PROJECT SUMMARY

Project title: **Screening and Health Care Services for Vulnerable Populations Exposed to Interpersonal Violence**

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Project description: This research project will assess the extent to which medical schools prepare students to address the needs of vulnerable populations exposed to interpersonal violence in primary care settings. It will employ multiple methods to assess current medical school educational practice, identify evidence-based best practices, and develop and recommend curricular modifications, and disseminate information to the broader medical education profession through presentations at professional meetings, policy briefs, and articles in peer reviewed journals.

Statement of the problem, gaps in current research. Interpersonal violence (IV) is "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, stunted emotional development, or deprivation.[1] IV occurs across the life course and threatens the life, health and happiness of thousands of persons each year in the United States. IV encompasses a wide range of incidents from child abuse and neglect by caregivers, youth violence (violence by adolescents and young adults aged 10 to 29 years), intimate partner violence, sexual violence, elder abuse, and gun violence. There is a limited evidence base regarding best strategies in teaching medical students how to screen for and address the needs of vulnerable populations affected by interpersonal violence.

It is important that medical students understand and are prepared to take steps to address underlying individual, interpersonal, community and societal-level factors that increase the risk for violence among of vulnerable populations. This research project will assess the extent to which medical students are taught about the needs of vulnerable populations and the skills to screen, care, and refer those exposed to interpersonal violence in primary care.

Research questions or hypothesis:

1. What is the evidence base regarding education of medical students on screening for interpersonal violence among vulnerable populations for medical students in primary care settings?
2. What are the core elements of the medical educational curriculum that can be revised and adapted to ensure students have the knowledge and skills to provide culturally competent health care for vulnerable populations exposed to interpersonal violence?

Project goals:

1. To identify the extent to which medical students are trained to screen, treat, or refer persons exposed to interpersonal violence across the life course.
2. To develop model curricular elements that can be used by other medical schools to prepare students to effectively address the needs of vulnerable populations exposed to violence.
3. To disseminate research results on how medical schools are addressing ACEs in vulnerable populations to graduate medical education audience.

Geographic coverage: Our research will be national in scope, covering the entire United States

RESEARCH DESCRIPTION

Title: Screening and Health Care Services for Vulnerable Populations Exposed to Interpersonal Violence

Statement of the Problem

Interpersonal violence is not an intractable social problem or an inevitable part of the human condition. Multiple strategies exist to improve violence prevention efforts, and health care providers can be an important part of this solution.[2] There is a growing evidence base for the effectiveness of interventions designed to prevent child abuse,[3] intimate partner violence among adolescents,[4] elder abuse,[5] intimate partner violence among adults,[6] youth violence,[7] gun violence,[8] and sexual violence.[4] medical students, residents and other health care providers are well positioned to screen, prevent, intervene, and refer persons identified as at risk or engaged in IV. It is speculated that that current screening protocols are not included in medical education curriculum.

Limited research findings clearly show higher risk for interpersonal violence among LGBT, homeless persons and migrant workers than the general population. Attributes that increase risk among these vulnerable populations include a range of personal and social characteristics: race/ethnicity, age, gender, sexual orientation, religious affiliation, degree of acculturation; stigmatizing health conditions such as poor oral health, mental illness or physical disability; indicators of social class, such as education, employment, and poverty; and legal barriers. Studies have shown that health care providers such as medical doctors, psychologists, psychiatrists, and couples counselors do not always recognize or respond to issues of IV among vulnerable populations.

Study results will be useful in making recommendations for how medical schools should address interpersonal violence among vulnerable populations in their curriculum.

Research Description and Policy Relevance

The current health-care workforce lacks sufficient training on how to screen, prevent or intervene in cases of interpersonal violence across the life course, particularly as encountered by vulnerable populations in primary care settings. Little systematic attention has been given to ensuring health care providers are trained to screen for individual, interpersonal, community or societal risk factors for interpersonal violence that can negatively affect the health and mental health of vulnerable populations and lead to disparities in health and healthcare or to initiate interventions that can alter health trajectories. Academic health centers are strategically positioned to train medical students who will impact the health of vulnerable populations by educating future generations of providers, advancing science, and delivering integrated care that addresses the unique health needs of these communities.

Target Populations

Vulnerable populations at highest risk for IV include children, adolescents, older adults, and women in the perinatal period, as well as persons who are experiencing relationship factors or exposed to a range of community and societal risk factors. Migrant workers, homeless persons, and the LGBT community are at increased risk for interpersonal violence across the lifespan due to personal attributes, environmental exposures, and social and economic conditions, including overt discrimination, implicit bias, low levels of income and education, and lack of access to culturally competent health care providers, resources, and power. Interpersonal violence is not only a leading cause of injury and death among these vulnerable populations, but it contributes to a host of other adverse health outcomes including mental health, substance abuse, and suicide attempts and completions.

