual depreciation of homo- and bi-sexual traditions of living (Fassinger, 1991), which can frequently be more destructive than blatant antigay attitudes singly. On these grounds, the nomological framework and corresponding scale for internalized homonegativity will be utilized, instead of the framework and measurement tool for internalized homophobia.

Violence, Discrimination, & Harassment

A mounting body of evidence on the relationship between social inequality and mental health outcomes suggests that certain social statuses related to race/ethnicity, sexuality and socioeconomic position, may greatly affect the probability of exposure to discrimination, abuse, and violence (Fife & Wright, 2000) as a result of stigmatization (Krieger & Sidney, 1996) which may influence acquisition of social and personal resources (Turner & Lloyd, 1999). Experiences of stigmatization and discrimination have been shown to lead to greater susceptibility to depressive distress and anxiety (Finch, Kolody, & Vega, 2000; Kessler, Mickelson, & Williams, 1999). Evidence in the literature is extensive regarding the associations between VDH and psychosocial health among

Black people (Williams & Williams-Morris, 2000). Consequently, this section will focus more on the relationship between VDH and psychosocial health among sexual minorities in which research is relatively more recent and less well documented.

In the study by Crawford et al. (2002) referenced above, VDH was operationalized using the Schedule of Racist Events (SRE), and authors found that racist events predicted 34% of the variability in life satisfaction – every one unit increase on the SRE corresponded to a .12 decrease in LSS. Similarly, Diaz, Ayala, Bein, Henne, & Marin. (2001) found that experiences of social discrimination with respect to race, sexuality, and class predicted 11% of the variability in psychological symptoms (depression, anxiety, suicidal ideation) among a sample of Latino SMM. Further, in a study conducted by Meyer (1995), every one unit increase in ‘prejudice’ (defined as at least one violent or discriminatory event one year prior to interview) corresponded to a .11 increase in suicidality. Moreover, Mays and Cochran (2001) found that a nationally representative sample (Midlife Development in the United States – MIDUS) of MSM were 4.30 times more likely to be fired from a job and 1.82 times more likely to experience any type of discrimination than heterosexuals ($p < .05$).

Authors also report that 42% of MSM attributed lifetime discrimination to their sexual orientation, in whole or part, and 76% reported any personal experience of discrimination. In comparison, 98% of heterosexuals attributed lifetime discrimination to factors other than sexual orientation, and 65% indicated that they had ever experienced discrimination. Similarly, Huebner, Rebchook, & Kegeles (2004) found that among young MSM those who experienced discrimination within the past six months were 2.13

times more likely to have suicidal ideation within the past two months ($p < .001$) than those who had not experienced discrimination. Likewise, those who were victims of physical violence within the past six months were also 2.06 times more likely to have suicidal ideation in the past two months than those who had not.

Coping

According to stress and coping theory (Lazarus & Folkman, 1984), coping is denoted as the views and behaviors individuals utilize to deal with burdens that they identify as going beyond their resources. Psychosocial resources pertain to perceived optimism, social support, and spirituality. It is hypothesized that coping will moderate the relationship between the independent and dependent variables. Coping mechanisms entail efforts to change the pathway stress takes (problem-focused coping) and efforts to control emotional reactions to stressors (emotion-focused coping).

This framework has been suggested for looking at the relationship between stress, socio-cultural factors, coping processes, and a range of outcomes for African Americans (Barbarin, 1983, 1993). In a study conducted by Peterson and colleagues (1996), results revealed that psychosocial resources moderate the effects of stressors, including health symptoms, hassles, and life events, on depressive mood, among BSMM. Specifically, there was an association between detachment coping and depressive mood; and both optimism and religiosity were present in moderate amounts. Subjects felt more socially supported than not; and optimism and religiosity were negatively associated with depressive mood.

Hays and colleagues (1992) found that among MSM, greater contentment with information, social support-comfort, and assistance from friends and family was associated with less psychological distress. In a large multiracial study (N=1,031) of those who used illicit drugs and MSM, Fleishman and Fogel (1994) found that social support was negatively associated to psychological distress. Leserman, Perkins, and Evans (1992) found that BSMM were less likely to seek social support and expressed less contentment with their social support networks than White SMM. Moreover, optimism has been shown to be associated with coping (Carver, Pozo, Harris, Noriega, Scheier, et al., 1993; Freidman, Nelson, Baer, Lane, & Smith, 1992), and physical and psychological well-being (Scheier & Carver, 1992; Scheier, Matthews, Owens, Magovern, Lefebvre, et al., 1989).

These findings support the psychologically adaptive role of optimism and its significance as a coping strategy due to its ability to decrease fear and encourage the utilization of active coping mechanisms to affect a potentially intimidating or frightening circumstance. Spirituality, such as meditation, prayer, or church support, may also be utilized as a significant resource to successfully cope with psychological distress, particularly given the importance of spirituality in afro-centric paradigms of African American cultures. Leserman et al. (1992) reported that BSMM were more likely than White SMM to rely on religion as a coping resource for managing the risk of HIV/AIDS. A major part of coping, being resilient in the face of hardship and troubles, and achieving healthy identity development is the establishment and maintenance of relationships – family, friends, and intimate partners.

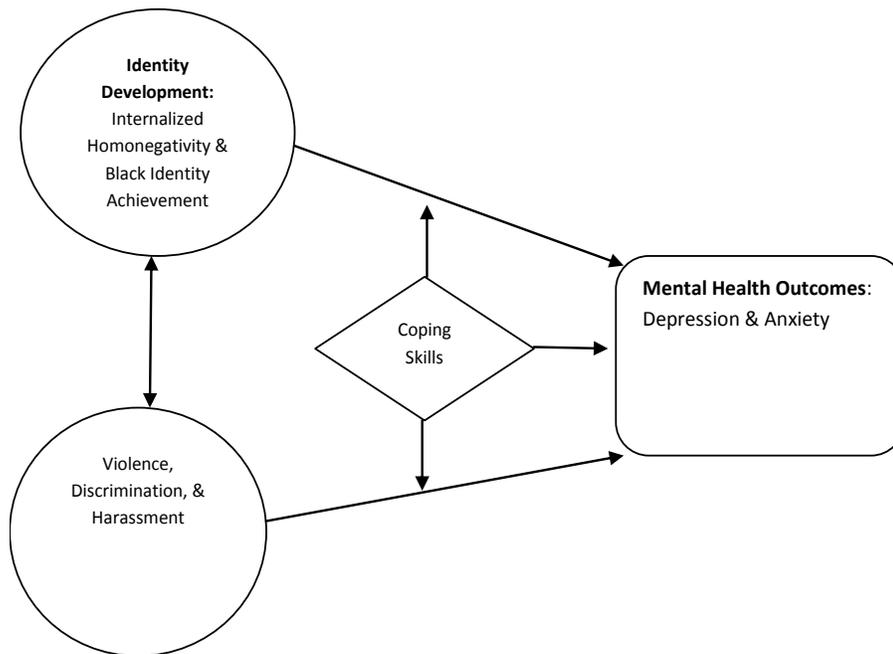
Potential Confounders

It is hypothesized that age and socio-economic status may confound the statistical associations between the independent and dependent variables. In the aforementioned study by Mills, et al. (2004), as age increased, the number of those who were depressed increased up to approximately 50 years old, then the number of those depressed decreased among MSM. Also, in the aforementioned study by Huebner, et al. (2004), more VDH occurred to those under 21 years of age compared to those over 21 among MSM. In both of these studies, those with higher educational attainment experienced fewer mental disorders, severity, and less VDH.

Theoretical Underpinnings

Drawn from the relevant literature and a preliminary study (Graham, Braithwaite, Spikes, Stephens, & Edu, 2009), the following diagram graphically depicts the hypothesized relationships between variables under study (figure 1). Identity development including level of internalized homonegativity and Black identity achievement may be related to the mental health outcomes, depression and anxiety, which may be moderated by level of positive coping skills. Violence, discrimination, and harassment may be related to depression and anxiety, which also may be moderated by coping. While identity development and VDH may be related to each other, this relationship is not the focus of this study. Coping may also be directly related to mental health outcomes. Additionally, a brief discussion on intersectionality is provided and further rationale for the importance of first focusing on validation assessment is considered.

Figure 1: Model of Hypothesized Variable Relationships



Intersectionality

In the earlier studies, ethnic and sexual identities were considered separately; there is a need for simultaneous consideration of these identities at the intersections representing marginalized groups. Intersectionality embodies the idea that the crossing of multiple forms of oppression with respect to class, ethnicity, sexuality, and others, generates disparate arrays of perspectives and consequences among individuals and groups. The core tenets of intersectionality are these: “ (a) no social group is homogenous, (b) people must be located in terms of social structures that capture the power relations implied by those structures, and (c) there are unique, nonadditive effects of identifying with more than one social group” (Stewart & McDermott, 2004, pp. 531-532). We would thus

expect that identification with multiple oppressed groups would generate disparate arrays of perspectives and consequences for different individuals and groups. Consequently, in phase I, with regard to tool modification, intersectionality will be considered and an interaction term between the racial and sexual identity measures will be tested for inclusion into a final regression model, though it is acknowledged that this is not an optimal proxy and that a better measure is needed for future research.

Rationale

This study is intended to expand, further validate, and build on previous work using the aforementioned measurement tools (CES-D, STAI, RIAS-B, IHNI, PEDQ-CV, and Brief COPE). This study does not seek to develop completely new tools nor does it attempt to establish validity outside of or juxtapose to other validation work on these tools, but should instead be thought of as additional validation; this to say that it is not expected that the tools will be radically or drastically overhauled or changed, but rather better suited to fit a specific subpopulation, which may be better described as small alterations, tailoring, and establishing baseline validity data that does not yet exist for a specific group. Validity and reliability in this study should not be thought of as dichotomous assessment of valid or not valid, but rather as a spectrum wherein we want to use tools that are as valid and reliable as they can possibly be. Rigorous psychometric criteria will be applied to modified tools before they are deemed acceptable to use in final analysis. If the tailored tools do not meet the necessary conditions the original tools will be used, as they would be considered the best available tools for use or the most valid and

reliable tools available, and would thus still yield useful and worthwhile information by being included in the final analysis.

Even so, given that none of the measurement tools were designed specifically for BSMM there is no reason to believe that they are optimally suited to be used as thoroughly validated scales. This assertion is further supported in that on face review the tools appear to need tailoring for use among this subpopulation. Additionally, discourse in the literature and preliminary studies conducted by the author provides evidence that some of the existing scales may be ill-suited to be used among some groups; tailoring may be warranted. The fact that these tools are to some degree measuring what they have been designed to measure is not doubted, but they are likely not accurately and precisely as possible assessing the related constructs among BSMM given that this subpopulation may express symptomology of depression and anxiety and the other constructs slightly differently.

The ways in which identity development, VDH, and coping show-up, present, and is discussed among BSMM are different from that of their reference groups. The language used by and the way this group understands and orients its self to the constructs being considered will not precisely mirror the same as the groups for which the tools were originally developed. The way BSMM conceptualize, think about, and respond to certain questions and constructs is somewhat dissimilar from their reference groups. Given the differential rates of depression and psychological distress in general among BSMM, it is extremely important that tools measuring potential determinants are as accurate and precise as possible.

