SPECIFIC AIMS

Bisexual individuals comprise the largest proportion (58.2%) of the US LGBT population. In total, 4.2% of US adults – nearly 14 million out of a total of 24 million LGBT Americans - identify as bisexual. Minority stress theory (MST) is the leading framework proposed to explain the wide-ranging health disparities impacting all sexual minority populations. MST posits stigmatization at the individual, interpersonal, and structural levels contributes to poor SGM health and health disparities. Within sexual minority populations, many empirical studies have linked minority stress to high levels of **substance use, sexually transmitted infections, lack of access to healthcare, and lower healthcare utilization**.

The initial articulations of MST did not include biphobia as a specific minority stressor that could combine with heterosexism and homophobia to uniquely harm the health of bisexual people. Subsequently, many studies have documented that bisexual people face biphobia not only from heterosexual society, but also from within LGBTQIA+ communities. Unlike gay and lesbian people, bisexual people are frequently not welcomed within LGBTQIA+ settings, let alone supported or affirmed for their sexual orientation. As a result, bisexual people are less likely to benefit from the health protective effects of LGBTQIA+ community belonging. Both identity affirmation and social support are known protective factors against the toxic health effects of minority stress.

The “double discrimination” of biphobia and the corresponding lack of bisexual affirmation and community support translates to poor bisexual population health: Across a wide variety of minority-stress linked health behaviors and conditions including substance use, bisexual people often have the worst outcomes of people of any sexual orientation. These findings are often exacerbated among women and people of color. In addition to identity-related stigmatization, geography is a key contextual factor affecting health. Few studies have investigated overall sexual minority or specific bisexual health minority-stress linked behavioral and health outcomes in rural settings, where retraction of already limited healthcare availability and the impact of the opioid epidemic are both stark realities.

Our team’s preliminary work has revealed the devastating health effects of biphobia on rural substance use: bisexual people who use drugs (bi+ PWUD) comprise >11% of PWUD overall and >85% of all sexual minority PWUD in rural Southern Illinois. Compared to individuals of other sexual orientations, we find in our team’s cohorts that bi+ PWUD are most likely to report past 30-day transactional sex (28%), condomless sex with someone who injects drugs (75%), and sharing needles to inject drugs (65.6%). At 33.3%, bi+ PWUD also report the highest 6-month avoidance of addiction treatment for fear of disrespect from medical providers.

These numbers documenting the health of rural bi+ PWUD could not be clearer: The time to act is now. Our expert team of bi+ investigators (Dr. Beach), substance use epidemiologists and interventionists (Drs. Jenkins and Pho), clinicians serving PWUD and LGBTQIA+ patients (Drs. Brenham, Dunkley, and Rose), and community partners employing rural LGBTQIA+ PWUD staff (Phoenix Center, Community Action Place) thus proposes the RuBi Project: *Infectious disease transmission behaviors and risks among **Ru**ral **Bi**sexual plus people who use drugs*, to develop and evaluate the first known interventions to promote harm reduction and primary care engagement among rural bi+ PWUD. In brief, RuBi proposes testing multilevel bi+ affirming interventions in a clinical trial including 316 bi+ PWUD and 158 control PWUD participants in rural Illinois to achieve the following **Specific Aims**:

Aim 1. Increase bi+ PWUD participation in harm reduction services designed to reduce infectious disease risk through implementation of a specifically bi+-affirming engagement model and intervention. We hypothesize that compared to individuals in the control groups, bi+ PWUD receiving the intervention will:
►H_1: *(primary)* have lower frequency of sharing syringes for injection at follow up (ss-inject).
►H_2: *(secondary)* have lower frequency of sharing syringes for drug mixing at follow up (ss-mix).
►H_3: *(secondary)* more frequently report condom use with partners who have other partners (condom-nmp).
►H_4: *(secondary)* more frequently report condom use with sexual partners who inject drugs (condom-wpid).

Aim 2. Increase engagement of bi+ PWUD in routine primary care through use of peer-based encouragement and navigation at health systems our team has trained to provide affirming care to bi+ PWUD. We hypothesize:
►H_5: *(primary)* In the intervention group, successful navigation to primary care will be associated with larger increases in behavioral model scores (*intent*, *skills*, and *environment*).
►H_6: *(secondary)* Bi+ PWUD in the intervention arm who engage in care will have less healthcare mistrust and greater satisfaction than those in the intervention who do not engage in care or those in the control groups.

RuBi is responsive to NOT-OD-22-166 - Research on the Health of Bisexual and Bisexual+ People and aligns with all cross-cutting priorities in NIDA’s 2022-2026 strategic plan. Overall, RuBi will build urgently needed tools to address an invisible public health crisis impacting an invisible stigmatized population: rural bi+ PWUD.