Despite efforts in the United States to reduce or eliminate disparities in health and healthcare in recent years, significant disparities related to interpersonal violence across the lifespan continue to be found.

The increased risk for interpersonal violence among vulnerable populations has been attributed to physical attributes, mental well-being, and social and economic inequities such as overt discrimination, implicit biases, and limited access to resources. Common attributes of these populations include a range of personal characteristics, including race/ethnicity, age, gender, sexual orientation, religious affiliation, and degree of acculturation; stigmatizing health conditions such as poor oral health, mental illness or physical disability; and community and social determinants, such as education, employment, and poverty. Disparities in health outcomes associated with IV are exacerbated by provider and system-level factors that result in differential access, receipt, or quality of health care due to societal inequities such as lack of health care coverage, cultural and linguistic differences, differential power and socioeconomic status (SES).

LGBT Persons. While IPV among partners of the opposite sex has received much attention, IPV among same-sex partners has been neglected. Statistics compiled by the National Intimate Partner and Sexual Violence Survey (NISVS), found that lesbian women and gay men reported levels of IPV and sexual violence equal to or higher than those of heterosexuals.[9] Results from a systematic review of 28 (of 576) studies on intimate partner violence (IPV) among U.S. men who have sex with men (MSM) indicate that all forms of IPV occur among MSM at rates similar to or higher than those documented among women.[10] Findings from the CDC's National Intimate Partner Violence and Sexual Violence (NISVS) show that among sexual minority women, bisexual women are 2-6 times more likely to report IPV compared to heterosexual women. The prevalence of IPV and sexual abuse has shown considerable rise in the past decade and may be as high as or higher than the straight/general population.[11]

LGBT youth also have been found to be at equal or greater risk for interpersonal violence than their heterosexual counterparts. Overall, the prevalence of dating violence among GLB adolescents is similar to that of heterosexuals. However, compared with heterosexuals and controlling for age, bisexual males had greater odds of reporting any type of abuse, and bisexual females had greater odds of experiencing sexual abuse. Controlling for age, lesbians had greater odds of being scared about their safety, compared with heterosexual females, and bisexuals were more likely to be threatened with outing, compared with gay males/lesbians. Pediatricians can play a vital role in preventing and identifying IV, by screening, providing counseling to youth and their parents, and advocating for programs and policies to address LGBT bullying.[12]

Homeless Persons. Homelessness has been identified as both a cause, an outcome, and a mediating factor associated with interpersonal violence. Approximately 63% of homeless women have experienced domestic violence in their adult lives (National Network to End Domestic Violence). The causes of interpersonal violence among homeless women are complex. Advanced medical problems and psychiatric illnesses, exacerbated by drug and alcohol abuse, in combination with the economic and social issues (such as the lack of housing and proper transportation) make this subset of the population a unique challenge for the health care system, local communities, and the government. Insufficient personal income and the lack of affordable housing are the major reasons for homelessness among women exposed to interpersonal violence in their homes.

Homeless children and runaway youth also often have high rates of past abuse, with up to two-thirds of homeless youth reporting a history of childhood physical or sexual abuse.[13-15] The experience of homelessness among children and youth appears to have numerous adverse implications and effects on their mental and physical health, neurocognitive development, and academic performance. A history of prior abuse has been found to contribute to increases in risky and impulsive behavior[16] leading to subsequent, adverse, medical and mental health conditions.[17] Homeless youth demonstrate increased rates of tobacco use, substance abuse, high-risk sexual behavior, victimization, and mental illness compared to their non-homeless peers in most.[13,15,18-22] In serving children and youth who have been the

victims of abuse and/or violence, health care providers need to understand (1) how childhood trauma may play a role in the genesis of their behavior, (2) how childhood trauma interacts with victimization on the streets to create vulnerability to psychopathology, and (3) the state of the current literature of trauma-informed interventions for children and youth.[23]

Migrant Farm Workers. Farm workers, in general, are more likely to suffer psychological as well as physical stressors, including discrimination, separation from family, long work hours, and fear of unemployment and underemployment, which increase their risks for mental illness and substance abuse. Migrant farm workers and their children are at increased risk for all types of interpersonal violence, which from child abuse, bullying, intimate partner violence, and sexual violence. They face a high risk of domestic violence, sexual violence and harassment in the work place. Migrant and seasonal farm working women report higher rates of intimate partner violence (IPV) as compared to the national average[24] but are often reluctant to report these experiences While the exact prevalence of workplace sexual violence and harassment among farmworkers is difficult to determine due to the challenges of surveying a seasonal, migrant, and often unauthorized population, the problem is serious Victims often then face systemic barriers—exacerbated by their status as farmworkers and often as unauthorized workers—to reporting these abuses and bringing perpetrators to justice.