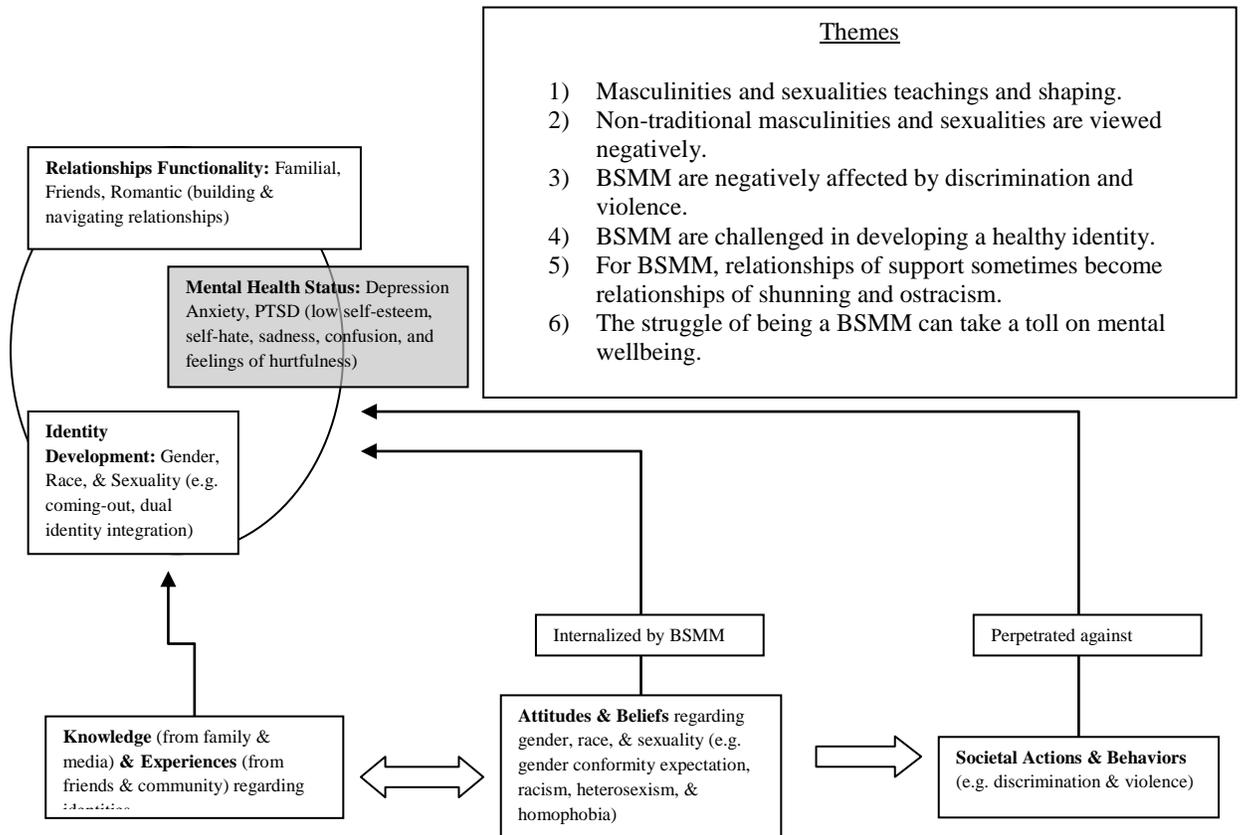
Preliminary Study

The study team has explored the psychosocial health of BSMM (Graham et al., 2009) using focus groups to examine issues and factors potentially influencing the mental health of this population. Twenty-two self-identified Black, or multi-racial (including Black), sexual minority men residing in Atlanta, Georgia, participated in two focus groups – 11 each. Categories that emerged from data analysis included: knowledge/experiences about masculinities and sexualities, attitudes/beliefs regarding race, sexuality, and gender, societal action/behavior directed toward BSMM, racial and sexual identity development, relationship functionality, and mental health status. Overarching themes for each category were delineated.

Findings suggest that BSMM appear to learn and became aware of what it means to exemplify manliness, Blackness, and gayness from their families, friends, through popular media, and in community institutions. These influences seem intimately related to attitudes and beliefs surrounding identity designations which include heterosexism, homophobia, and hegemonic gender conformity expectations that may be both internalized by BSMM and lead to societal actions and behaviors perpetuated against BSMM, such as violence and discrimination. Data analysis suggests that these categories and themes, which consist of knowledge/experiences, attitudes/beliefs, and societal actions/behaviors, can influence and affect BSMM's core sense of self, ability to sustain healthy relationships, and their mental health status. Additionally, there may exist bi-directional relationships between these three categories and themes: identity development, relationship functionality, and mental health status. This exploratory study

provides useful information on the variables being measured and provides support for the hypothesized relationships.

Figure 2: Mental Health of BSMM – Preliminary Thematic Domains



Research Design & Methods

This proposed study of the psychosocial health of BSMM will be conducted in two phases. Phase one activities will include formation of a research advisory group (RAG), and face and content validity assessments of measurement tools. Phase two activities will include participant recruitment and survey administration. An observational cross-

sectional study design will be used. This study looks at covariation of several potential exposure (cause) and disorder (effect) variables.

A group of 10 researchers and service providers who have experience with and are knowledgeable about psychosocial health (including coping), internalized homonegativity, racial identity development, violence, discrimination, harassment, and BSMM will be recruited and assembled to serve on the RAG. Members will be identified through their publications and by recommendation of community partners. Given the nature of the variables to be investigated, including racial and sexual identity, and the ways in which the concepts ‘internalized homonegativity,’ racial and sexual identity, and violence, discrimination, and harassment, are defined, careful and deliberate attention will be given to the subtle, but potentially significant differences in the ways in which these constructs may present or be oriented in different groups. The vernacular, conceptualizations, and applicability of the constructs being investigated may differ in different subpopulations.

Procedures

Construct validity of existing measures... must be established among BSMM. To establish construct validity, translation and criterion-related validity will be assessed. To assess translation validity, operationalized as face and content validity, the experts on the RAG will use findings from the preliminary study conducted by the author, the literature, and RAG experiences and knowledge in working with these constructs and the target population to:

- Consider how to word questions to get at the issues of interest, to minimize confusion and misunderstanding, and to offer the appropriate level of directness so that the wording is not threatening or disturbing for respondents.
- Examine each question to determine if it needs to be asked at all and if so, at what level of detail.
- Determine whether additional questions need to be asked to provide enough context to interpret answers or to determine the intensity of the respondent's attitudes or beliefs.
- Address questions that may be biased or loaded given the specific target population (BSMM).

These assessments will inform alterations and tailoring of measurement tools to be compared with the original tools by exploratory factor analysis.

Only if the revised tools result in psychometrically better tools, will the amended versions be used in final analysis. Psychometrically better refers to Kaiser's measure of sampling adequacy, amount of variance accounted for, factor intercorrelations, number of items highly loading on the factors theoretically hypothesized, and Cronbach's alphas for the total tools as well as subscales. If a modified tool is determined to perform better than its original, convergent validity will be assessed by comparing the adjusted tool to the original. Correlations of .70 or greater will be determined acceptable. If none of the adapted tools are determined better suited, the original tools will be used in final analysis.

Sampling. The University of North Carolina at Greensboro will serve as the primary study site; however, participant recruitment, screenings, and survey administration may

also take place at any of the partnering community institutions or organizations.

Purposive and volunteer snow-ball sampling will be employed. These sampling strategies are very useful for situations in which sampling for proportionality is not the primary concern. In snowball sampling, we will begin by identifying someone who meets the inclusion criteria for the study, obtaining informed consent, assessing them, and then training them to refer others to the study through word-of-mouth so that they could contact the the study team if interested in participating. Although we expect to acquire diverse responses from the target population, we are also likely to overweight subgroups in the population that are more readily accessible, such as those who are “out,” of college age, etc.

Recruitment. The community partners will develop posters, flyers, and palm cards with contact information that has been approved by the University of North Carolina at Greensboro Institutional Review Board (IRB) for recruitment specialists to post and distribute at community partner facilities and events. Letters will also be drafted and sent to community partner e-mail and physical address listserves. Additionally, advertisements will be placed in local newspapers, radio stations, and social networking websites. The materials will include a short description of the study, including its purpose and the contact information of study personnel, as well as a web link for the project. In sum, the extent of community partner involvement will included: 1) assisting in the development of recruitment materials, 2) distributing advertisement materials through community partner networks and mailing lists, and 3) serving as data collection sites. Potential participants will contact recruitment specialists via e-mail, phone, or in-person

meetings, at which time the recruitment specialists will screen based on the following criteria:

- Excluded from the study will be: Women; men who have sex with women only, and men who self-identified as straight.
- Inclusion criteria: Men 18 years old or over who self identified as being of African descent (Black, African-American, etc.) and as men who have sex with men.

After presentation of both written and verbal explanations of the study, recruitment specialists obtained informed consent and contact information from participants at the first encounter.

Data Collection

Following receipt of informed consent and contact information, participants were provided with a unique identifier and password to complete the battery of surveys on-line at a secured website accessed from their own personal computer, a data collection kiosk setup at a community partner facility, or another mutually agreed upon time and private location using a laptop computer provided for them. Participants will be required to answer each question before moving to the next. At the kiosk, laptops will be set-up behind a screen/partition to enable participants to respond to the items in private. The kiosks will be set up during community partner events targeted toward Black men and/or MSM. The battery of surveys should take between 30 and 45 minutes to complete. Upon completion of the surveys participants will receive a \$25 gift card.

Power & Sample Size. With alpha level of .05 using a two-tailed test, power of .80, and an estimated moderate f^2 effect size of .20 a sample of 55 is needed to detect significant relationships between the dependent variables (depression, anxiety) and the independent variables (identity development, VDH). A sample size of 55 will allow detection of an omnibus R^2 at least equal to .17. In the study by Crawford et al. (2002) cited earlier, VDH was operationalized using the Schedule of Racist Events (SRE), and authors found an R^2 of .34 for racist events regressed on life satisfaction. Similarly, Diaz et al. (2001) found an R^2 of .11 for experiences of social discrimination with respect to race, sexuality, and class regressed on psychological symptoms (depression, anxiety, suicidal ideation) among a sample of Latino MSM. These R^2 values were not total correlation coefficient deviations from zero, but special increases in R^2 resulting from the inclusion of the particular independent variable added last into a model, so the omnibus R^2 is likely to be even greater. Therefore a sample size of 55 is probably sufficient to detect expected effect sizes based on available data found in the literature.

Measures

Center for Epidemiologic Studies Depression Scale (CES-D), which was developed in 1976 for use in general adult populations (aged 18 or older), is a 20-item self-report scale that measures depressive symptoms (Radloff, 1977). CES-D items reference the previous 7 days, responses are summed, and scores are treated as continuous data. An early validation against a clinical scale revealed the specificity (with a cut point of 15) was good in a community sample (94%) and the sensitivity was moderate (64%; Myers &

Weissman, 1980). Also, sample-dependent scale reliability has been shown to be high ($\alpha=.87$).

A cut point of 15 will also be used in this proposed study, indicating that a score > 15 indicates depression. Since its introduction, the CES-D has been used to assess depression risk in several populations for whom it was not originally designed (e.g. adolescent, elderly, ethnic and clinical populations). Much of the research using the CES-D, however, has been conducted with elderly populations. Depression scores in different racial/ethnic subpopulations might be biased by response patterns that vary between racial groups, not because a community has more or fewer symptoms or disorders, but because the subpopulation articulates psychopathology in a manner not captured by measures normed primarily in a different ethnic group (Vega & Rumbaut, 1991). No better scale has been identified, and given its widespread use among Black and MSM populations, the CES-D will be used in this study.

It is well documented that men typically report fatigue, irritability, loss of interest in work or hobbies, and sleep disturbances as depressive symptoms rather than the feelings of sadness, worthlessness, and excessive guilt that women report (DHHS, 2003). It is also well documented that Black populations often report more somatic complaints and more sleep and appetite disturbances, while Whites report more cognitive disturbances, anxiety, and core depressive feelings (Garlow, 2005). Additionally, recent research suggests that language significantly affects reports of psychopathology by different ethnic groups. The CES-D must be able to adequately assess the symptoms expressed by the target population if it is to be used as a viable depressive symptoms indicator.

State-Trait Anxiety Inventory (STAI). The STAI-S (Spielberger, 1983) is a 20-item questionnaire intended to evaluate current anxiety and has been used in African-American populations. The STAI has two factors, anxiety-present and anxiety-absent, and each item is rated from 1 (not at all) to 4 (very much so) to reflect the level of each affect statement. The STAI has also demonstrated satisfactory internal consistency and test-retest reliability across numerous studies (Barnes, Harp, & Jung, 2002). Additionally, the STAI has demonstrated satisfactory convergent and discriminate validity with other measures (Bieling, Antony, & Swinson, 1998; Caci, Bayle, Dossios, Robert, & Boyer, 2003).

Black Racial Identity Attitudes Scale (RIAS-B). This scale is a modified version of Helms and Cross's Black Racial Identity Attitudes Scale (RIAS-B). It is a personal assessment tool developed to identify stage placement in the Cross model of Minority Identity Development (MID). The inventory consists of 50 statements to which participants are asked to respond using a Likert-type scale (1-strongly disagree, 5-strongly agree). The subscales are scored by averaging the properly keyed items so that each respondent receives a scale score for each of the four types of racial identity attitudes (Helms & Parham, 1990).

Higher mean subscale scores reflect a greater degree of that racial identity attitude. Some of the statements indicate concrete actions, some are descriptive terms, and others are statements of personal values and beliefs. RIAS-B items reference the current state and scores are treated as categorical data. The RIAS-B will be used instead of the Minority Multi-Group Ethnic Identity Measure (MEIM) in an attempt to triangulate

findings from the Crawford (2001) study using a different racial identity development measure and because it was determined that the RIAS-B may be a better and more comprehensive tool.

