

2014 Dissertation Abstracts
Department of Health Behavior
UNC Gillings School of Global Public Health

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Ling-Yin Chang*Examining the direct, indirect, and moderated effects of neighborhood characteristics on trajectories of dating violence perpetration*

Committee: Vangie A. Foshee, PhD (Chair), Susan T. Ennett, PhD, Luz McNaughton Reyes, PhD, Carolyn Halpern, PhD, Michael Shanahan PhD

ABSTRACT

Purpose: This dissertation examined how and under what circumstances neighborhood characteristics influence the development of dating violence perpetration from grades 8 to 12. Specifically, Study 1 examined the direct effects of three types of neighborhood characteristics (structural factors, collective efficacy, and physical disorder) on dating violence perpetration trajectories, after controlling for individual covariates. Study 2 explored the moderating and mediating role of collective efficacy in the relationships between other neighborhood characteristics being examined and adolescent dating violence perpetration trajectories after taking into account individual controls.

Methods: Adolescent data were drawn from the final four waves of the Context/Linkages Study; neighborhood data were collected from wave three parents' interviews and U.S. Census data. Multilevel growth curve models were conducted with 3,218 students to examine the direct, indirect, and moderated effects of neighborhood characteristics on dating violence perpetration trajectories. The sample was 50% male, 41% White, 50% Black, and 9% Other race/ethnicity.

Results: Study 1 found that the associations between neighborhood characteristics and physical dating violence perpetration varied depending on the sex of adolescents and on whether or not the other neighborhood variables were controlled in the analyses. In models that controlled for individual covariates and all other neighborhood characteristics, neighborhood economic disadvantage (a neighborhood structural factor), was a significant predictor of adolescent dating violence perpetration. This association, however, was significant for girls but not for boys, and was only significant on initial levels but not slopes of dating violence perpetration trajectories. In terms of the role of collective efficacy, results of Study 2 showed that collective efficacy did not moderate or mediate the relationships between other neighborhood risk factors and dating violence perpetration for either girls or boys.

Conclusion: Findings suggest that dating violence prevention strategies for girls should consider the contexts in which they live rather than only targeting changes in their individual characteristics. Early prevention programs are needed, and sex differences in neighborhood effects should be considered when designing neighborhood-level interventions.

Emily Elstad

Cancer Screening Benefits & Harms: News Coverage & Provider Perceptions

Committee chair: Noel Brewer

ABSTRACT

Background. Cancer screening poses both potential benefits and potential harms to patients. This dissertation explored news coverage and provider perceptions of screening by comparing two screening tests that differ substantially in their balance of potential benefits to harms: colonoscopy, which results in net benefit for many adults, and prostate-specific antigen (PSA) testing, which may do more harm than good.

Methods. Study 1 data came from a 2012 survey of clinicians (n=126) from 24 family/internal medicine practices in North Carolina. Analyses examined clinicians' perceptions of screening benefits and harms and potential mediators of the relationship between screening test and clinicians' likelihood estimates. Study 2 data came from a content analysis of articles on PSA testing or colonoscopy in the top 10 U.S. print newspapers. Analyses examined whether newspapers' portrayal of screening changed after the 2008 U.S. Preventive Services Task Force recommendation changes.

Results. Study 1 found clinicians perceived PSA testing to have greater likelihood of harm than colonoscopy and lower likelihood of lengthening life. These associations were mediated by clinicians' gist of screening and perceived benefits, but not perceived harms. Study 2 found that mentions of PSA harms in newspapers were stable before 2008 but increased after that time. Mentions of PSA benefits and colonoscopy harms and benefits did not change over time.

Discussion. Clinicians and the news media both fell short as sources of information on PSA testing and colonoscopy. As a result, patients may be receiving imbalanced information on cancer screening. Findings suggest that messages to clinicians intended to decrease their over-recommendation of PSA testing may need to emphasize its few benefits rather than its many harms.

