



# REDUCING RISK, BUILDING RESILIENCE: A REVIEW OF RESEARCH ON LGBTQ YOUTH AND SUBSTANCE USE

September 2019

Benjamin Gleason, PhD and Marie Heath, EdD

Special Guest Introduction  
By Jeremy Goldbach, PhD, LMSW



## SPECIAL INTRODUCTION

In general, social indicators tell us that alcohol, tobacco and other drug use are having significant consequences on youth, and warrant prevention efforts. Drug use is having a significant impact on student achievement; 41% of youth admitted to having used alcohol, 31% used marijuana and 8% used other drugs including cocaine and prescription drugs.

Adolescents who identify as lesbian, gay, bisexual, and/or transgender (LGBT) are at increased risk for substance use (Moon et al., 2007), including the use of cigarettes, alcohol, marijuana, cocaine, and ecstasy (Corliss et al., 2010; Marshal et al. 2008), e-cigarettes and prescription drug misuse (Goldbach et al., 2016). Additionally, LGBT youth are more likely to use multiple substances simultaneously (Garofalo et al., 1998), increasing their risk for adverse health outcomes (Marshal et al., 2008). The health consequences of substance use include increased risk for morbidity and mortality both during adolescence and later in life (Johnson et al., 2008). In our most recent CHKS data for LA County, LGBT high school youth reported 2.5x the rate of 30-day tobacco use (20.5% compared to 8.5%), and nearly double the rate of 30-day alcohol use (52.7% compared to 28.8%) and marijuana use (35.9% compared to 22.2%).

LGBT youth also require special attention in research and practice settings to help reduce risk and build resilience. First, adolescence is a critical period during which individuals establish long-term trajectories of health, as youth are solidifying their identities during this period (Mustanski, Kuper, & Greene, 2013) and stigmatizing experiences during adolescence are known to disrupt the achievement of developmental tasks and contribute to negative outcomes (Goldbach et al., 2014; Radkowsky & Siegel, 1997). Research on the disparate substance use outcomes found among LGBT youth have been linked to unique stressors (Alessi, Martin, Gyamerah, & Meyer, 2013; Goldbach, Tanner-Smith, Bagwell, & Dunlap, 2014; Goldbach, Schragger, Dunlap, & Holloway, 2015; Steinberg & Morris, 2001) commonly known as minority stress (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Meyer, 2003; Rosario, Schrimshaw, Hunter, & Gwadz, 2002). The minority stress theory (MST; Meyer, 2003) is by far the most widely applied model and posits that an array of unique and chronic psychosocial stressors affects sexual minorities and contribute to negative behavioral health patterns. These include both distal stressors (i.e., prejudicial events, discrimination and violence) and proximal stressors (i.e., expectations of rejection, concealment and internalized homophobia) are chronic and unique in their contribution to poor behavioral health (Rosario, Schrimshaw, Hunter, & Gwadz, 2002).

Minority stress for LGBT adolescents may differ in significant ways from their adult counterparts, as well. For example, the experience of coming out, or disclosing one's sexual orientation, as an adolescent may be stressful in the context of two often compulsory social environments: home and school (D'Augelli, 2006; Goldbach et al., 2014; Rice et al., 2014; Russell, Franz, & Driscoll, 2001). Negative parental reactions to an adolescent's sexual minority identity can create stress in the home, sometimes resulting in youth homelessness, an additional risk for substance use (Clatts et al., 2005; Rice et al., 2014; Rosario, Schrimshaw, & Hunter, 2012). Further, LGBT youth often attend schools where pervasive homophobic bullying is common and teachers may not readily intervene (Gay, Lesbian & Straight Education Network [GLSEN], 2012). Youth who are (or are perceived to be) a sexual minority are more likely to be bullied in school, which has been correlated with high rates of absenteeism, lower educational attainment, depression, suicidality and substance use (GLSEN, 2012; Ybarra, Mitchell, Kosciw, & Korchmaros, 2014).

**by Jeremy Goldbach, PhD, LMSW**

Associate Professor (with tenure),  
Suzanne Dworak-Peck School of Social Work  
Director of LGBTQ Center for Health Equity  
University of Southern California

#### CITATIONS

---

Alessi, E. J., Martin, J. I., Gyamerah, A., & Meyer, I. H. (2013). Prejudice events and traumatic stress among heterosexuals and lesbians, gay men, and bisexuals. *Journal of aggression, maltreatment & trauma*, 22(5), 510-526.

Clatts, M. C., Goldsamt, L., Yi, H., & Gwadz, M. V. (2005). Homelessness and drug abuse among young men who have sex with men in New York City: A preliminary epidemiological trajectory. *Journal of Adolescence*, 28(2), 201-214.