Internalized Homonegativity Inventory (IHNI). Internalized homonegativity describes the internalized negative attitudes that those desiring, eroticizing, and having sex with members of the same sex hold about homosexuality and related phenomena. Homonegativity is based on the word homonegativism proposed by Hudson and Rickets (1980) and is a comprehensive expression that depicts the entire range of negative attitudes towards homosexual phenomena, particularly homo- and bi-sexual persons. Internalized homonegativity is defined as the array of ‘negative attitudes and affects toward homosexuality in other persons and toward homosexual features in oneself’ (Shidlo, 1994).

Shidlo’s description has two components: a cultural aspect and an intrapsychic feature. The cultural component reflects the socialized negative thoughts and feelings that homo- and bi-sexual persons experience when they come across other homo- and bi-sexual persons and when they reflect on homosexuality in general. The intrapsychic facet describes the negative postures and views that homo- and bi-sexual persons have that influence their personal lives, such as their bearing and standpoint toward same-sex sexual and emotional attraction, same-sex sexual behavior, and same-sex intimate relationships. The IHNI was validated on 241 gay men, primarily of European descent. The 23 IHNI items reference current state, responses are 1=Strongly Disagree to 6=Strongly Agree, and scores are treated as continuous data.

Perceived Ethnic Discrimination Questionnaire – Community Version (PEDQ-CV).

The PEDQ-CV can be utilized across ethnic groups to evaluate perceived ethnic discrimination and will be utilized in this study as a measure of VDH. The PEDQ-CV is a 34-item measure assessing lifetime experiences within social and interpersonal contexts and has been used with Latino and Black subjects (Brondolo, Kelly, Coakley, Gordon, Thompson, & Levy, 2005). The items assess a range of dimensions of interpersonal discrimination including exposure to ethnicity-related stigmatization, social distancing, discrimination at work, and threat or aggression. This scale is a modification of the PEDQ-Revised B, developed by Contrada and colleagues (Contrada, Ashmore, Gary, Coups, Egeth, et al., 2001) to evaluate perceived exposure to discrimination. To develop the community version, the original items were phrased in simpler language and adapted to reflect the everyday experiences of community-dwelling adults. Items inquire about a variety of everyday experiences generally pertinent to members of minority groups. Items are treated as continuous data and rated on a 5-point Likert-type scale, with a response of 1 signifying the event “never happened” and a response of 5 signifying the event “happened very often.”

Brief COPE. The Brief COPE is a shortened adaptation of the COPE Inventory (Carver, 1997). The COPE was developed to evaluate a wide array of coping responses, several of which have an explicit basis in theory. The Brief COPE excludes two scales (Restraint Coping and Suppression of Competing Activities) contained in the full COPE, condenses others to two items per scale, and adds one scale. The full COPE is a 60-item

instrument with 4 items per scale, and consists of 15 scales, each with a particular conceptual focus.

The Brief COPE is comprised of 28 items, 14 scales (of two items each). The original COPE did not have a measure of self-blame. Response options range from 0 (I haven't been doing this at all) to 3 (I've been doing this a lot). The inventory includes some responses that are considered dysfunctional, as well as some that are considered functional. It also includes two pairs of polar-opposite tendencies. Items ask respondents to consider how they usually feel, think, and respond given stressful or depressing situations or events, and scores are treated as continuous data.

Timeline

Figure 3: Timeline (months)

Activity	N	D	J	F	M	A	M	J	J
• Obtain final IRB approval	X								
• Identify, contact, and form the Research Advisory Group (RAG)	X								
• Conduct face and content validity assessments of variable measurement tools by RAG	X	X							
• Convene community partners	X	X							
• Develop participant recruitment strategies	X	X	X						
• Develop posters, flyers, and palm cards with contact information	X	X	X						
• Draft letters and advertisement materials	X	X	X	X					
• Amend IRB application				X					
• Recruit participants				X	X	X	X		
• Screen, enroll, and obtain consent from participants				X	X	X	X	X	
• Collect survey data				X	X	X	X	X	
• Data cleaning, analysis, and interpretation				X	X	X	X	X	X
• Manuscript development and findings dissemination				X	X	X	X	X	X

The project will take nine months to complete, beginning in November and concluding in July.

Data Analysis

Data will be prepared for analysis (organized, cleaned, and examined for recording and data entry errors), and a codebook will be generated including the following items for each variable: name, description, format, instrument, date collected, respondent, location, and notes. Data will be analyzed using Statistical Package for the Social Sciences for Windows Version 15.0 (2007). Univariate analysis will be conducted on all variables including descriptive statistics (mean, median, frequencies, standard deviation, and range). Partial scatter plots and histograms will be used to evaluate the distribution of the participants according to the variables measured.

Validity & Reliability Testing. To ascertain criterion-related validity for all tools, exploratory factor analysis will be conducted. The factor analysis will be performed using the principal components analysis extraction method and an oblique rotation because it is thought that some degree of correlation may exist between the subcategories of the constructs. Specifically, Direct Oblimin will be used in an attempt to satisfy the principles of simple structure with regard to the factor pattern matrix through a parameter, delta, that is used to control the degree of obliqueness, or correlation, allowed between the factors – set at 0. The Kaiser-Meyer-Olkin test will be computed to evaluate the correlation matrix.

The scree test and percent variance will be used as criteria for extracting factors. A cutoff of .4 will serve as an indicator of meaningful factor loadings. To establish internal consistency reliability for each tool, average item total correlations will be assessed using

split-half approach to compute Cronbach's alpha. The closer Cronbach's alpha is to 1.0, the greater the internal consistency of the items in the scale.

Statistical Associations. Multiple linear regression assumptions related to linearity, homoscedasticity, and normality, including independence, will be assessed. Pairwise correlations between independent variables will also be calculated to assess collinearity problems. Simple correlation analyses will be conducted to evaluate the associations between pairs of variables. Nonparametric statistics will be used when appropriate to evaluate the significance of the associations.

Strong linear relationships among independent variables will be further examined by assessing the variance inflation factor (VIF) and tolerance using 10.0 and .20, respectively, as critical values. To identify influential observations that significantly affect either the variables in the regression model or the accuracy of estimates of the regression coefficients and associated standard errors, response extremeness and predictor extremeness will be examined by assessing leverages, jackknife residuals, and Cook's distances. Leverage considers an observation with respect to the independent variables, jackknife residuals help pinpoint outliers, and Cook's distance measures the extent to which the estimates of the regression coefficients change when an observation is deleted from the analysis. Individual effects of each independent variable on the depression and anxiety measures will be considered in separate multiple regressions using the least-squares method as the best-fitting model that minimizes the sum of squares of the distances between the observed responses and those predicted by the fitted model.

Intersectionality, Moderation, & Confounding. To include a proxy measure of racial and sexual identity intersectionality, an internalized homonegativity and racial identity development interaction term will be included in the regression equation. I recognize that inclusion of this interaction assumes additive identity properties and is not a true measure of intersectional identity, but in absence of any available better quantitative measure I assessed it necessary to include this proxy term at minimum so as not to ignore the role of intersectional identity. Additionally, research suggests that coping level may moderate the relationship between the independent variables (IHNI, RIAS, IHNI-RIAS, and VDH) and CES-D and STAI scores, therefore coping and coping-independent variable interaction terms will also be included in the regression equation to operationalize moderation effects. If these interaction terms meet significance criteria for inclusion into the final model, corresponding moderation effects will be determined to exist.

Since age and income are possible confounding variables, they will be included in the regression model as covariates. Internalized homonegativity and Black identity achievement are both rooted in a developmental framework and therefore age, which is closely related to maturation and identity development, may mask the true associations between depression and anxiety and the IHNI and RIAS-B. Therefore, age will be included as an interval level variable from which adjusted and crude beta coefficients will be compared and assessed for significance. Additionally, the hypothesized moderating variable, coping, is in part influenced by resource acquisition to implement certain coping strategies; consequently, socioeconomic status may affect level of coping skill. Therefore, the interval level variable income will be included as a proxy for

socioeconomic status, for which adjusted and crude beta coefficients will be compared and assessed for significance. Cases with missing data will be excluded listwise in each analysis.

Limitations and Strengths

Utilization of a cross-sectional study design presents challenges in drawing conclusions due to lack of temporal data on whether or not the independent variables precede the dependent variables among the target population. While it can be reasonably assumed that BSMM are not born depressed or anxious and that identity development starts early in life, the onset of VDH relative to depression and anxiety is not as well established. In any case, there is likely to be a bidirectional relationship between the independent and dependent variables; thus, without data to conduct at least trend analysis over time, inferences must stop short of drawing causal conclusions. Nevertheless, the proposed research project addresses an important problem of depression and anxiety, and upon successful completion of the aims, this study will improve scientific knowledge and technical capability by 1) further developing the conceptual framework of mental disorder acquisition by BSMM, and 2) providing additional validation of measurement tools for use in future studies.

Although the overall health of the U.S. population has improved over the last few decades, many segments of the population, like BSMM, still suffer from poor health related to mental distress and HIV. This study adds to the identification of and addresses fundamental causes of these adverse health outcomes and disparities. The proposed study will refine and improve construct measurement tools and provide preliminary information

on influencing factors that can inform treatments, services, or preventative interventions. In order for progress to be made in the field, valid and reliable measurement tools are needed and relationships between depression and anxiety and their influencing factors must be established.

The validity and reliability testing in this proposed study will enable measurement tool use in future studies among this subpopulation across research fields. As depression and anxiety often lead to other mental and somatic illnesses and sometimes suicide, it is vitally important to identify influencing factors and be able to accurately and precisely measure them. The principal investigator has developed strong relationships with key partners, institutions, and organizations in BSMM communities in Guilford country through current and previous work in the Triad area.

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CHAPTER II

INTERNALIZED HOMONEGATIVITY INVENTORY FOR BLACK SEXUAL MINORITY MEN

Abstract

The purpose of this study was to explore the validity and reliability of the Internalized Homonegativity Inventory (IHNI) among a sample of Black sexual minority men (BSMM). This cross-sectional convenience sample (N=61) study assessed translation and criterion-related validity. Considering face and content validity and exploratory factor analysis, the IHNI was tailored to better suit BSMM, and the original and revised IHNI were compared. The revised IHNI performed slightly better among BSMM than the original.

Introduction

Internalized homonegativity significantly influences the health of sexual minority men, particularly psychosocial health outcomes. The internalized homonegativity inventory (IHNI) is a recently developed tool that was validated and primarily used with predominately white samples of sexual minority men. As a result, it is unclear whether this tool is culturally relevant for use among Black sexual minority men (BSMM). In order to investigate the relationship between internalized homonegativity and health outcomes among BSMM, it is necessary to have reliable tools that measure as accurately and precisely as possible internalized homonegativity among this particular

subpopulation. Thus, additional validation and tailoring of the IHNI to assure cultural relevance and sensitivity for use among BSMM is needed. This present study examined the construct validity and reliability among BSMM of the IHNI.

Background

Internalized homonegativity, not to be confused with internalized homophobia, can be described as negative, disapproving, or repudiating views or perceptions of homosexuality or related sexuality components, that persons with a same sex orientation have accepted, believe, or taken on from an external source (Hudson & Ricketts, 1980; Weinberg, 1973). Mental health practitioners coined the term internalized homophobia to consider homo- and bi-sexual persons' suffering connected to their sexual orientation as an alternative to viewing them as inflicted with a disorder. In this way, practitioners could think about the influence that a homophobic, heterosexist society has on the development of homo- and bi-sexual people. As pointed out by Shidlo (1994), internalized homophobia is a valuable concept for theorizing matters of development, psychopathology, psychotherapy, and prevention with homo- and bi-sexual persons. However, homophobia has been critiqued as an inadequate term because it refers expressly to the clinical fear and avoidance (phobia) of homosexuals and as such does not sufficiently incorporate the cultural attitudes and beliefs that promote and support the devaluation and hatred of homo- and bi-sexual persons (Herek, 1994; Shidlo, 1994).

This is not to say that homophobia is not useful or should never be considered, but that fear and avoidance alone often does not reflect the intent meant when the term homophobia is used. The outlook and way of thinking described by the term under debate

should be sufficiently scoped, aptly dimensioned, and adequately ranged. Thus, homonegativity is a more descriptive, appropriate term and recasting of the construct. In particular, homonegativity and internalized homonegativity are more suitable than homophobia and internalized homophobia because the former labels also include societal and individual depreciation of homo- and bi-sexual traditions of living (Fassinger, 1991), which can frequently be more destructive than blatant antigay attitudes taken separately.

