

2013 Dissertation Abstracts
Department of Health Behavior
UNC Gillings School of Global Public Health

Paul Gilbert 2
A Mixed-Methods Investigation of Alcohol Use among Immigrant Sexual Minority Latinos in North Carolina

Allison K. Groves 3
Prevalence and trajectories of intimate partner violence among South African women during pregnancy and the postpartum period

Andrea L. Heckert 4
A Mixed-Methods Examination of the Influence of Social Conditions and Social Networks on the Sexual Risk Behavior of Structurally Vulnerable African American Male Substance-Users

Jiang Li 5
Understanding Pathways to Weight Loss among Employees and Organizations Enrolled in the WAY to Health Worksite-based Weight Loss Study

Derrick D. Matthews 6
Socialization Influences on Sexual Health Behaviors Among African American Men: Utilizing an Inter-group and Intra-group Approach to Health Disparities

Stephanie Baker White 7
School Racial Climate and Racial Disparities in Youth Sedentary Behavior

Paul A. Gilbert*A Mixed-Methods Investigation of Alcohol Use among Immigrant Sexual Minority Latinos in North Carolina*

Committee: Eugenia Eng, DrPH, MPH (Co-Chair), Scott D. Rhodes, PhD, MPH (Co-Chair),
Clare Barrington, PhD, Ted Mouw, PhD, and Krista Perreira, PhD

Abstract

Background: Alcohol use has the potential for multiple direct and indirect harmful effects; however, little is known about drinking patterns among immigrant sexual minority Latinos, a sub-group that includes gay men, men who have sex with men who do not self-identify as gay, and transgender or gender variant persons. Assuming that drinking may be a coping response to social stressors, I used a mixed qualitative-quantitative design to investigate alcohol use among immigrant sexual minority Latinos in North Carolina.

Qualitative Study: I sought to identify salient social stressors and coping strategies, with particular attention to the role of alcohol use. I conducted semi-structured interviews with 15 foreign-born sexual minority Latinos who were purposively recruited through the study's Advisory Committee or other community contacts and analyzed data following Grounded Theory methods, which resulted in an inductive model of alcohol use. Participants drank infrequently; however, two-thirds of current drinkers exceeded the recommended daily limit of no more than two drinks per day, and nearly half reported at least one binge drinking episode each month. Drinking was fundamentally a social behavior, which was embedded in cultural, social, and individual contexts. Among stressors, being a sexual minority was indirectly linked to alcohol use through drinking venues and companions, and being an undocumented immigrant dissuaded drinking for a sub-set of participants. Inferences were confirmed in four member-check interviews with study participants and three key informant interviews with representative of faith-based or community-based organizations serving sexual minority Latinos.

Quantitative Study: This secondary analysis used data obtained in the study, *HIV among Rural Latino Gay Men and MSM in the Southeast*. Using cross-sectional survey data from 190 sexual minority Latinos who were recruited using Respondent-Driven Sampling, I tested theoretically derived hypotheses about the association of select stressors with alcohol use using logistic regression to model drinking status (any drinking vs. none), multinomial logistic regression to model frequency of drinking (yearly, monthly, or weekly drinking vs. none), and Poisson regression to model binge drinking (count of binge episodes in past 30 days). I also tested whether social support moderated any relationships between stressors and drinking. Although 55% of participants reported no alcohol use, the majority of current drinkers reported at least one binge drinking episode in the past 30 days. Ethnic discrimination was associated with alcohol use as expected, consistent with the stress and coping model. Social support moderated two relationships between stressors and alcohol use, consistent with the stress buffering hypothesis. As no predictor was associated with all drinking outcomes, however, further research is necessary to understand how social stressors might be associated with drinking.

Conclusion: Because both qualitative and quantitative studies found high levels of binge drinking, sexual minority Latinos should be a priority population for alcohol risk-reduction interventions. There was limited support for drinking as a coping behavior, while drinking as a social behavior emerged as the qualitative study's core concept. Interventions that fail to account for both dimensions of alcohol use are likely to have limited effectiveness. Further research is necessary to refine the conceptual model and better understand the relationships between stressors, social behavior, and risky drinking.