Corliss, H. L., Rosario, M., Wypij, D., Wylie, S. A., Frazier, A. L., & Austin, S. B. (2010). Sexual orientation and drug use in a longitudinal cohort study of US adolescents. *Addictive behaviors*, 35(5), 517-521.

D'Augelli, A. R. (2006). Developmental and contextual factors and mental health among lesbian,

- gay, and bisexual youths. In A. E. Omoto & H. M. Kurtzman (Eds.), *Sexual orientation and mental health: Examining identity and development in lesbian, gay, and bisexual people* (pp. 37-53). Washington, DC: APA Books.
- Garofalo, R., Wolf, R. C., Kessel, S., Palfrey, J., & DuRant, R. H. (1998). The association between health risk behaviors and sexual orientation among a school-based sample of adolescents. *Pediatrics, 101*(5), 895-902.
- [GLSEN] Gay, Lesbian, and Straight Education Network. (2012). *Playgrounds and Prejudice: Elementary School Climate in the United States. A Survey of Students and Teachers*. Gay, Lesbian and Straight Education Network. New York: GLSEN.
- Goldbach, J. T., Mereish, E., & \*Burgess, C. (2016). Sexual orientation disparities in the use of emerging drugs. *Substance Use & Misuse, 52*, 265–271.
- Goldbach, J. T., Schrage, S., \*Dunlap, S., & Holloway, I. (2015). The application of minority stress theory to marijuana use in sexual minority adolescents. *Substance Use & Misuse, 50*, 366–375. doi:10.3109/10826084.2014.980958
- Goldbach, J., Tanner-Smith, E., \*Bagwell, M., & \*Dunlap, S. (2014). Minority stress and substance use in sexual minority adolescents: A meta-analysis. *Prevention Science, 15*, 350–363.
- Hatzenbuehler, M. L., Nolen-Hoeksema, S., & Dovidio, J. (2009). How does stigma “get under the skin”? The mediating role of emotion regulation. *Psychological Science, 20*(10), 1282-1289.
- Johnson, C. V., Mimiaga, M. J., & Bradford, J. (2008). Health care issues among lesbian, gay, bisexual, transgender and intersex (LGBTI) populations in the United States: Introduction. *Journal of Homosexuality, 54*(3), 213-224.
- Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., ... & Morse, J. Q. (2008). Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction, 103*(4), 546-556.
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychological bulletin, 129*(5), 674.

- Moon, J. W., Roh, Y., Lauf, R. J., Vali, H., Yeary, L. W., & Phelps, T. J. (2007). Microbial preparation of metal-substituted magnetite nanoparticles. *Journal of microbiological methods*, 70(1), 150-158.
- Mustanski, B., Kuper, L., & Greene, G. J. (2013). Development of sexual orientation and identity. In: Tolman DL, Diamond LM, editors. *Handbook of Sexuality and Psychology*. Washington, DC: American Psychological Association; 2013.
- Radkowsky, M., & Siegel, L. J. (1997). The gay adolescent: Stressors, adaptations, and psychosocial interventions. *Clinical psychology review*, 17(2), 191-216.
- Rice, E., & Barman-Adhikari, A. (2014). Internet and social media use as a resource among homeless youth. *Journal of Computer-Mediated Communication*, 19(2), 232-247.
- Rosario, M., Schrimshaw, E. W., & Hunter, J. (2012). Risk factors for homelessness among lesbian, gay, and bisexual youths: A developmental milestone approach. *Children and youth services review*, 34(1), 186-193.
- Rosario, M., Schrimshaw, E. W., Hunter, J., & Gwadz, M. (2002). Gay-related stress and emotional distress among gay, lesbian and bisexual youths: A longitudinal examination. *Journal of Consulting and Clinical Psychology*, 70(4), 967.
- Russell, S. T., Franz, B. T., & Driscoll, A. K. (2001). Same-sex romantic attraction and experiences of violence in adolescence. *American journal of public health*, 91(6), 903.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual review of psychology*, 52(1), 83-110.
- Ybarra, M. L., Mitchell, K. J., Kosciw, J. G., & Korchmaros, J. D. (2015). Understanding linkages between bullying and suicidal ideation in a national sample of LGB and heterosexual youth in the United States. *Prevention Science*, 16(3), 451-462.

