

RESEARCH STATEMENT | JOHN MOORE

My research investigates psychosocial determinants of substance use behaviors and substance use recurrence among individuals with co-occurring serious mental illness as pathways for improving prevention and intervention services. Rates of substance use and substance use disorders are disproportionately higher among individuals with serious mental illness, and the harmful effects of substance use are a significant contributor to the reduced life expectancy of this population. However, interventions have not been effective at reducing substance use among individuals with serious mental illness, and little is known about the psychosocial determinants of substance misuse that can lead to improvements in treatment. I seek to inform intervention and treatment development by advancing knowledge of psychosocial determinants that should be emphasized in substance use interventions for those with co-occurring serious mental illness and substance misuse.

The development of my research agenda began during my undergraduate studies when I worked as a substance use recovery coach and clinician at an intensive outpatient treatment center. My interests were further solidified early in my graduate career when I worked on research and evaluation projects examining substance use treatment delivery. As a master's student at Washington University in St. Louis, I collaborated on the *Missouri State Targeted Response (STR) to the Opioid Crisis* grant. I conducted data analyses and contributed to the preparation of reports evaluating state-contracted treatment agencies' performance on the delivery of low-threshold Medication Assisted Treatment (MAT) to uninsured individuals with opioid use disorder in Missouri. I was struck by the project's success in providing evidence-based treatment to nearly 3,000 individuals who otherwise may not have received care. I also served as a program evaluator for an agency in St. Louis that provided substance use prevention and intervention services. The evaluative report I authored for the agency highlighted critical gaps in both the reach and effectiveness of the agency's services in neighborhoods that were predominately comprised of racial and ethnic minorities and neighborhoods that were socioeconomically disadvantaged. These findings demonstrated to me how substance use is influenced by the environmental and sociodemographic characteristics of individuals.

I enrolled in the Doctoral Program in Social Work at The University of Texas at Austin to examine critical determinants of substance use and behavior change among underserved and understudied populations. During my tenure as a doctoral student, I have authored eleven scientific publications in peer-reviewed journals, of which eight are first-authored. To further sharpen my expertise in conducting quantitative research, I completed the Graduate Portfolio Program in Applied Statistical Modeling administered by the Department of Statistics and Data Sciences. To date, my research experience includes randomized clinical trials, national epidemiological surveys, implementation research, pilot studies, retrospective research, and cross-sectional surveys.

Most recently, I have engaged in community-based research as a co-investigator and data manager on a study of individuals who formerly experienced chronic homelessness and have a history of substance misuse who now reside in a residential community. A prominent focus of our work has been identifying factors that are conducive to substance use behavior change for those with serious mental illness. The long-term goal of this work is to collaborate with community residents and draw from study results to develop and implement a substance use intervention. I developed the study's interview assessment, trained on-site interviewers, developed the data collection and data management protocols, and have conducted all study analyses. We presented the preliminary findings of this work at the *AMERSA* conference.

I have been purposeful in leading and collaborating on research projects that have furthered my acumen in conducting substance use research. For example, I conducted a study that examined the relationship between positive affect, or one's tendency to experience positive emotions, with engagement in multiple health risk behaviors (e.g., at-risk drinking and smoking) among Latino adults. Study results showed that positive affect was associated with a lower likelihood of engaging

in multiple health risk behaviors among Latinos, suggesting that it may be a relevant factor to emphasize in behavior change interventions. This is significant because positive affect is an important personality trait, but it is not widely emphasized in substance use and other health behavior interventions. This work resulted in a first-authored publication in *Health Psychology*, which is a flagship journal in the field of health behavior change. I also recently conducted novel analyses using data from a randomized clinical trial of a brief motivational intervention grounded in the Transtheoretical Model of Change (TTM) to reduce substance use among adult patients of a Level-1 trauma center. I found significant differences in the TTM constructs of change profiles between those who discontinued and continued substance use, which suggests that certain TTM constructs may need to be prioritized in substance use interventions for those with a traumatic-injury history.

Drawing from my extensive quantitative research training, I have conducted several studies using nationally representative datasets to investigate substance use behaviors, treatment, and healthcare utilization among adults in the U.S. In a recently published first-author article in *American Journal of Health Promotion*, I used data from the Behavioral Risk Factor Surveillance System (BRFSS) to investigate associations of at-risk drinking, current smoking, and their co-occurrence with attending a primary care check-up. Results showed that individuals who engaged in both at-risk drinking and current smoking were less likely to attend a primary care visit compared to those who engaged in only one behavior. Thus, substance use screening and intervention services in primary care may not be reaching individuals with the greatest need for services. In another study using data from the National Survey on Drug Use and Health (NSDUH), I found that older adults and those with less than a high school education were less likely to receive a substance use screen in healthcare settings. These findings demonstrated that research is needed to investigate practices that can improve the delivery of screening and intervention services for older adults and for those with less formal education. This work was published in *The American Journal on Addictions*.

In recognition of my scholarly work and future research trajectory, I was awarded the Donald D. Harrington Dissertation Fellowship, the premier graduate fellowship offered by The University of Texas at Austin. My three-paper dissertation aims to identify psychosocial characteristics that are associated with reduced substance use among individuals with serious mental illness. Paper One features a systematized review of psychosocial determinants of substance use recurrence among persons with psychotic disorders. Paper Two investigates clinical and sociodemographic determinants of substance use recurrence among adults with schizophrenia who attended substance use treatment using data from the Treatment Episode Data Set-Discharges (TEDS-D). Lastly, Paper Three uses data from a randomized clinical trial that examined the effectiveness of a smoking cessation intervention administered to individuals with serious mental illness in an inpatient psychiatric care setting. I am investigating associations of behavior change motivation and behavior change self-efficacy at baseline with alcohol and illicit substance use behavior trajectories. This work will inform understanding of sociodemographic disparities in substance use behavior and treatment outcomes as well as clinical characteristics that can be targeted in interventions and services.

My long-term research trajectory will prioritize identifying protective factors of substance use behaviors with the goal of integrating such determinants into interventions for those with co-occurring serious mental illness. I will strive to secure funding by writing grants from federal, local, private, and other funding mechanisms to support my program of research. Specifically, I will aim to secure an NIH K01 Mentored Research Scientist Career Development Award to support my work in the short-term. My career goal is to become a professor at a university that is supportive of interdisciplinary substance use research. I recognize the importance of interdisciplinary research in this area, and I am committed to collaborating with health and public health researchers to advance my research agenda. I am confident that my program of research will fulfill my goal of informing evidence-based practice for individuals with co-occurring substance misuse and serious mental illness.