Allison Kjellman Groves

Prevalence and trajectories of intimate partner violence among South African women during pregnancy and the postpartum period

Committee: Suzanne Maman, PhD (Chair), Vangie Foshee, PhD, H. Luz McNaughton Reyes, PhD, Carolyn Halpern, PhD and Sandra L. Martin, PhD

ABSTRACT

Intimate partner violence (IPV) is a significant public health problem in South Africa. However, there has been limited research on IPV during pregnancy and the postpartum period, despite significant negative consequences. A better understanding of the prevalence and trajectories of IPV for women in South Africa during pregnancy and the postpartum period will inform IPV prevention interventions.

Study 1 used data from the South Africa HIV antenatal post-test support study (SAHAPS) to describe the prevalence and rates of physical, sexual and psychological IPV at pregnancy, at four months postpartum and at nine months postpartum. More than 1 in 5 women experienced some form of IPV at least once during pregnancy. The prevalence of both physical and psychological IPV increased from pregnancy into the postpartum period, whereas the prevalence of sexual IPV was stable.

Study 2 used SAHAPS data to address two aims. First, random coefficients growth curve modeling was used to describe the mean trajectories of physical and psychological IPV as well as individual variability around the mean during pregnancy and the postpartum period. This method was also used to examine whether relationship characteristics (relationship power, relationship stress and partner social support) and women's history of pre-pregnancy IPV would act together to increase risk for IPV during pregnancy and the postpartum period. The mean trajectory for both types of IPV was flat which means that, on average, there was not significant change in levels of IPV over pregnancy and the postpartum period. However, there was significant individual variability in trajectories of IPV over the study period. The association between pre-pregnancy IPV and IPV during pregnancy and the postpartum period was buffered by higher relationship power. Additionally, higher relationship stress increased women's risk of psychological IPV during pregnancy and the postpartum period, regardless of pre-pregnancy IPV. Partner social support did not change women's risk of IPV during this time.

The high prevalence of IPV during pregnancy and the postpartum period highlight the need for screening and intervention during and following pregnancy. While screening alone is not efficacious at reducing IPV, screening in conjunction with an intervention may reduce risk of IPV during this time.

Andrea L. Heckert*A Mixed-Methods Examination of the Influence of Social Conditions and Social Networks on the Sexual Risk Behavior of Structurally Vulnerable African American Male Substance-Users*

Committee: Eugenia Eng, DrPH (chair), Clare Barrington, PhD, J. Michael Bowling, PhD, Elizabeth Costenbader, PhD, William Zule, DrPH

ABSTRACT

Background: HIV and other STI represent one of the gravest sets of health disparities encountered by African American communities. In spite of a decline in HIV infection rates among many behavioral risk groups in the US, African American men have experienced an increase in HIV incidence over the last decade. Important gaps exist in understanding how social conditions and social networks shape the HIV risk behaviors of structurally vulnerable African American substance-using men.

Manuscript 1 explored how social conditions shape the sexual and drug-using norms and behaviors of structurally vulnerable African American men who have sex with men and women. Using in-depth interviews (n=16) from the Sexually Active Men's Study collected in North Carolina from 2007-2008, inductive thematic analyses revealed patterns of political, structural, symbolic and everyday experiences of violence that place structurally vulnerable men at risk for HIV and other STI. The study found that their exposure to violence, ranging from personal addiction, assault, and incarceration to institutional racism and homophobia, shaped their masculine identity construction and sexual risk behaviors.

Manuscript 2 examined the relationship between the composition and social support function of structurally vulnerable African American men's personal networks and their sale of sex for drugs or money to men and/or women. It also examined the relationship between dyadic characteristics, social support function, and unprotected sex among these men and their sexual partners. Using cross-sectional network survey data (n=201) from the Sexual Acquisition and Transmission of HIV Cooperative Agreement Program network study collected in North Carolina from 2007-2008, logistic regression analyses revealed that the men's likelihood of selling sex for drugs or money was higher if they had a greater proportion of peers with a history of incarceration and less likely if they had a greater proportion of employed peers. Additionally, the likelihood of unprotected sex was significantly higher for sexual partner dyads, which were categorized as primary sexual partnerships and as drug partnerships. While the proportion of peers as sources of social support were not significant protective factors against the sale of sex for drugs or money, these same forms of social support were predictive of unprotected sex within the sexual partner dyads.