Internalized homonegativity is defined as the array of “negative attitudes and affects toward homosexuality in other persons and toward homosexual features in oneself” (Shidlo, 1994). Shidlo’s description focuses on cultural aspects and intrapsychic features. The cultural components reflect the socialized negative thoughts and feelings that homo- and bi-sexual persons experience when they come across other homo- and bi-sexual persons and when they reflect on homosexuality in general. Contrarily, intrapsychic facets describe the negative postures and views that homo- and bi-sexual persons have that influence their personal lives, such as their bearing and standpoint toward same-sex sexual and emotional attraction, same-sex sexual behavior, and same-sex intimate relationships.

Unique Experience of Black Sexual Minority Men

Herek (1996) has made the case that homonegativity is a major social factor influencing sexual and psychological health outcomes among gay men. Other clinical studies have established a relationship between internalized homonegativity and self-hatred, low self-esteem, and self-imposed confines on one’s aspirations (Cabaj, 1988; Kahn, 1991; Nicholson & Long, 1990). Internalized homonegativity has also been shown

to be a major construct in sexual identity development, which may unfold uniquely among ethnic minority men. African-American gay men, for example, allude to feelings of conflicting loyalties between African-American communities and gay communities, when challenged by homophobia in African-American communities or racism in gay communities (Greene, 1994). There are realistic concerns about rejection by either community (Dyne, 1980; Icard, 1986; Mays & Cochran, 1988), which may influence how BSMM understand and orient themselves to gay affirmation, morality of homosexuality, and other components of internalized homonegativity.

Most people have multiple components of a collective identity, each of which can assume lesser to greater importance or prominence in disparate circumstances. When two or more of those identities are marginalized or stigmatized, one could become the target of multiple prejudices in majority group contexts (e.g., as Black, gay, low socioeconomic status) but could also experience prejudice in minority community environments (e.g., racial prejudice from White gay men, sexual prejudice from Black heterosexuals) (Herek & Garnets, 2007). Possessing multiple minority identities raises an individual's likelihood of experiencing marginalization, subjugation, and stigma (Diaz, Bein, & Ayala, 2006; Greene, 1994) which will likely affect how BSMM conceptualize, think about, and respond to certain questions and ideas represented by internalized homonegativity. In spite of the acknowledged homophobia in African-American and other communities, African-American gay men maintain a strong connection with their ethnic cultural heritage and to their communities, and often cite their ethnic identity as primary (Acosta, 1979; Mays, Cochran, & Rhue, 1993); which could impact their sexual

identity development and how internalized homonegativity shows up or presents among BSMM.

Loiacano (1989) conducted a qualitative study in which Black gay men were interviewed about their sexual identity. One of the salient themes delineated was an expressed need to integrate better multiple identities, namely ethnic and sexual identities. The author describes this as a strong desire to acquire simultaneous and inclusive validation and support for Black gay men's diverse identities. This issue of racial and sexual identity integration is a unique factor among BSMM and the degree to which their identities and exercising cultural practices conflict, will bear on what internalized homonegativity looks like among this subpopulation.

Internalized Homonegativity Measurement Among Ethnic and Sexual Minority Men

A study conducted by Shaptow, Weiss, Munjas, Hucks-Ortiz, Young and colleagues (2009) examined associations between internalized homonegativity and sexual health risk factors among a predominately Black sample of sexual minority men in Los Angeles county using respondent-driven sampling techniques. The majority of the sample was between 30 and 49 years of age and most had an educational attainment level of high school or greater. Scores for the IHNI total, Gay Affirmation, and Morality were significantly higher for the African-American men than for those of other ethnicities; and the total and subscale scores were highest for bisexual men and straight identified men and lowest for homosexual and gay identified men. IHNI scores were correlated with self-reported measures of "outness" to examine content validity, which does not appear sufficient since "outness" does not cover all of the construct domains included in the

IHNI. This seems more like an assessment of convergence than an examination of content validity; and since a detailed discussion of the “outness” measure is not provided, a clear evaluation of this measure as appropriate for use in content validity assessment cannot be made.

Psychometric properties of the Internalized Homonegativity Inventory (IHNI) total and the subscales were assessed using Cronbach’s alphas for internal consistency and a principal components factor analysis for latent structure of the data. The original IHNI was used even though the sample included bisexual and non-gay identified men, which suggest translation validity may be less than optimal given that the original IHNI only references homosexual and gay men. Also, while the Cronbach’s alphas for the total and subscales were all acceptable, the factor analysis only yielded two factors, (Personal Homonegativity and Gay Affirmation) instead of three factors as delineated in the IHNI’s original validation. Additionally, there were items that crossloaded on factors not theoretically hypothesized and items that did not load at all. These findings indicate that further validation of the IHNI for use among BSMM is warranted.

Due to the unique standpoint of groups at the intersections of racial and sexual identities, assessment tools used to measure constructs like internalized homonegativity among predominantly White samples cannot be assumed optimally valid for use among BSMM. This present study examined the construct validity and reliability among BSMM of the IHNI. Face and content validity was assessed by a group of experts to examine translation validity. To examine criterion-related validity exploratory factor analysis was conducted and convergence assessed.

Methods

Design and Sampling

The study consisted of two phases, an expert panel review of the IHNI and survey of participants. An observational cross-sectional study design was used. The University of North Carolina at Greensboro served as the primary study site; however, participant recruitment, screenings, and survey administration also took place at a variety of sites in the community including pride organizations, local bars and clubs, and community based organizations. We used snowball-sampling techniques where eligible participants recommended others to contact the investigator if interested in participation.

Recruitment materials included posters, flyers, and palm cards approved by the Institutional Review Board (IRB) for the recruitment specialist to distribute at community facilities and events. Also, letters containing the same information as flyers were sent to physical and electronic mailing address listservs. Additionally, advertisements were placed in local newspapers and on social networking websites. The materials included a short description of the study, including its purpose and the contact information of study personnel, as well as a web link for the project.

Procedures and Data Collection

Potential participants contacted the recruitment specialist via e-mail, phone, and in-person meetings, at which time the recruitment specialist excluded women, men who had sex with women only, and men who self-identified as straight. Participants included in the study were men 18 years old or over who self-identified as being of African descent (Black, African-American, etc.) and as men who had sex with, desired to have sex with,

or eroticized sex with men. After presentation of both written and verbal explanations of the study, the recruitment specialist obtained informed consent and contact information from participants at the first encounter. Following receipt of informed consent and contact information, participants received a unique identifier and password to complete the battery of surveys online at a secured website accessed either from their own personal computer or a laptop computer provided for them. Participants were required to answer each question before moving to the next. The battery of surveys took between 30 and 45 minutes to complete. Participants received a \$25 gift card.

A group of 10 researchers who have experience with and are knowledgeable about internalized homonegativity and BSMM were recruited and served on the expert panel that assessed the translation validity of measurement tools. Panelists were identified through their publications and by recommendation of community partners. Careful and deliberate attention was given to the subtle, but potentially significant differences in the ways in which the internalized homonegativity concepts may present or be oriented in different groups. The vernacular, conceptualizations, and applicability of the constructs being investigated may differ in different subpopulations. To assess translation validity, operationalized as face and content validity, the expert panel used findings from a preliminary study (Graham et al., 2009), the literature, and panelists' experiences and knowledge in working with these constructs and the target population to:

- Consider how to word questions to get at the issues of interest, to minimize confusion and misunderstanding, and to offer the appropriate level of directness so that the wording is not threatening or disturbing for respondents.

- Examine each question to determine if it needs to be asked at all and if so, at what level of detail.
- Determine whether additional questions need to be asked to provide enough context to interpret answers or to determine the intensity of the respondent's attitudes or beliefs.
- Address questions that may be biased or loaded given the specific target population (BSMM).

These assessments informed alterations of the IHNI for further examination using factor analysis.

Instruments

The Demographic Information Sheet asks 10 questions focused on three components of sexuality (orientation, identity, and role), socioeconomic status (educational attainment and annual income), religious affiliation, age, and any previous diagnosis of depression.

Internalized Homonegativity Inventory (IHNI). The IHNI was validated on 241 gay men primarily of European descent. The scoring of positive items is reversed, such that higher scores represent greater internalized homonegativity (Wayne, 2001). Higher scores on the personal homonegativity and morality of homosexuality subscale, and lower scores on the gay affirmation subscale represent more IHNI. Sample items include "I am proud to be gay," "homosexuality is harmful to the order of society," and "I believe homo/bi-sexual men are weak." The 23 IHNI items reference current state, responses (1-strongly disagree to 6-strongly agree) are summed, and scores are treated as continuous

data. Cronbach's alphas for the adapted 17 item IHNI produced in this study were: total – $\alpha=.97$, Factor 1 - $\alpha=.95$, Factor 2 - $\alpha=.91$, Factor 3 - $\alpha=.89$.

Results

Demographics

Seventy-seven percent of participants indicated that they have had sex with or desire to have sex with males only, 77% self-identified as culturally gay, and 13% identified culturally as same-gender-loving (Table 1). Thirty-nine percent of participants completed a two-year degree or had some college education, 31% completed a four-year degree, and the average annual income of participants was \$25,275, with a range of \$0 to \$68,000. The average age of participants was 31 with a range from 19 to 50 years old; 50% designated their religious affiliation as Christian, and 33% as spiritual.

Translation Validity

Given the variety of ways BSMM identify, the expert panel suggested replacing the word homosexual in items 3, 5, 9, 12, 16, 20, and 22 with the word homo/bi-sexuality; the word gay in items 1, 17, and 21 with the word homo/bisexuality; the word gay in item 13 with the phrase “not heterosexual”; and the word gay in items 8 and 14 with the phrase “sexual minority men.” The panel also suggested adding the word “only” to the end of item 15 for clarity, adding two new items to the measure, and deleting items 10, 11, 9, and 16 (Table 2). Items suggested for addition to the personal homonegativity dimension were drawn from a preliminary study (Graham et al, 2009): “I feel ashamed when I see or am around other sexual minority men who are obviously homo/bi-sexual or who are acting gay/SGL” and “I believe homo/bi-sexual men are weak.”

The panel concluded that item 10 should be deleted because 1) nervousness is very closely related to a different construct, anxiety, that is prevalent among BSMM; 2) without better specifying context and given the high propensity of violence, discrimination, and harassment related to both race and sexuality for BSMM, participants could be responding to realistic concerns about safety and not personal homonegativity; and 3) with the inclusion of item 13, a major concept of internalized homonegativity is not lost by the deletion. At best this item may be a consequence of internalized homonegativity rather than a reflection of it. Though this item represents a related construct, it should not be included to measure internalized homonegativity among this subpopulation.

Item 11 was recommended for deletion because it 1) unwisely assumes participants do not already perceive themselves as having control over their feelings of attraction toward other men, 2) supposes that if participants do wish they had control over their attraction, they would chose to eliminate those feelings, and 3) control over feelings of attraction could be read as having better control of sexual compulsivity, which is not a meaning the question intends.

Item 9 was recommended for deletion because meaning and significance of homosexuality as a gift is not very clear; gift could reference a talent, for example. Also, the item begs the question of homosexuality as a gift from whom and for what purpose. Finally, given societal marginalization, oppression, and victimization of BSMM, it is possible that even those with otherwise low levels of internalized homonegativity would not reference or use the language of their homosexuality as a gift.

Lastly, item 16 was recommended for deletion because order of society is not defined or readily understood. It could refer to society generally being disturbed by the presence or existence of homosexual persons, it could refer to procreation, or it could refer to religious/divine notions of right or wrong. No matter which interpretation is chosen, what is intended in this item is not clear. The language changes to the items recommended by the panel were incorporated into the original IHNI before survey administration, however the items suggested for deletion were retained in order to compare the two versions with factor analysis. References to the original IHNI from hence forth refer to the full 23 item IHNI with recommended language changes.

Factor Analysis & Item Selection

Prior to performing exploratory factor analyses on the original IHNI, the factorability was inspected by computing Kaiser's measure of sampling adequacy (MSA). The MSA is a marker of the amount of common variance in the item pool; it can range from zero to one. Kaiser (1970) reported that MSA indices greater than .80 should be considered good. For the original IHNI (with language changes) initial MSA index for all 23 items was .89.