**INTRODUCTION TO “REDUCING RISK, BUILDING RESILIENCE” BY MARIE K. HEATH, ED.D.**

Because LGBTQ youth experience unique and chronic stressors, effective interventions need to be tailored to the community, rather than use existing global or broad-based interventions. This review examines the interventions needed to address the unique experiences of LGBTQ youth (the coming out process, the external and internal homophobia impacting their lives, the victimization specific to their sexual identity). It also considers the particular challenges in developing these interventions which include the need to maintain confidentiality and the ways in which MST impacts the larger LGBTQ community.

Goldbach and colleagues (2014) explored the very specific risk factors that LGBTQ youth experience, including negative reactions to sexual identity; psychological stress; victimization; lack of home and/or school support; depression and anxiety; truancy and conduct problems; and homelessness or runaways. Goldbach and colleagues (2015) acknowledged these stressors and then explored protective factors for substance use, finding that a stable home life and positive experiences in school decrease the likelihood of marijuana use among LGBTQ youth.

Implications from Goldbach and colleagues' (2014; 2015) findings suggest that interventions should help to build LGBTQ youth coping skills, refusal skills, and problem-solving skills. Cognitive based and motivational based therapies help develop these different approaches (Aromin, 2016). However, these therapies may require a level of self-disclosure and outing that can cause additional stress on young people - exacerbating a chronic stress that is already a risk factor. Schwinn and colleagues (2015) used an anonymous web-based program targeted to LGBTQ youth and found that young people reported increased comfort with these skills after progressing through the program. This suggests a way forward using interventions that are accessible and targeted without requiring sexual identity disclosure from the youth accessing the program (compared, for instance, with the way that attending a specific program at school or in the community requires sexual identity disclosure).

**ARTICLE 1: MINORITY STRESS AND SUBSTANCE USE IN SEXUAL MINORITY ADOLESCENTS: A META-ANALYSIS****SUMMARY**

Many of the risk factors associated with substance use among young people are the same risk factors associated with substance use among young lesbian, gay, or bisexual (LGB)

people. However, LGB youth experience three times the rate of substance use compared to heterosexual peers. This may be because minoritized groups experience risk factors in a way that is unique to their minoritized status in society. This article identifies risk factors specific to LGB youth which include negative reactions to sexual identity; psychological stress; victimization; lack of home and/or school support; demographics; depression and anxiety; truancy and conduct problems; and homelessness or runaways.

The sections below explore each of these areas as they relate specifically to LGB youth.

### **Risk Factors for Substance Use for LGB Youth**

#### *1) Negative Consequences Associated with Sexual Identity Disclosures (i.e. "Coming Out")*

Coming out - disclosing sexual identity - often correlates with positive mental health benefits. However, negative reactions to an LGB person's coming out is correlated with risk factors for substance use. LGB youth may try to use substances to manage anxiety and boost self-confidence during this process. This is particularly apparent when the coming out process takes a long time or is drawn out, possibly due to internalized or external homophobia. It seems it may also be more stressful for youth who deviate from societal norms and expectations of gender - for instance lesbian and bisexual women with a more "masculine identity" may experience greater stressors than their peers. This is also correlated with higher substance use.

#### *2) Psychological Stress*

There are specific psychological stressors that LGB youth experience, including negative reactions to sexual identity disclosure; generalized negative attitudes in society towards homosexuality; and the difficulty of the coming out process.

#### *3) Victimization*

Victimization refers to the experience of violence and abuse because of sexual identity. The taunting and teasing of youth specifically because they are LGB is heavily correlated with substance use.

#### *4) Lack of Supportive Environments*

The support (or lack thereof) from parents and adults at school had significant impact on the likelihood of LGB youth using substances. LGB youth who perceived less support from parents or school were more likely to use substances than their LGB counterparts who perceived more support.

### 5) Demographics

LGB youth of color and male LGB youth had a slightly higher likelihood of substance use than their white and female peers.

### 6) Internalizing/Externalizing Problem Behavior

Another risk factor for substance use was experiencing internalizing behavior including anxiety, depression, or suicidal ideation. Additionally, externalizing behavior including conduct problems and truancy were correlated to substance use.

### 7) Housing Status

Precarity in housing status was correlated to substance use. LGB youth who are living in homelessness or as runaways experience higher instances of substance use.

### **Intervention Development**

Interventions tailored to the unique experience of LGB youth (as opposed to universal or broad-based interventions currently used to treat substance use in youth) would be a more effective way to address substance use in LGB youth.

### CITATION

---

Goldbach, J. T., Tanner-Smith, E. E., Bagwell, M., & Dunlap, S. (2014). Minority stress and substance use in sexual minority adolescents: A meta-analysis. *Prevention Science, 15*(3), 350-363.