Research Questions or Hypothesis

1. What is the evidence base regarding education of medical students on screening for interpersonal violence among vulnerable populations for medical students?
2. What are the core elements of the medical educational curriculum that can be revised and adapted to ensure students have the knowledge and skills to provide culturally competent health care for vulnerable populations exposed to interpersonal violence?

Project Goals

1. To identify the extent to which medical students are trained to screen, treat, or refer persons exposed to interpersonal violence across the life course.
2. To develop model curricular elements that can be used by other medical schools to prepare students to effectively address the needs of vulnerable populations exposed to violence.
3. To disseminate research results on how medical schools are addressing ACEs in vulnerable populations to graduate medical education audience.

Geographic Coverage: Our research will be national in scope, covering the entire United States

WORK PLAN

PROJECT GOALS

I. To identify the extent to which medical schools train students to screen, treat, and refer vulnerable persons exposed to interpersonal violence across the life course.

Methodology

A. We will use PRISMA guidelines to conduct a systematic review of the literature from 2005 until present using Scopus, PubMed, Web of Science, EBSCOhost, Google Scholar and PsycINFO. A systematic review will be conducted according to PRISMA guidelines. The search strategy cross-referenced keywords for LGBT populations (*lesbian, gay, bisexual, transgender, queer, homosexual, MSM, WSW, sexual minority*) with keywords for health care providers (*provider, physician, doctor, nurse, medical student, medical resident, health personnel, practitioner*) and

keywords for interpersonal violence (child abuse, sexual abuse, physical abuse, adolescents, elder abuse, intimate partner violence among adults, youth violence, dating violence, gun violence, and sexual violence).

B. An electronic RedCap survey on how the curriculum addresses vulnerable populations around interpersonal violence will be developed, tested and disseminated to Offices of Graduate Medical Education at all 146 US medical schools.
C. We will conduct a survey of medical students. We will conduct a survey of medical students at the four HBCU medical schools (Meharry Medical College, Morehouse School of Medicine, Howard University and Charles R. Drew University) to assess how they perceive their training to screen and address the needs of LGBT, homeless and migrant workers affected by interpersonal violence.

Analysis

A. The systematic review of the literature on how medical school curricula address interpersonal violence in vulnerable populations will be analyzed using the PRISMA guidelines.

Anticipated Product

A. We will disseminate evidence-based recommendations through a minimum of two scholarly presentations and two peer reviewed articles on how medical schools might structure their curriculum to better prepare students to address IV among vulnerable populations in primary care settings.

II. To develop model curricular elements that can be used by other medical schools to prepare students to effectively address the needs of vulnerable populations exposed to violence.

Methodology

A. We will identify and maintain a repository of best practices in medical student education about screening and treatment for interpersonal violence among LGBT, homeless persons, and migrant workers.
B. We will develop model medical education curricular modules on interpersonal violence, including a minimum of one patient simulation script.
C. We will map recommended curricular units to the Medbiquitous *Curriculum Inventory Working Group Standardized Instructional and Assessment Methods and Resource Types.*

Analysis

A. Dr. Mohammad Tabatabai will conduct the analysis of survey responses from Offices of Graduate Medical Education at all 146 US medical schools.
B. Dr. Mohammad Tabatabai will analyze medical student surveys. Dr. Tabatabai is a biostatistician.

Anticipated Product

A. We will establish a web-accessible repository of curricular modules on interpersonal violence across the lifespan relative to vulnerable populations

III. To disseminate research results on how medical schools are addressing ACEs in vulnerable populations to graduate medical education audience.

A. We will disseminate a policy brief with recommendations about the role of medical schools in training students and residents about the effects of ACEs on vulnerable populations.
B. We will identify and disseminate best practices in medical student education about screening and treatment for interpersonal violence among LGBT, homeless persons, and migrant workers through scholarly presentations and peer reviewed publications
C. We will identify and disseminate model curricular elements that can be used by other medical schools to prepare students to effectively address the needs of vulnerable populations exposed to interpersonal violence.

Anticipated Product:

A. We will disseminate a policy brief and scholarly products to medical education professional on how medical schools are addressing the health needs of LGBT, homeless and migrant worker populations affected by IV across the life course in their curriculum;
B. We will provide technical assistance to other medical schools on how to modify their curriculum to better address the needs of vulnerable populations exposed to interpersonal violence across the life course.