A principal axis analysis extraction with varimax rotation was specified for the 23 items. The IHNI was conceptualized and developed to be composed of 3 factors, so 3 factors were designated for retention. The eigenvalues and amount of variance accounted for by each of the three respective factors after rotation were 5.78 (27.53%), 5.61 (26.69%), and 3.42 (16.3%). The factor intercorrelations were: factor 1 with factor 2, $r=.83$; factor 1 with factor 3, $r=.87$; and factor 2 with factor 3, $r=.71$. The Cronbach's

alphas for the original IHNI scale were: total - .97, factor 1 - .96, factor 2 - .91, and factor 3 - .87.

The factor solution was examined with respect to the patterns of item loading. Items that loaded .44 or greater on the factors they were theoretically hypothesized to were retained while the others were dropped. Eight items (four from the first subscale, three from the second, and one from the third) were removed using these criteria. Four of the items designated for deletion were also previously suggested for deletion by the panel (items 10, 11, 9, and 16). To further refine the subscales, the two items suggested for inclusion in the first subscale by the expert panel were added and another principal axis factor analysis specifying the extraction of three factors with varimax rotation was performed on the 17 items¹.

The same criteria for inclusion were applied to this revised version. No subsequent items were removed. After subscale refinement, a total of 17 items were retained. For the revised IHNI the MSA index for all 17 items was .88, just as good as the original IHNI. The eigenvalues and amount of variance accounted for by each of the three respective factors after rotation were 4.71 (27.69%), 4.55 (26.79%), and 3.16 (18.58%).

The factor intercorrelations were: factor 1 with factor 2, $r=.80$; factor 1 with factor 3, $r=.83$; and factor 2 with factor 3, $r=.68$. The average communalities after extraction were slightly higher in the revised IHNI as compared to the original and the total variance explained by the three factors was slightly higher in the revised IHNI (73.05%) as

¹ The two items were also added to the original IHNI for inclusion in an additional principal axis analysis using the same criteria where the same 8 items were dropped as those removed after the original IHNI principal axis analysis excluding the two added items. Consequently, the two added items had no effect on the items removed.

compared to the original (70.52%). Table 2 presents the final version of the revised IHNI, with items and final factor loadings. Cronbach's alphas for the revised scale were: total - .97, factor 1 - .95, factor 2 - .91, and factor 3 - .89.

Table 3 shows the means and standard deviations for the revised IHNI instrument and the three subscales, along with internal consistency reliabilities (coefficient alpha) and correlations among the subscales. Coefficient alpha was .89 or greater for each of the subscales. With respect to the subscale correlations, all the subscales were significantly positively correlated. The original tool and the modified tool were highly correlated with an $r = .96$, which establishes convergent validity in that the tools theoretically should be related to each other.

Discussion

This study expands, further validates, and builds on previous work using the IHNI. The IHNI was minimally altered and tailored to better suit a specific subpopulation, BSMM. Factor analysis revealed a slightly better performance of the altered IHNI as compared to the original. The revised IHNI factor solution resulted in a decrease of items that crossloaded and appeared slightly more meaningful in that it better reflected the hypothetical factor structure presented in the construct definition of internalized homonegativity.

The original factor solution did not capture the hypothesized dimensions as clearly in this sample. The deletions encompassed items that have been critiqued as being extreme and overt and thus not appropriate for inclusion in the tool (Currie, Cunningham, & Findlay, 2004). The reliability of the revised IHNI scale was just as high as the original

scale in this sample. The psychometric properties of both the original IHNI and revised IHNI scales were significantly better in this sample than the original validation statistics reported.

Similar to factor analysis findings in the Shoptaw et al. (2009) study, some items failed to load sufficiently on their theoretically hypothesized factor for the original IHNI among BSMM. Further validation of both the IHNI and the revised version resulting from this study is needed among diverse samples focused on discriminant, concurrent, and predictive validity, including confirmatory factor analysis. Additional research using the IHNI to determine the influence of internalized homonegativity on pressing health outcomes such as suicide, depression, and anxiety among BSMM is also needed.

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TABLES

Table 1. Demographics

Sexual Orientation	N	%
Homosexual	47	77
Bisexual	14	23
Sexual Identity		
Gay	46	77
Same-Gender-Loving	8	13
In-the-Life	1	2
Bisexual	3	5
Other	2	3
Highest Level of Education		
High School	7	12
Some college/2 yr degree	24	39
4 yr degree	19	31
Terminal degree	11	18
Religious Affiliation		
Christian	30	50
Spiritual	20	33
None	10	17
Depression Diagnosis		
Depression Diagnosis	20	33
CES-D Score > 15	18	30
STAI Score > 39	20	33

Note. N=61. Age range = 19-50 years. Mean age = 30.7 years.
Annual income range = 0-\$68,000. Mean income = \$25,275.

Table 2. Internalized Homonegativity Inventory (IHNI) Items and Subscale Factor Loadings

Item no.	Item text	Original IHNI Factor loading	Revised IHNI Factor loading
<i>Factor 1: Personal Homonegativity</i>			
3	When I think of my homo/bi-sexuality, I feel depressed.	.38	n/a
17	Sometimes I feel that I might be better off dead than homo/bi-sexual.	.40	n/a
7	When I think about my attraction towards men, I feel unhappy.	.53	.48
20	I sometimes feel that my homo/bi-sexuality is embarrassing.	.72	.80
13	I am disturbed when people can tell I'm not heterosexual.	.66	.66
23	I believe it is unfair that I am attracted to men instead of women only.	.64	.65
18	I sometimes resent my sexual orientation.	.64	.71
5	I feel ashamed of my homo/bi-sexuality.	.60	.61
15	Sometimes I get upset when I think about being attracted to men.	.53	.52
10	When people around me talk about homosexuality, I get nervous.	<.2	n/a
11	I wish I could control my feelings of attraction toward other men.	<.2	n/a
24	I feel ashamed when I see or am around other sexual minority men who are obviously homo/bi-sexual or who are acting gay/SGL.	n/a	.56
25	I believe homo/bi-sexual men are weak.	n/a	.45
<i>Factor 2: Gay Affirmation(reversed scored)</i>			
21	I am proud to be homo/bi-sexual.	.46	.50
6	I am thankful for my sexual orientation.	.30	n/a
1	I believe being homo/bi-sexual is an important part of me.	<.2	n/a
12	In general, I believe that homo/bi-sexuality is as fulfilling as heterosexuality.	.85	.80
8	I believe that more sexual minority men should be shown in TV shows, movies, and commercials.	.65	.67
22	I believe that public schools should teach that homo/bi-sexuality is normal.	.61	.65
9	I see my homo/bi-sexuality as a gift.	<.2	n/a
<i>Factor 3: Morality of Homosexuality</i>			
19	I believe it is morally wrong for men to be attracted to each other.	.69	.67

16	In my opinion, homo/bi-sexuality is harmful to the order of society.	<.2	n/a
4	I believe that it is morally wrong for men to have sex with other men.	.83	.81
14	In general, I believe that sexual minority men are more immoral than straight men.	.78	.79
2	I believe it is OK for men to be attracted to other men in an emotional way, but it's not OK for them to have sex with each other.	.67	.65

Table 3. Psychometric Properties of the Revised Internalized Homonegativity Inventory (IHNI) and Its Subscales

Property	IHNI	Personal Homonegativity	Gay Affirmation	Morality of Homosexuality
M	30.67	16.43	7.91	6.36
SD	17.25	9.46	4.42	4.44
Median	25	14	7	4
Range	17-85	9-45	4-20	4-20
Skew	2.22	1.98	1.39	2.21
Internal Consistency	.97	.95	.91	.89
Correlations				
IHNI	-			
Personal	.98	-		
Gay Affirmation	.88	.80	-	
Morality	.90	.83	.68	-

N=58. All correlations shown are significant at $p < .001$

CHAPTER III
FACTORS INFLUENCING DEPRESSION AND ANXIETY AMONG BLACK
SEXUAL MINORITY MEN

Abstract

The primary aim of this study was to examine the relationships between depression and anxiety, ethnic and sexual identity development (operationalized as Black identity achievement and internalized homonegativity); violence, discrimination, and harassment; and coping skills among Black sexual minority men. Using an observational cross-sectional study design 54 participants completed an interviewer-administered assessment. Experience of violence, discrimination, and harassment, and internalized homonegativity explained a large portion of the variability in depression and anxiety among this sample. The study also showed high prevalence of mental distress among Black sexual minority men.

Introduction

Research and theoretical suppositions suggests that Black sexual minority men (BSMM) may experience more depressive symptoms and anxiety disorders than their White sexual minority and Black heterosexual counterparts, groups that already experience higher rates than the general population. Little is known about the factors that influence the psychosocial health of BSMM. The limited research conducted among BSMM, predominately White samples of sexual minority men and among Black men

with unspecified sexuality, however, indicates that the unique concerns around identity and exposure to violence and discrimination may play particularly important roles. Also critical are an individual's internal and external resources that can serve as coping tools.

The relationships found between depressive symptoms and anxiety, and these constructs among sexual minority and Black men in general cannot be assumed to exist, to exist to the same degree, or to exist in the same way for BSMM because the lived and authentic experiences of this subgroup in relation to the constructs under investigation are likely different from each of the referent groups (White sexual minority and Black heterosexual men), though there is most likely significant overlap. This idea, drawing from what is referred to in cultural studies and the social sciences broadly as “intersectionality”, is not new, but has yet to be applied to the examination of the psychosocial health of BSMM. Intersectionality is a sociological theory suggesting that—and seeking to explore how—a variety of culturally and socially constructed types of discrimination interact on numerous and frequently concurrent levels, leading to systematic social inequality. Health disparities research, in part, is based on the reality that morbidity and mortality are not distributed equally across groups and that the driving factors influencing disease and illness rates may also vary across groups including those at the intersections of various populations. The primary aim of this study was to examine the relationships between depression and anxiety, ethnic and sexual identity development (operationalized as Black identity achievement and internalized homonegativity), VDH, and coping skills among BSMM.

Background

Mental health disorders affect a considerable proportion of the general population in the United States (US; Grant, Stinson, Dawson, Chou, Dufour, et al., 2004). Data from the National Comorbidity Study show that over their lifetime roughly 21% and 29% of adults meet Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria for a mood or anxiety disorder respectively (Kessler, Berglund, Demler, Jin, & Walters, 2005). Thus, mental health issues are of great concern nationally. Disparities have also been documented as a mounting body of data indicates that sexual minorities are at greater risk for mental health disorders than their heterosexual/straight counterparts (Cochran & Mays, 2005; Cochran, Sullivan, & May, 2003; Gilman, Cochran, Mays, Hughes, Ostrow, et al., 2001; Meyer, 2003).

Meyer (2003) concluded, in a meta-analysis, that the odds of gay and bisexual men experiencing an anxiety or mood disorder over their lifetime were twice that of straight men. General population investigations using random sampling techniques have also shown that homo/bi- sexual men were more likely to have mood and anxiety disorders than were heterosexual men (Cochran, Keenan, Schober, & Mays, 2000; Cochran & Mays, 2000a, 2000b; Sandfort, de Graaf, Bijl, & Schnabel, 2001; Mays & Cochran, 2001). However, sample sizes of Black men have been too small to estimate population parameters for Black homo/bi-sexual men. Even so, a convenience sample study by Cochran and Mays (1994) found a 32.6% prevalence of depression among BSMM. Among the few convenience sample studies that include all or significant numbers of Black sexual minority men, African-American gay men were observed to have an

increased probability of feeling anxiety and isolation but were considered unlikely to seek professional help (Bell & Weinberg, 1978; Bass-Hass, 1968). These findings indicate that group members may be more susceptible to negative mental health outcomes.

Bostwick, Boyd, Hughes, and McCabe (2009) examined cross-sectional data from the 2004-2005 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), whose design included clustering and stratification of the target population, to explore dimensions of sexual orientation and the prevalence of mood and anxiety disorders in the US. Eleven percent of the sample identified as Black non-Hispanic. Mood and anxiety disorders among men were more concentrated in sexual minority groups. Men who identified as gay (n=190) were 2.4 and 1.8 times more likely to have any lifetime and past-year mood disorder respectively, and 2.7 and 2.3 times more likely to have any lifetime and past-year anxiety disorder respectively than those who identified as straight; and men who identified as bisexual (n=81) were 2.1 and 1.7 times more likely to have any lifetime and past-year mood disorder respectively, and 2.7 and 2.4 times more likely to have any lifetime and past-year anxiety disorder respectively than those who identified as straight. Also, men who reported being attracted to males only (n=229) were 1.7 and 1.1 times more likely to have any lifetime and past-year mood disorder respectively, and 2.2 and 1.6 times more likely to have any lifetime and past-year anxiety disorder respectively than those who identified as heterosexual; and men who reported being mostly attracted to males (n=96) were 2.6 and 2.2 times more likely to have any lifetime and past-year mood disorder respectively, and 3.3 and 4.0 times more likely to have any lifetime and past-year anxiety disorder respectively than those who identified as

heterosexual. Higher rates of mental disorder among sexual minority men as compared to straight men are conclusive, even when sexuality is defined and considered in a variety of meaningful ways (i.e. behaviorally, culturally). Researchers must now turn attention to better understanding why these disparities exist and to determine whether minority groups within this subpopulation are similarly burdened in corresponding ways.