Ann Gottert*Gender norms, masculine gender-role strain and HIV risk behaviors among men in rural South Africa*

Committee: Clare Barrington (Chair), Suzanne Maman, Luz McNaughton Reyes, Audrey Pettifor, and Catherine MacPhail

ABSTRACT

Introduction: Studies suggest strong links between inequitable gender norms and men's HIV risk behaviors in South Africa, where one-fifth of adults are HIV-positive. Masculine gender-role strain (MGRS), the psychological strain men experience from trying to live up to expectations of themselves as men, had not previously been measured or applied in HIV prevention research in the African setting. The aims of this mixed-methods study among men in Mpumalanga province were to evaluate measures of gender norms and MGRS; examine relationships between these constructs and key HIV risk behaviors; and qualitatively explore men's experience of MGRS.

Methods: Quantitative data came from community surveys with 581 men ages 18-35. We conducted factor analyses to assess the factor structure, validity and reliability of the Gender Equitable Men's scale (GEMS) and an MGRS scale we developed. We then used logistic regression to examine the impact of inequitable gender norms and MGRS on three HIV risk behaviors. Finally, we conducted qualitative interviews with 18 men and analyzed data using both narrative and coding procedures.

Results: The unidimensional GEMS and multi-dimensional MGRS scales were valid and reliable. Prevalence of concurrency in the last 12 months was 38.0%, 13.4% of men reported perpetrating IPV in that period, and 19.9% abused alcohol. In multivariate analyses, more inequitable gender norms and higher MGRS were each significantly associated with an increased odds of sexual partner concurrency, intimate partner violence (IPV) perpetration, and alcohol abuse. Qualitative findings supported the salience of MGRS in men's lives and its links to HIV risk. Men experienced all three theoretical sub-types of MGRS. Most common was *discrepancy strain* from unemployment; two-thirds of men were unmarried and unable to establish their own households and become providers. Some men also experienced *trauma strain* from intense peer pressure to sexually exploit women. Finally, participants described *dysfunction strain* from restricting emotions and abusing alcohol, which contributed to family violence.

Conclusion: Social constructions of masculinity shape HIV risk in Mpumalanga. We underscore recent calls to scale up gender transformative programs, and recommend exploring complementary strategies to reduce the three sub-types of MGRS, grounded in a local understanding of male vulnerabilities.

Sean M. Hanley*Community-based Approaches to Prevention: Linking Coalition Capacity, Community Readiness, and Implementation to Reductions in Adolescent Alcohol Use*

Committee chair: J. Michael Bowling

ABSTRACT

Background: The adverse consequences of adolescent alcohol use are substantial and varied. Community-based approaches to prevention have gained favor over the past 30 years, and the use of coalitions has become a popular model by which to plan and implement interventions. Although theory suggests that coalition capacity and community readiness are likely to affect the quality of implementation and the efficacy of the interventions, empirical work in this regard is lacking.

Methods: Using data from an evaluation of the Vermont Strategic Framework State Incentive Grant, a theory-based multiple mediation model was tested that examined the direct effects of coalition capacity and community readiness, and the mediated effects of intervention comprehensiveness, evidence base, and fidelity of implementation, on past-month alcohol use and binge alcohol use among high school students in 24 intervention communities. Coalition and community member surveys were used to collect data on coalition characteristics and community readiness, data from progress reports were abstracted to measure implementation characteristics, and Youth Risk Behavioral Surveillance System survey data was used to measure past-month use. It was hypothesized that greater levels of coalition capacity and community readiness would lead to greater reductions in alcohol and binge alcohol use over time and that implementation characteristics would mediate these relationships.

Results: Significant effects of coalition capacity on alcohol use were found, although no significant mediators of this relationship emerged. There were no significant effects on binge alcohol use. Exploratory analyses indicated that the total number of interventions implemented significantly mediated the relationship between readiness and reductions in binge alcohol use.

Discussion: This study provides an empirical test of theoretical relationships commonly proposed in the community-based substance use prevention literature. One hypothesis was supported and the results of exploratory analyses identified a new, potentially important mediating factor. Improvements in measures and the application of the proposed mediation models to larger studies are needed to improve our understanding of the mechanisms operating in communities that produce behavioral change.