Limitations

1. Anticipated limitations include incomplete survey response from both the Offices of Graduate Medical Education and students at the four HBCU medical schools.
2. Identification of specific literature and other evidence that define the specific topics included in the curriculum in medical education in medical schools.

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Human Subjects Research: One of the activities involves human subjects. Students at four HBCU medical schools will be contacted to complete a survey on how well they feel they were prepared to address interpersonal violence in vulnerable populations. A proposal will be submitted to the MMC IRB for approval prior to initiating the research.

Key Staff Qualifications and per cent of time on research project:

[list staff and qualifications]

Paul D. Juarez, PhD, Program Director is Vice Chair for Research in the Department of Family and Community Medicine and Director of the Health Disparities Research Center of Excellence at Meharry Medical College and serves as the Director of the Tennessee Area Health Education Center (AHEC). Dr. Juarez also is PI of a research grant to increase PrEP uptake and adherence among young black MSM in

Memphis, TN and previously served as the PI of the Nashville Urban Partnership Academic Center of Excellence to Prevent Youth Violence.

Mohammad Tabatabai, PhD, Director, Statistical Methods, is a Professor of Biostatistics at Meharry Medical College. Dr. Tabatabai current research is in cancer modelling, premature death, diabetes in Mid-Cumberland region of Tennessee, and HIV/HCV co-infection. He is a member of the research team preparing to analyze the combined Meharry-Vanderbilt data on HIV/HCV coinfection. He is also a member of the Biostatistics and Biomedical Informatics Core (BBIC) for the Tennessee Center for AIDS Research (TN-CFAR) assisting HIV researchers with the design and analysis of their research proposals. The BBIC provides statistical and biomedical informatics support to HIV/AIDS investigators at Meharry Medical College, Vanderbilt University, and the Tennessee Department of Health. He has recently joined the Research Design, Biostatistics and Clinical Research Ethics (DBRE) Core of the Meharry Clinical and Translational Research Center (MeTRC). He has done extensive research in breast, brain, prostate cancer as well as modeling tumor growth such as glioblastoma multiform type IV, hypertabastic survival analysis and their applications in medical genomics, robust linear and nonlinear regression models including logistic, probit and multinomial regression models and cellular growth models. Dr. Tabatabai has recently been honored with the prestigious Professor of the Year Award by the Meharry Medical College pre alumni association.

R. Lyle Cooper, PhD (PI), has been a Licensed Clinical Social Worker since 2005. Dr. Cooper has worked with the LGBT population since 1999 when he began his work as an HIV outreach worker funded through the NIDA Indigenous Street Outreach Worker Model Study. He presently serves as PI on an NIAID sub award from the Tennessee Center for AIDS Research examining the role of stress (as measured through salivary cortisol) related to racial and sexual orientation discrimination and HIV related stigma among Black men that have sex with men (MSM), and the role of this stress in HIV disease progression. He is also the PI on a SAMHSA funded study to reduce HIV risk behaviors and substance abuse among young Black MSM. He is also an experienced educator with 14 years of teaching experience. He has served on curriculum committees, and developed two specializations, the Spalding University Alcohol and Drug Counseling Specialty Certificate, and the University of Tennessee, College of Social Work's Doctorate in Clinical Social Work program, where he worked on the committee that developed the program.

Matthew Morris, PhD (Co-PI)**,** has been licensed as a clinical psychologist with Health Service Provider designation in the state of Tennessee since 2013. Dr. Morris is PI of an ongoing NIMH-funded project examining neuroendocrine and psychosocial risk factors for posttraumatic stress disorder and major depressive disorder in young adult women recently exposed to physical or sexual assault (K01 MH10143). He has expertise in the assessment of trauma exposure and trauma-related psychopathology through semi-structured psychiatric interviews and in the measurement of hypothalamic-pituitary-adrenal axis and sympathetic nervous system diurnal secretion and stress reactivity through saliva (i.e., cortisol and alpha-amylase levels) and hair samples (i.e., cortisol concentrations). In addition, Dr. Morris has conducted health disparities research on racial differences in pain sensitivity in African-American and Non-Hispanic White youth and has expertise in the implementation of experimental pain protocols.

Content Expert Consultants:

Leandro Mena, MD, Associate Professor, Internal Medicine, University of Mississippi and Jackson State University.

Tom Arcury, PhD, Professor and Vice Chair for Research, Family and Community Medicine, Wake Forest University

Beth Shinn, PhD, Professor, Human & Organizational Development, Vanderbilt University