The Bostwick et al. (2009) findings may be underestimated given the face-to-face interview method that may have led to underreporting of sensitive information such as minority sexual identity, attraction, or behavior (Laumann, Gagnon, Michael, & Michaels, 1994; Drabble, Midanik, & Trocki, 2005). Authors point to negative attitudes toward and punishment of gay men in response to perceived transgressions of heteronormative behavioral scripts or infringements on traditional sex norms, which lead to severe forms of victimization and physical violence, as a primary determinant of these disparities in mood and anxiety outcomes (Herek, 2002; Herek & Capitano, 1999; Kite & Whitley, 2003; Herek, 2009). Experiences of physical harm and threats of harm have been strongly related to poor psychosocial health outcomes among samples of predominately White sexual minority men (Herek & Garnets, 2007; Herek, Gills, & Cogan, 1999).

Violence, Discrimination, & Harassment

In a sample of 1,248 young gay and bisexual men (M=23 years, range = 18-27) recruited in three southwestern US cities, 5% reported during the previous six months they had experienced physical violence because of their sexual orientation (Huebner, Rebhook, & Kegeles, 2004). In a 1989 San Francisco Examiner national telephone

survey, 5% of gay men (n=287) reported having been physically abused or assaulted in the previous year because they were gay (Results of Poll, 1989). Similarly, in a probability sample of 912 Latino men who have sex with men (MSM), recruited from social venues in New York, Miami, and Los Angeles, 10% reported they had experienced violence as an adult because of their sexual orientation or femininity (Diaz, Ayala, Bein, Henne, & Marin, 2001). These earlier studies show the longstanding high rates of VDH perpetuated against sexual minority communities.

More recently, Herek (2009) conducted a national probability sample study examining the prevalence of hate crimes and stigma-related experiences among sexual minority adults in the US. The sample included 311 women and 351 men (241 gay men, 110 bisexual men). Fifteen percent of the combined sample identified as non-Hispanic Black, and of the total sample 34.8% and 26.9% identified as gay men and bisexual men respectively. The proportion of all men who self-reported ever experiencing VDH ranged from 17.7% for gay men and 3.7% for bisexual men for the category job or housing discrimination, to 63% for gay men and 41.4% for bisexual men for the category verbal abuse. Thirty-nine percent of gay men and 20.1% of bisexual men self-reported experiences of sexual identity-related violence, property crime, or attempted crime at least once; and 35.4% of gay men and 19% of bisexual men reported experiences of being threatened with violence at least once. Data on BSMM were not parsed out or reported in this study. There is a need to determine if these findings hold for BSMM as well.

A 2000 review of the literature on racial/ethnic discrimination and mental health not bound by sexuality criteria identified 13 studies (Williams & Williams-Morris, 2000). Four investigations (Brown, Williams, Jackson, Neighbors, Torres, et al., 2000; Karlsen & Nazroo, 2002; Kessler, Mickelson, & Williams, 1999; Siefert, Bowman, Helfin, Danzinger, & Williams, 2000) explored the relationship between a diagnosis of major depression and perceived discrimination, and 3 showed a positive association. None of the investigations revealed a negative association. One investigation (Kessler, Mickelson, & Williams, 1999) explored the relationship between generalized anxiety disorder and perceived discrimination, which showed a positive association. Generally, discrimination is associated with poor mental health outcomes; however, we do not yet understand the degree to which exposure to perceived discrimination contributes to increased risk of illness, disorder, or problems, the circumstances in which this may happen, or the processes and mechanisms that may be implicated. Study of discrimination and mental health in this regard is still in a formative phase.

Accruing evidence indicates violence, discrimination and harassment are critical factors in the mental health status of ethnic and sexual minority men. A primary theme that emerged from Graham and colleague's (2009) study was the negative effect of violence and discrimination on the mental health status of BSMM. Similarly, Crawford, Allison, Zamboni, and Soto (2002) found negative associations between experiences of perceived racist events and life satisfaction and anxiety among BSMM. Finally, Diaz, Ayala, Bein, Henne, and Marin (2001) found the experience of racial, sexual and class discrimination to be positively associated with depression and anxiety among Latino

sexual minority men. These studies support the need for additional research on the experiences of violence, discrimination and harassment among ethnic sexual minority men and associated mental health outcomes.

Identity Development

There is a paucity of literature focused explicitly on identity development among BSMM from an integrative perspective generally. It is important to begin by discussing BSMM as whole persons and communities taking into account their various identity elements together before considering different aspects of their overall identity separately. Graham, Braithwaite, Spikes, Stephens, and Edu (2009) conducted focus groups to explore the psychosocial health of BSMM and shed light on the potential influencing factors of mental health outcomes. They found that BSMM are challenged in developing a healthy overarching identity. Authors concluded that struggles related to the unique experience of being BSMM, such as negative attitudes and beliefs concerning race, sexuality, and gender conformity pressure, contributed to burden of depression and anxiety. These findings substantiate the supposition that unique factors are at play for BSMM related to mental health outcomes.

Also, the study by Crawford, et al. (2002) among African-American gay or bisexual men found that BSMM with a positive racial identity were significantly less likely to have mental distress and more likely to have greater life satisfaction and self-esteem than BSMM with less positive racial identity. In spite of the acknowledged homophobia in African-American and other communities, African-American gay men maintain a strong connection with their ethnic cultural heritage and to their communities, and often cite

their ethnic identity as primary (Acosta, 1979; Mays, Cochran, & Rhue, 1993). Additionally, African-American gay men allude to feelings of conflicting loyalties between African-American communities and gay communities, when challenged by homophobia in African-American communities or racism in gay communities (Greene, 1994). There are realistic concerns about rejection by either community (Dyne, 1980; Icard, 1986; Mays & Cochran, 1988). There is the potential for negative effects on the health and psychosocial well-being of gay men who are members of ethnic minority groups.

This issue of racial and sexual identity integration is a unique factor among BSMM. Most people have multiple components of a collective identity, each of which can assume lesser or greater importance or prominence in disparate circumstances. When two or more of those identities are marginalized or stigmatized, one could become the target of multiple prejudices in majority group contexts (e.g., as Black, gay, low socioeconomic status) but could also experience prejudice in minority community environments (e.g., racial prejudice from White gay men, sexual prejudice from Black heterosexuals) (Herek & Garnets, 2007). Possessing multiple minority identities raises an individual's likelihood of experiencing marginalization, subjugation, and stigma (Diaz, Bein, & Ayala, 2006; Greene, 1994) which could lead to mental disorders like depression and anxiety.

Black Identity Development. Positive racial identity is denoted as “the process of development by which individual members of various socioracial groups overcome the version of internalized racism that typifies their group in order to achieve a self-affirming

and realistic racial-group or collective identity” (Helms & Cook, 1999, p.84). Based on Helms’ (1995) model of Black racial identity, the least affirming status is Preencounter. The next racial identity phase, Encounter, commences once one has a personal thought-provoking experience with race that leads the individual to question his racial identity. The third phase, Immersion, entails coming to understand the worth and significance of the individual’s ethnic heritage. However, this newfound meaning is often not authentic and is accompanied by negative reactionary attitudes toward dominant cultural orientations, usually in the form of anger and distrust toward those who participate in racial oppression. The last stage, Internalization, is characterized by affirming and valued perception of oneself.

A study conducted by Pierre and Mahalik (2005) examined Black racial identity as a predictor of psychological distress and self-esteem among 130 Black men of undocumented sexuality between the ages of 18 and 25 years old from a college and community sample. The authors found that pre-encounter and immersion racial identity attitudes were associated with more psychological distress and less self-esteem while Internalization attitudes were associated with better psychological well-being. These findings are consistent with previous research in the area (Carter, 1991; Munford, 1994; Parham & Helms, 1985a, 1985b; Pyant & Yanico, 1991). As such, these investigations support the contention that Black men who have a confident self perception and a more open worldview that neither mindlessly disparages nor romanticizes Blackness or Whiteness but rather is sensibly self-affirming of their ethnic heritage may be more psychologically adjusted.

Internalized Homonegativity. Theoretically, internalized homonegativity hinders the course of healthy identity development (Malyon, 1982). Internalized homonegativity is defined as the array of ‘negative attitudes and affects toward homosexuality in other persons and toward homosexual features in oneself’ (Shidlo, 1994). A study conducted by Rosser et al. (2008) examined the relationship between homosexuality, internalized homonegativity, and mental health in men who have sex with men. Subjects self-reported as male at birth and self-identified as “men who have sex with, or are attracted to, other men (MSM).” Internalized homonegativity was measured with the reactions to homosexuality scale (Ross & Rosser, 1996; Rosser, Bockting, Ross, Rugg, Bauer, et al., 2000) and depression was measured using three items based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-III, 1980).

The study found that internalized homo-negativity, not homosexuality, was an important predictor of depression in homosexual men. This was the case for all levels of depression (adjustment, dysthymia, and major). In this study, across the three measures of depression, the likelihood of being depressed increased 1.4-2.6 times per unit increase in internalized homonegativity. The greater the internalized homo-negativity a participant possessed, the more likely he was to view his sexuality as a curse, hating it, and rejecting it. Authors concluded that as a result, men who possessed greater internalized homo-negativity were likely to be psychosexually less developed and less content with their sexuality.

In both Cass (1979) and Coleman’s (1982) stage typologies, earlier stages are more likely to be experienced as “psychosexual adolescence.” Likewise, on six measures of

social acculturation, internalized homo-negativity was strongly negatively correlated with reading gay magazines, patronizing gay places, socializing with peers, and being “out.” It seemed that the more internalized homo-negativity, the more likely men were isolated from their peers.

Coping

In stress and coping theory (Lazarus & Folkman, 1984), coping is defined as the views and behaviors individuals use to deal with burdens they identify as exceeding their resources. Coping mechanisms entail efforts to change the pathway stress takes (problem-focused coping) and efforts to control emotional reactions to stressors (emotion-focused coping). This framework has been suggested for looking at the relationship between stress, socio-cultural factors, coping processes, and a range of outcomes for African Americans (Barbarin, 1983, 1993). A study by Peterson and colleagues (1996), found that psychosocial resources, including optimum social support and spirituality, mediated the effects of stressors on depressive mood among Black men who have sex with men.

Miranda and Storms (1989) found that active coping styles in a predominately White sample of homosexual men were associated with positive sexual identity development that led to healthy psychological adjustment. Another investigation including Black and White homosexual men found that BSMM were more likely to use disengaged coping styles such as self-blame and denial compared to White gay men (Hayes, 1996). Other investigations have found a statistical relationship between perceived racism and disengaged coping (Clark, 1997; Lopez-Kinney, 2002). Finally, a study conducted by David and Knight (2008) examined stress and coping among a diverse sample of gay men

taking into consideration internalized homonegativity and found that even though BSMM were more likely to use disengaged coping styles they did not appear to experience more negative mental health outcomes as a result.

To date, few studies have been conducted that investigate the relationship between depressive symptoms and anxiety, and the aforementioned conceptual constructs among an exclusively or predominately Black sample of sexual minority men. The primary aim of this study was to examine the relationships between depression and anxiety, ethnic and sexual identity develop (operationalized as Black identity achievement and internalized homonegativity), VDH, and coping skills among BSMM. This study will focus on the following research questions:

1. Are internalized homonegativity and VDH significantly positively associated with depression and anxiety?
2. Is Black identity achievement significantly negatively associated with depression and anxiety?
3. Is there an interaction effect between internalized homonegativity and Black identity achievement on depression and anxiety?
4. Does coping skill level moderate the associations between depression and anxiety, and internalized homonegativity, VDH, and Black identity achievement?

Findings from this study will move us closer to determining the primary factors driving rates of depression and anxiety among BSMM. Better understanding mental health determinants among BSMM will enable population health practitioners, medical service

providers, and policy-makers to help prevent mental distress and disorders, effectively promote overall psychosocial health, and intervene early in distress sequelae.