Conclusion: The findings from this mixed methods study suggest that the men reside in social environments that are not supportive of HIV/STI prevention behaviors. The study calls attention to the persistent influence of violence on masculine identity construction and sexual risk behavior. The influence of peer incarceration and peer employment on the men's sale of sex for drugs or money also reinforces the need to explore the role of group norms, including the intersection of masculine identity construction and sexual health behavior. It is especially pertinent to understand how men's evaluation of their social roles may shape their risk behaviors. Additionally, the influence of sexual partner dyad

characteristics and social support on unprotected sex merit further exploration of how risk perceptions and behaviors are socially organized.

Jiang Li

Understanding Pathways to Weight Loss among Employees and Organizations Enrolled in the WAY to Health Worksite-based Weight Loss Study

Committee: Laura Linnan (Chair), Susan Ennett, Kelly Evenson, Eric Finkelstein, Deborah Tate

ABSTRACT

The focus of this dissertation is to understand how worksite-based multilevel weight loss interventions influence employees and worksites enrolled in the WAY to Health research study. The dissertation work is described in two separate manuscripts. Paper 1 uses the RE-AIM framework to evaluate the public health impact of the minimal-intensity worksite-based environmental change intervention called The Winner's Circle Dining Program (WC) in the context of a large group-randomized and controlled weight loss intervention trial. In Paper 2, we conducted a theory-guided meditational analysis to examine autonomous and controlled motivations, eating and physical activity self-efficacy as pathways in the relationship between the web-based weight loss program/cash incentives, healthy eating, physical activity and weight change among employees enrolled in the weight loss study.

Methods: A total of 1004 overweight employees from 17 community colleges in North Carolina were enrolled in the WAY to Health study and were randomly assigned to one of three interventions: WC only, WC +Web-based Weight Loss Program (WC+WEB), or WC + Web-based Weight Loss Program + Incentives (WC+WPI). Data for Paper 1 were obtained using a mix of qualitative and quantitative data collection methods from campus environmental assessments, workforce information data, key stakeholder interviews, anthropometric measurements of employees and a 30-minute self-administered employee health survey at baseline, 3, 6 and 12 months. Descriptive statistics were summarized for RE-AIM measures-Reach, Adoption and Implementation. To examine the Effectiveness of WC, the interactions between WC and the individual level interventions as well as their main effects on changes in individual's weight (or healthy eating) were estimated using a 2-level hierarchical linear model. Data for Paper 2 were obtained using anthropometric measurements of employees and the 30-minute self-administered employee survey at baseline, 3, 6 and 12 months. A structural equation model analysis was used to test the proposed mediators on the path to weight change.

Results: Paper 1 found that sixty-two percent of overweight and obese participants reported that they used the food services (i.e., cafeteria or vending machines) on campus thus were reachable by the WC intervention. After orientation and training for WC, all campuses (100%) adopted at least one component of the WC program to provide access and highlight healthy foods. Nine out of 17 CCs (53%) placed WC stickers at cafeteria and/or vending machines over a 12-month period. Based on employee survey data, 48% and 32.5% of the employees purchased items that have the Winner's Circle logo in the cafeteria/snack bar and campus vending machines. Moreover, placing WC stickers at the cafeteria or vending machines significantly enhanced the effects of the individual-level intervention on weight loss among participants who used campus food services at the 12-month follow-up. **Paper 2** revealed that the relationship between WC+WPI intervention and weight loss was mediated by autonomous

motivation to participate in a weight loss program; as was the relationship between the WC+WPI intervention and total calories. Results did not support the hypothesized model in which self-efficacy mediates the relationship between the WAY interventions and healthy eating, physical activity or weight.

Conclusions: Our data suggested that a minimal-intensity worksite-based environmental change program like Winner's Circle alone may not have substantial impact on employee's weight or healthy eating behaviours in a 12-month period. But WC enhanced the effects of employee-level weight loss interventions; and, was adopted, implemented and accepted by both the employers and employees. The WC+WPI intervention significantly enhanced autonomous motives to participate in a weight loss program, which in turn results in the reduced total calorie intake and body weight among overweight and obese employees at work. WAY interventions did not significantly improve eating and physical activity self-efficacy. However, higher self-efficacy was associated with desirable changes in nutrition, PA and weight. Future worksite-based weight loss intervention studies could consider interventions that target autonomous motives, eating and physical activity self-efficacy to maximize the intervention effects on weight loss.