Jessica K. Pepper

Electronic Cigarettes: Diffusion of a Controversial Innovation

Committee chair: Noel Brewer, PhD

ABSTRACT

Introduction. Electronic cigarettes (e-cigarettes) are battery-powered nicotine delivery systems that have become increasingly popular in the U.S. and have the potential to serve as a harm reduction tool for adult smokers. We sought to understand the diffusion of e-cigarettes into the U.S. marketplace.

Methods. A U.S. national sample of 17,522 adults (≥ 18 years old) completed an online survey in March 2013 assessing their awareness of and sources of information about e-cigarettes. As part of the same study, smokers ($n=6,607$) responded to questions about perceived health risks related to tobacco products, and smokers who had never tried e-cigarettes ($n=3,253$) participated in a between-subjects experiment investigating their responses to e-cigarette advertisements.

Results. Most respondents (86%) had heard of e-cigarettes. The most commonly reported sources of information were another person, ads on television, and seeing e-cigarettes being sold. Smokers believed that e-cigarettes were less likely to cause lung cancer, oral cancer, and heart disease than cigarettes, traditional smokeless tobacco, snus, and dissolvable tobacco. Ads that emphasized the differences between e-cigarettes and regular cigarettes or showed an image of a person using an e-cigarette created the greatest interest among smokers in trying the product.

Conclusions. The positive reaction to e-cigarettes over other non-cigarette tobacco product may be, in part, because e-cigarettes embody more of the features of an innovation (relative advantage, compatibility, trialability, and observability). Future research should concentrate on understanding the impact of risk beliefs on trajectories of use, determining efficient ways to deliver appropriate information about e-cigarettes to the public, and examining the effects of changes in the e-cigarette industry (e.g., the entry of Big Tobacco into the marketplace and the development of new styles of e-cigarettes).

Shyanika W. Rose*Factors Influencing Support for Point-of-Sale Provisions of the Tobacco Control Act: Retailer and Public Opinion*

Committee chair: Kurt Ribisl, PhD

ABSTRACT

Background: The Family Smoking Prevention and Tobacco Control Act (FSPTCA) of 2009 provided new opportunities to regulate tobacco products at the point-of-sale (POS). Little is known about retailer, public and smoker support for 10 FSPTCA POS policies in five domains (1) minors' access to tobacco, (2) regulating promotion, (3) product bans (menthol, flavored cigarettes), (4) advertising restrictions, and (5) labeling changes (graphic warnings).

Study 1: This study conducted a survey of 257 tobacco retailers in three counties in North Carolina and linked their opinions about tobacco control policies with audit data of their stores' compliance with POS policies. Through structural equation modeling and generalized estimating equations, I found that store non-compliance with tobacco control policies was associated both with more retailer barriers to compliance and less support for POS policies. Awareness and source of information about tobacco control regulations was not associated with compliance.

Study 2: This study surveyed a US nationally representative sample of 17,507 respondents using linear regression to calculate weighted point estimates and identify factors associated with support for POS policies among adult respondents and smokers. For smokers we also examine the interaction of individual characteristics and policy self-interest on support for specific POS policies. Overall, non-smokers had more support than smokers. African-Americans, Hispanics, and those of other races, had more support than Whites. Education level and income were generally unrelated to level of support. Among smokers, those patterns also held. Policy support varied by provision with the highest support for minor's access restrictions (over 80%) and the lowest for advertising restrictions like black and white text advertising (23%). Among smokers, policy self-interest moderated the relationship between intention to quit and support for graphic warnings. Other self-interest variables had a direct effect on policy support.

Conclusions: This dissertation study provides new information on retailer support and compliance and public support for policies that are or could be implemented under the Tobacco Control Act at POS. Tobacco control advocates and the FDA can build on existing levels of public support to promote, enforce, and maintain controversial policy changes in the retail environment.