Methods

Design and Sampling

An observational cross-sectional study design was used. The University of North Carolina at Greensboro served as the primary study site; however participant recruitment, screenings, and survey administration also took place at a variety of recruitment and data collection sites. Volunteer snow-ball sampling was employed. In snowball sampling we began by identifying someone who met the criteria for inclusion into the study and then asked them to tell others about the study through word-of-mouth so that they may contact the investigator if interested in participating.

Posters, flyers, and palm cards were developed and approved by the Institutional Review Board (IRB) for the recruitment specialist to distribute at community facilities and events. Letters were also drafted and sent to e-mail and physical address listserves. Additionally, advertisements were placed in local newspapers and on social networking websites. The materials included a short description of the study, including its purpose and the contact information of study personnel, as well as a web link for the project.

Procedures and Data Collection. Potential participants contacted the recruitment specialist via e-mail, phone, and in-person meetings, at which time the recruitment specialist screened by excluding women, men who had sex with women only, and men who identified as straight; and including men 18 years old or over who self identified as being of African descent (Black, African-American, etc.) and as men who had sex with,

desired to have sex with, or eroticized sex with men. After presentation of both written and verbal explanations of the study, the recruitment specialist obtained informed consent and contact information from participants at the first encounter. Following receipt of informed consent and contact information, participants were provided with a unique identifier and password to complete the battery of surveys online at a secured website accessed from their own personal computer or laptop computer provided for them. Participants were required to answer each question before moving to the next; and the battery of surveys took between 30 and 45 minutes to complete, after which participants received a \$25 gift card to Target.

Measures

Center for Epidemiologic Studies Depression Scale (CES-D), which was developed in 1976 for use in general adult populations (aged 18 or older), is a 20-item self-report scale that measures depressive symptoms (Radloff 1977). Sample items include “I felt sad,” “I felt lonely,” and “I felt fearful.” CES-D items reference the previous 7 days, responses (0-rarely or none of the time, 3-most or all of the time) are summed, and scores are treated as continuous data. The scoring of positive items are reversed, the possible range of scores is zero to 60 with the higher scores indicating the presence of more symptomatology, and Cronbach’s alpha on the CES-D in this study was .95.

State-Trait Anxiety Inventory (STAI), The STAI-S (Spielberger, 1983) is a 20-item questionnaire intended to evaluate current anxiety and has been used in African-American populations. Sample items include “I feel calm,” “I feel tense,” and “I feel upset.” The STAI has two factors, anxiety-present and anxiety-absent, each item is rated

from 1 (not at all) to 4 (very much so) to reflect the level of each affect statement, and responses are summed. Anxiety-absent items are reverse scored, higher scores represent greater anxiety, and scores are treated as continuous data. The STAI has also demonstrated satisfactory internal consistency and test-retest reliability across numerous studies (Barnes, Harp, & Jung, 2002). Additionally, the STAI has demonstrated satisfactory convergent and discriminate validity with other measures (Bieling, Antony, & Swinson, 1998; Caci, Bayle, Dossios, Robert, & Boyer, 2003). Cronbach's alpha in this study was .96.

Demographic Information Sheet asks 10 questions focused on three components of sexuality (orientation, identity, and role), socioeconomic status (educational attainment and annual income), religious affiliation, age, and history of depression diagnosis.

Black Racial Identity Attitudes Scale (RIAS-B) is an assessment tool developed to identify stage placement in the Cross model of minority identity development. The inventory consists of 50 statements to which participants are asked to respond using a Likert-type scale (1-strongly disagree, 5-strongly agree). The subscales are scored by averaging the properly keyed items so that each respondent receives a scale score for each of the four types of racial identity attitudes (pre-encounter, encounter, immersion/emersion, and internalization/commitment) (Helms & Parham, 1990). The highest mean subscale score reflects placement at that particular racial identity attitude stage. Some of the statements indicate concrete actions, some are descriptive terms, and others are statements of personal values and beliefs. Sample items include "the people I respect most are White," "being Black just feels natural to me," "and White people can't

be trusted.” Items reference the current state. Cronbach’s alpha on each subscale have been shown to range from .51 to .80. In this study, Cronbach’s alphas were Stage 1 – $\alpha=.89$, Stage 2 – $\alpha=.56$, Stage 3 – $\alpha=.70$, Stage 4 – $\alpha=.86$.

Internalized Homonegativity Inventory (IHNI). The IHNI was validated on 241 gay men primarily of European descent, the scoring of positive items is reversed, and higher scores represent greater internalized homonegativity (Wayne, 2001). Sample items include “I am proud to be gay,” “homosexuality is harmful to the order of society,” and “I believe homo/bi-sexual men are weak.” The 23 IHNI items reference current state, responses (1-strongly disagree to 6-strongly agree) are summed, and scores are treated as continuous data. Cronbach’s alphas for the adapted 17 item IHNI used in this study were: total – $\alpha=.97$, Factor 1 - $\alpha=.95$, Factor 2 - $\alpha=.91$, Factor 3 - $\alpha=.89$.

Perceived Ethnic Discrimination Questionnaire – Community Version (PEDQ-CV). The PEDQ-CV can be utilized across ethnic groups to evaluate perceived ethnic discrimination and was utilized in this study as a measure of VDH. The lifetime discrimination scale (34-items) which includes four subscales (exclusion/rejection, stigmatization, discrimination at work/school, and threat/aggression) and the discrimination in different settings component of the PEDQ-CV were used. Sample items include “people ignored you,” “people do not trust you,” and “people actually hurt you.” Participants were also asked to indicate whether race, sexuality, both race and sexuality together, or one or the other but cannot tell which, was primarily involved in their experience of each VDH statement in the discrimination scale and in each community sector in the settings component. These measures were used to assess past-year

experiences within social and interpersonal contexts and have been used with Latino and Black subjects (Brondolo, Kelly, Coakley, Gordon, Thompson et al., 2005). This scale is a modification of the PEDQ-Revised B, developed by Contrada and colleagues (Contrada, Ashmore, Gary, Coups, Egeth et al., 2001) to evaluate perceived exposure to discrimination. To develop the community version, the original items were phrased in simpler language and adapted to reflect the everyday experiences of community-dwelling adults. The past-year discrimination responses (0-never happened to 4-happened daily) are summed, higher scores represent more VDH, and scores are treated as continuous data. Cronbach's alpha in this study was .98.

Brief COPE. The Brief COPE is a shortened adaptation of the COPE Inventory (Carver, 1997). The Brief COPE is comprised of 28 items, is designed to measure both active and disengaged coping styles, and includes 14 subscales (of two items each) that represent coping activities. Sample items include "I criticize myself," "I make jokes," and "I learn to live with it." In keeping with previous use of this measure, subscales were combined into two higher order factors of disengaged coping and active coping, consisting of six and eight subscales respectively, where disengaged coping items were reverse coded. The active coping factor included the eight subscales: use of emotional support, use of instrumental support, active coping, positive reframing, planning, humor, acceptance, and religion. The disengaged coping factor included the six subscales: self-distraction, denial, substance use, behavioral disengagement, venting, and self-blame. Items ask respondents to consider how they usually feel, think, and respond given stressful or depressing situations or events; response options range from 0 (I usually don't

do this at all) to 3 (I usually do this a lot); and scores are treated as continuous data.

Cronbach's alpha in this study was .88.

Data Analysis and Regression Diagnostics

Data were cleaned and checked for recording and plausibility errors. All variable values were determined to be reasonable. Appropriate descriptive statistics (mean, standard deviation, and range) and partial regression plots for each variable were examined using Statistical Package for the Social Sciences for Windows Version 15.0 (2007) (Table 1). Regression assumptions of normality were assessed by examining skewness, kurtosis, and residual plots. No gross violations were found.

To identify influential observations that significantly affected either the variables in the regression model or the accuracy of estimates of the regression coefficients and associated standard errors, response extremeness and predictor extremeness were examined by assessing leverages, jackknife residuals, and Cook's distances. No significant influential outliers were detected. The variance inflation factor and tolerance were used to measure collinearity, with VIF greater than 10 or tolerance less than .01 indicating multicollinearity problems. It was expected that there would be minimal to moderate correlation between independent variables, but no strong pairwise correlations between independent variables were detected.

Initially, all base variables were entered into a regression model predicting CES-D and STAI scores, with interaction terms added last, in order to determine statistical associations for the full theorized model before beta coefficient significance, strength of dependent and independent variable correlations, and amount of variance accounted for,

were taken into consideration in specifying the final model. Following this, step-wise independent multiple regression analysis was used to estimate the most parsimonious linear relationship between scores on the CES-D and STAI independently and internalized homonegativity, racial identity development, VDH, and intersection and interaction terms. To include a proxy measure of racial and sexual identity intersectionality, an internalized homonegativity and racial identity development interaction term was included in the regression equation. The IHNI subscales for this interaction term were reverse coded, such that higher total scores on the IHNI reflect less internalized homonegativity. It was theorized that those possessing both higher levels of internalized homonegativity and lower levels of positive racial identity would experience greater levels of depression and anxiety than those with lower levels of internalized homonegativity and greater levels of positive racial identity. I recognize that inclusion of this interaction assumes additive identity properties and is not a true measure of intersectional identity, but in absence of any available better quantitative measure authors assessed it necessary to include this proxy term at minimum so as not to ignore the role of intersectional identity. Additionally, research suggests that coping level may moderate the relationship between the independent variables (IHNI, RIAS, IHNI-RIAS, and PEDQ) and CES-D and STAI scores, therefore coping and coping-independent variable interaction terms were also included in the regression equation to operationalize moderation effects.

Internalized homonegativity and Black identity achievement are both rooted in a developmental framework and therefore the demographic variable age, which is closely

related to maturation and identity development, was included in the equation as a covariate. Likewise, measures of the social determinate of health variable, socioeconomic status, were also included in the equation as covariates. Education and income which influence resource acquisition were used to operationalize socioeconomic status. The variables age, education, income, RIAS, IHNI, RIAS-IHNI intersection, PEDQ, coping, and four coping interactions (c-RIAS, c-IHNI, c-RIAS-IHNI, c-PEDQ) were selected to test for inclusion in the model. Cases with missing data were excluded listwise.

Results

Demographics

Seventy-seven percent of participants indicated that they have had sex with or desire to have sex with males only, 77% self-identified as culturally gay, and 13% identified culturally as same-gender-loving (Table 2). Thirty-nine percent of participants completed a two-year degree or had some college education, 31% completed a four-year degree, and the average annual income of participants was \$25,275, with a range of \$0 to \$68,000. The average age of participants was 31 years old, with the youngest participant being 19 and the oldest being 50; 50% designated their religious affiliation as Christian, and 33% as spiritual. Thirty-three percent of participants indicated that they had been diagnosed with depression by a healthcare professional, 30% of participants had CES-D scores greater than 15 indicating likelihood of depression, and 33% had STAI scores greater than 39 indicating likelihood of anxiety. Just 20% of participants scored into a racial identity development stage lower than internalization.

In the past year 95% of participants experienced violence, discrimination, and harassment (VDH) at least once, on average 11% of participants experienced VDH weekly, and 5.3% of participants experienced VDH daily. Of those experiencing any VDH in the past year, 40% indicated their race as being primarily involved in the majority of VDH they have experienced in the past year and 32% indicated both race and sexuality as being primarily involved in the majority of VDH they have experienced (Table 3). In the past year, 52% of participants experienced VDH in public places; 43% experienced VDH in retail, customer services, or other business settings; and 35% in the criminal-justice system. Of those experiencing VDH in public places and retail/customer service, 35% and 46% respectively indicate both their race and sexuality together as being primarily involved; and of those experiencing VDH in the criminal-justice system, 62% indicate their race as being primarily involved.

Regression Analysis

The variables education, income, RIAS, Coping, RIAS-IHNI intersection, and c-RIAS interaction were significantly negatively correlated with CES-D scores ($p < .05$); and the variables IHNI, PEDQ, and c-PEDQ interaction were significantly positively correlated with CES-D scores ($p < .05$) (Table 4). The variables age, c-IHNI, and c-RIAS-IHNI were not significantly correlated with CES-D scores. The variables RIAS, coping, and c-RIAS interaction were significantly negatively correlated with STAI scores ($p < .01$); and the variables IHNI, PEDQ, RIAS-IHNI intersection, and c-PEDQ interaction were significantly positively correlated with STAI scores ($p < .01$). The variables

education, age, income, c-IHNI, and c-RIAS-IHNI were not significantly correlated with STAI scores.