Derrick D. Matthews

Socialization Influences on Sexual Health Behaviors Among African American Men: Utilizing an Inter-group and Intra-group Approach to Health Disparities

Committee: Wizdom Powell (Chair), Susan Ennett, Lisa Hightow-Weidman, Enrique W. Neblett, J. and Luz McNaughton Reyes

ABSTRACT

The large and persistent racial disparity in HIV and STD infection among men has prompted researchers to identify determinants driving differences in sexual health behaviors. However, the process which men develop sexual health behavior early in life remains an understudied factor in the production of sexual health disparities. Additionally, the study of African American men's health behaviors is frequently limited by only comparing their experiences to men of other racial groups. This dissertation explores sources of variation in the relationship between health socialization and sexual health behaviors both across and within race. Manuscript 1 examined racial differences in the effects that peers and fathers have on the age of first sex and condom use during adolescence and young adulthood. Using data from the National Longitudinal Study of Adolescent Health, analyses revealed that peers and fathers influenced the age of first sex. These effects did not differ by race, though African American men became sexually active more quickly than White men. There was no racial difference in rates of condom use, nor did any socialization effects from adolescence carry over to young adulthood. Manuscript 2 explored variability in condom use among African American men using data from the African American Men's Health and Social Life Study. A latent class approach was employed to explore the joint effects of racial and masculine identity on condom use. Analysis yielded four distinct classes of racial and masculine identity, though these profiles did not explain variability in condom use. However, early life paternal sexual health socialization was positively associated with condom behavior. These findings suggest that those agents who shape the development of sexual health behavior, particularly fathers,

play an important role in delaying sexual initiation and possibly condom use. Based on results, interventions should work with fathers to leverage their existing influence, and foster additional opportunities for father-son communication about sexual health. The large racial difference in the timing of sexual initiation, coupled with the lack of racial difference in condom use, suggests that additional research is needed into structural factors driving the racial disparity in HIV and STD infection among men.

Stephanie Baker White

School Racial Climate and Racial Disparities in Youth Sedentary Behaviors

Committee: Susan Ennett (Chair), Jo Anne Earp, Laura Linnan, Wizdom Powell and Catherine Zimmer

ABSTRACT

Racial disparities in adolescent sedentary behavior have been documented yet little is known about the influence of contexts such as schools. My study addressed this gap by focusing on three aims: (1) to develop a school-level measure of racial climate and determine whether students in schools with more negative racial climates engage in more sedentary behavior, (2) to determine whether individual perceptions of prejudice among students and of unfair treatment among teachers towards students predict sedentariness, and (3) to assess whether the relationship between school racial climate and adolescent sedentary behavior is mediated by prejudice and unfair treatment. My conceptual model was based on a stress-coping behavior paradigm and informed by ecological theory, the integrative model of child development, contact theory, and the social network literature. To address the study aims, I used data from Waves 1 and 2 of the National Longitudinal Study of Adolescent Health to perform Confirmatory Factor Analysis and Multilevel Structural Equation Modeling. School racial climate was measured by using school-level structural indicators of cross-race interactions based on contact theory.

Results indicated that the school racial climate can be reliably measured using structural indicators; however, the measure lacked invariance across race-gender subgroups. Therefore, a separate model was analyzed per group. For black males, as hypothesized, a more negative school racial climate was associated with increased sedentary behavior when prejudice was included as a mediator. Significant mediation was not found for any other race-gender subgroup.

Results suggest that, except for black males, sedentary behavior may not be a coping strategy used by adolescents in response to a negative racial school climate, or that a negative school racial climate may not be a stressful context among all youth. Further, the findings suggest that the school racial climate may not be experienced similarly for black and white youth, and that the construct should be measured separately for each race, and possibly gender, subgroup. Additional research is needed to further clarify whether the school racial climate leads to other negative coping behaviors among black males, as well as to improve measurement of school racial climate among other race-gender subgroups.