With the base variables education, age, income, RIAS, IHNI, PEDQ, coping, and RIAS-IHNI entered into regression models (CESD, $F=11.73$, $p<.01$; STAI, $F=7.38$, $p<.01$), the beta coefficients for IHNI and PEDQ were significant ($p<.05$) for both model predicting CES-D and STAI scores (Table 5). Every one unit increase in the IHNI accounted for a .63 increase in CES-D scores and a .7 increase in STAI scores, and every one unit increase in PEDQ accounted for a .23 increase in CES-D scores and a .25 increase in STAI scores. After the interaction terms were added to the models (CESD, $F=10.79$, $p<.01$; STAI, $F=7.06$, $P<.01$), the beta coefficients for the IHNI and RIAS-IHNI intersection were significant ($p<.05$) for both models predicting CES-D and STAI scores (Table 5). Every one unit increase in the IHNI corresponded to a 1.97 increase in CES-D scores and a 3.47 increase in STAI scores, and every one unit increase in the RIAS-IHNI intersection corresponded to a .71 decrease in CES-D scores and a .94 decrease in STAI scores.

The PEDQ beta coefficient became non-significant and the RIAS beta coefficient remained non-significant for both models predicting CES-D and STAI scores even though the RIAS-IHNI intersection beta coefficient was significant. This suggests that the IHNI variable is driving the significance of the RIAS-IHNI intersection beta coefficient. When the RIAS, IHNI, and the RIAS-IHNI intersection were entered into models, both the RIAS and the RIAS-IHNI intersection beta coefficients became non-significant for

both models predicting CES-D and STAI scores (not shown). Only the IHNI beta coefficient remained significant.

Using step-wise multiple regression analysis with probability-of-F-to-enter less than or equal to .05 and probability-of-F-to-remove greater than or equal to .10, the variables PEDQ and IHNI were entered into the final model for both the CES-D and STAI while the variables age, education, income, RIAS, the RIAS-IHNI intersection, coping, and the four coping interaction terms (c-RIAS, c-RIAS-IHNI, c-IHNI, c-PEDQ) were excluded. Taking into account the number of variables in the model and the number of observations, 64% of the variance in CES-D scores (Table 6) and 53% of the variance in STAI scores (Table 6) were explained by PEDQ and IHNI together. PEDQ alone accounted for 52% of the variance in CES-D scores, with IHNI accounting for an additional 13%. IHNI alone accounted for 46% of the variance in STAI scores, with PEDQ accounting for an additional 7%.

The overall models were significant (CES-D, $F=47.89$, $p<.001$; STAI, $F=31.10$, $p<.001$), I reject the null hypothesis that all model coefficients are 0; there is a linear relationship between PEDQ and IHNI and CES-D and STAI scores. Holding IHNI constant, for every 1 unit increase in PEDQ, CES-D scores increased by .29; and holding PEDQ constant, for every 1 unit increase in IHNI, CES-D scores increased by .33. Holding PEDQ constant, for every 1 unit increase in IHNI, STAI scores increased by .41; and holding IHNI constant, for every 1 unit increase in PEDQ, STAI scores increased by .24.

Discussion

Experience of VDH and internalized homonegativity explained a large portion of the variability in depression and anxiety scores, findings greater than but in line with other similar and related studies (Graham et al., 2009; Crawford et al., 2002; Diaz et al., 2001; Brown et al., 2000; Karlsen & Nazroo, 2000; Kessler et al., 1999; Siefert et al., 2000; Malyon, 1982; Rosser et al., 2008). Though experience of VDH explained more of the variability in depression scores than internalized homonegativity and vice versa for anxiety, both VDH and internalized homonegativity were very strongly associated with both depression and anxiety. The study included a diverse sample of BSMM with respect to sexuality, age, and socioeconomic status. A high percentage of the sample screened positive for likelihood of both depression (30%) and anxiety (33%), prevalence greater than the general population estimated between 9.3-21% for depression and 11-29% for anxiety (Grant et al., 2004; Kessler et al., 2005), greater than the 22% found for depression and comparable to the 36.7% found for anxiety among Black gay, lesbian, and bisexual respondents by Meyer, Dietrich, and Schwartz (2008), and comparable to the 32.6% found for depression by Cochran and Mays (1994). The average CES-D score was 13.78 and the average STAI score was 38.30, which are roughly equal to the 13.96 and 37.5 respectively found among a sample of similar aged BSMM in the study by David and Knight (2008).

Violence, discrimination, and harassment appeared to be chronic among participants in the current study. In the past year, participants in this sample reported experiencing more VDH, more often than has been reported in samples of predominately White sexual

minority men; which range from 3.7% to 76% (Huebner et al., 2004; Herek, 2009; Mays & Cochran, 2001), and on-par with findings from the original validation study of the PEDQ-CV which was conducted among a predominately Black and Latino sample (Brondolo et al., 2005). Race independently and race and sexuality together were implicated most by participants as driving factors in their experience of VDH. This may be further evidence of the essential role of intersectionality in understanding and contextualizing the relationship between VDH and mental health outcomes among BSMM.

Participants experienced VDH most often in public places, retail settings, and the criminal-justice system, which differs somewhat from the original PEDQ-CV validation study where community settings with the most reported VDH included public places, work, and school. This difference may be a result of the inclusion of Latino and women subgroups in the validation study whose experiences may differ from those of BSMM comprising the current study's sample. Most participants indicated both race and sexuality together as being primarily involved in their experiences of VDH in most community settings, with the exception of the criminal-justice system where participants cited race most often, and religious institutions where participants cited sexuality most often. The racial identity development measure dropped out of the final models and thus does not appear to play a significant role in depression and anxiety outcomes in this sample; though the lack of variability in stage placement of participants may be an important factor explaining why this variable was insignificant.

An overwhelming majority of participants fell in the immersion and internalization stages, while very few participants were in the pre-encounter or encounter stages. Perhaps consequently, neither the racial identity development, identity development intersection, nor their coping interaction measures made it into the final models. Given the moderately strong univariate associations between both depression and anxiety and the race and sexual identity intersection measure, and the significant RIAS-IHNI intersection beta coefficient when all variables were entered into a model without forcing any variables to drop, possibly a different or better measure of Black identity development would produce different results when forcing variables with non-significant variables to drop from the model. As it appears that either the sample distribution is skewed on stage placement or the measure is not able to adequately differentiate participants across the stages. However, if racial identity development does not in fact play a major role in explaining depression or anxiety outcomes among BSMM, this finding does not support previous findings in the literature on racial identity development as a predictor of mental health outcomes among Black men with undocumented sexuality (Pierre & Mahalik, 2005; Carter, 1991; Munford, 1994; Parham & Helms, 1985a, 1985b; Pyant & Yanico, 1991).

Likewise, level of positive coping did not appear to play a significant role in depression outcomes in this sample and thus neither confirm findings among samples of predominately White gay men (Miranda and Storms, 1989) nor the study conducted by Peterson et al. (1996), but does verify findings from the study conducted by David and Knight (2008). In light of these findings, I share David and Knight's (2008) conclusions that perhaps resiliency may be a more important mitigating factor than positive coping

for depression and anxiety. Age and income were excluded variables that were close to being included in the final model for depression, and age and Black identity achievement variables were close to being included in the final model for anxiety. Perhaps with a larger sample size, and thus greater power, the relationship between depression and age and income, and anxiety and age and Black identity would be significant.

Additional research should focus on qualitative and quantitative exploration of the causes of VDH in community settings in which VDH is most prevalent, further validation and development of measurement tools for use among BSMM, and a better understanding of identity development among BSMM, including the influence of spirituality and religious institutions given that a moderate portion of the sample indicated that they were Christian. Findings of this study suggests efforts should be increased to implement anti-discriminatory policies in community settings where VDH is most prevalent, public health practitioners should work to decrease negative attitudes and beliefs regarding ethnic and sexual minority identities in an effort to decrease levels of internalized homonegativity, and service providers should help clients alleviate their internalized homonegativity and avoid VDH. This inquiry sought to produce scientific evidence that could inform health and quality of life promotion related to VDH and identity development. Findings of this study further develop the conceptual framework of mental disorder acquisition by BSMM.

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TABLES

Table 1. Mean Scores and Standard Deviations of Dependent and Select Predictor Variables.

Analysis Measure	Mean	Std. Dev.
CES-D	13.78	12.67
STAI	38.30	13.97
PEDQ	11.24	20.50
IHNI	30.98	17.21
RIAS	3.67	.82
Cope	54.46	13.32

Note. N=54

Table 2. Demographics

	N	%
Sexual Orientation		
Homosexual	47	77
Bisexual	14	23
Sexual Identity		
Gay	46	77
Same-Gender-Loving	8	13
In-the-Life	1	2
Bisexual	3	5
Other	2	3
Highest Level of Education		
High School	7	12
Some college/2 yr degree	24	39
4 yr degree	19	31
Terminal degree	11	18
Religious Affiliation		
Christian	30	50
Spiritual	20	33
None	10	17
Depression Diagnosis	20	33
CES-D Score > 15	18	30
STAI Score > 39	20	33

Note. N=61. Age range = 19-50 years. Mean age = 30.7 years.
Annual income range = 0-\$68,000. Mean income = \$25,275.

Table 3. VDH, Identity, and Sector

VDH – Implicated Identity	N	%
Race primary	25	44
Sexuality primary	11	19
Race & Sexuality primary	18	32
Cannot tell which	3	5
VDH – Sector Prevalence		
Public	31	52
Retail	26	43
Criminal-Justice	21	35
Entertainment Venues	20	33
Religious Institutions	19	32
Workplace/Job	19	32
School/College	18	30
Medical Services	14	23
VDH – Sector – Identity		
Public / Both	11	35
Retail / Both	12	46
Criminal-Justice / Race	13	62
Entertainment / Both	11	55
Religious / Sexuality	11	58
Workplace / Both	10	53
School / Both	10	56
Medical Services / Both	8	23

Note. Proportion of participants indicating which identity component was primarily involved in the majority of VDH experienced in the previous year, community sectors with the highest prevalence of VDH, and primary identity component implicated in VDH across sector.

Table 4. Correlation Matrix

	CES-D	STAI
Education	-.30 ^b	-.20
Income	-.26 ^b	-.16
RIAS	-.59 ^a	-.48 ^a
IHNI	.71 ^a	.69 ^a
PEDQ	.72 ^a	.62 ^a
Cope	-.62 ^a	-.53 ^a
RIAS-IHNI	-.25 ^b	-.34 ^a
c-RIAS	-.61 ^a	-.52 ^a
c-PEDQ	.37 ^a	.41 ^a

Note. RIAS = Racial Identity Attitudes Scale; IHNI = Internalized Homonegativity Inventory; PEDQ = Perceived Ethnic Discrimination Questionnaire; Cope = Brief Cope; RIAS-IHNI = intersection interaction; c-RIAS = coping-RIAS interaction.

^a= Significant at the .01 level. ^b= Significant at the .05 level.

Table 5. Initial Regression Betas for Predicting Depression and Anxiety (Base Variables only and Base Variable with Interaction Terms).

Predictor Variable	β CES-D	β STAI	β CES-D	β STAI
Education	-.02	.06	-.02	.01
Age	.11	.08	.11	.15
Income	-.09	-.03	-.07	-.02
RIAS	.32	.31	2.15	3.06
IHNI	.86 ^a	.84 ^a	2.68 ^a	4.18 ^a
PEDQ	.37 ^a	.36 ^a	-.08	-.58
Cope	-.09	-.01	.39	2.0
RIAS-IHNI	-.36	-.24	-2.49 ^a	-2.95 ^a
c-RIAS	-.09	-.03	-1.60	-3.28
c-IHNI	.32	.31	-.10	-1.45
c-RIAS-IHNI	.86 ^a	.84 ^a	.95	1.68
c-PEDQ	.37 ^a	.36 ^a	.31	.69

Note. RIAS = Racial Identity Attitudes Scale; IHNI = Internalized Homonegativity Inventory; PEDQ = Perceived Ethnic Discrimination Questionnaire; Cope = Brief Cope; RIAS-IHNI = intersection interaction. The Beta listed is the standardized value. ^a= Significant at the .05 level.

Table 6. Summary of Stepwise Multiple Linear Regression Analysis

Predictor Variable	Step	R	Adj. R ²	Δ R ²	Sig. Δ R ²	β	T	P
Depression								
PEDQ	1	.72	.51			.47	4.67	<.001
IHNI	2	.81	.64	.13	<.001	.45	4.44	<.001
Anxiety								
PEDQ	1	.47	.46			.49	4.30	<.001
IHNI	2	.55	.53	.07	.004	.34	3.01	.004

Note. PEDQ= Perceived Ethnic Discrimination Questionnaire; IHNI= Internalized Homonegativity Inventory. The Beta listed is the standardized value.