## **ARTICLE 2: PREVENTING DRUG USE AMONG SEXUAL-MINORITY YOUTHS: FINDINGS FROM A TAILORED, WEB-BASED INTERVENTION**

### SUMMARY

While LGBTQ adolescents use substances for the same reason as their heterosexual peers, they also use substances because of the chronic stress of identifying as part of a sexual-minority group. These unique stressors indicate that LGBTQ youth need targeted interventions. However, targeting interventions to LGBTQ youth in the traditional intervention modes (that is, interventions that occur in schools or other face-to-face environments) require LGBTQ youth to self-disclose sexual identity. This limits interventions to adolescents who are already “out” to themselves, their peers, and their parents.



This study developed a web-based drug abuse prevention program for sexual-minority youths. It used Facebook ads to recruit 15-16-year-old LGBTQ youths to take part in the program. The program used an animated young adult narrator to guide the participants through the three-session program. Session 1 focused on skills for identifying and managing stress; session 2 provided a five-step guide for making decisions; and session 3 addressed drug use rates and refusal skills. After three months, participants noted that they felt less stress, less peer drug use, and less past 30-day other drug use, and higher coping, problem solving, and drug-use refusal skills.

### ***Intervention Development***

This study suggests that interventions should be targeted to LGBTQ adolescents. The interventions should allow young people to participate without parent permission and without publicly disclosing their orientation. Online interventions allow for a safe, non-stigmatizing environment for these interventions. Online interventions also benefit from a broad reach and low administrative costs.

### CITATION

---

Schwinn, T. M., Thom, B., Schinke, S. P., & Hopkins, J. (2015). Preventing drug use among sexual-minority youths: findings from a tailored, web-based intervention. *Journal of Adolescent Health, 56*(5), 571-573.

## **ARTICLE 3: THE APPLICATION OF MINORITY STRESS THEORY TO MARIJUANA USE AMONG SEXUAL MINORITY ADOLESCENTS**

---

### SUMMARY

LGB youth experience chronic stress related to identifying as members of a minority sexual group. Chronic stress may explain the difference in heterosexual and LGB marijuana use rates. This article identified experiences of violence/victimization, increased outness (being out to more people), and internalized homophobia as chronic stressors leading to increased psychological distress. The increased stress on a minoritized group increases use and access to substances in the larger, minoritized community. It identified which stressors were specifically correlated with marijuana use among LGB youth. It also identified which factors are protective, that is, which factors can help prevent marijuana use in LGB youth.

### ***Stressors Increasing Marijuana Use***

Internalized homophobia (negative feelings about oneself because of sexual identity) leads to increased marijuana use. Bisexual youth are more likely to use marijuana than their gay or lesbian peers. Age, gender, and race/ethnicity were not significantly associated with increased marijuana use.

### ***Protective Factors***

LGB youth in school are less likely to use marijuana, and LGB youth who live at home with their parents are less likely to use marijuana. Experiencing connection to the LGB community decreased internalized homophobia. Although decreased internalized homophobia is a protective factor for marijuana use, young people connected with the LGB community engage in increased substance use. There is a relationship between community connectedness, homophobia, and marijuana use.

### ***Intervention Development***

Interventions should address influencing general environmental stressors on LGB youth. It is also important to develop individual level interventions, such as coping skills training, that can help youth address internalized homophobia. Connectedness to community is another intervention to decrease internalized homophobia. This connectedness is important; however it is also important to understand the stress on the larger community which has led to increased use and accessibility of substances within the larger community.

### **CITATION**

---

Goldbach, J. T., Schrage, S. M., Dunlap, S. L., & Holloway, I. W. (2015). The application of minority stress theory to marijuana use among sexual minority adolescents. *Substance use & misuse, 50*(3), 366-375.

## **ARTICLE 4: SEXUAL MINORITY DISPARITIES IN SUBSTANCE USE WILLINGNESS AMONG YOUTH**

### **SUMMARY**

---

This study examined the *willingness* of sexual minority youth to engage in cigarettes, alcohol, and marijuana use compared to their non-sexual minority peers. *Willingness* refers to an

individual's curiosity about and openness to engage in a behavior, as opposed to their reactive or planned reasons for engaging (or not engaging) in a behavior.

The adolescents were polled at two different time periods over the course of their high school experience. At the initial polling, sexual minority youth showed a greater willingness to use cigarettes and marijuana. However, after time, they were only more likely to show a greater willingness to use cigarettes.

### ***Intervention Development***

The study concludes that among sexual minorities, peers play a role in the willingness to smoke cigarettes. Interventions should consider peer influence in order to address tobacco use in sexual minority groups. This may include social marketing programs that correct social norms, reduce the stigma of non-smoking, and provide refusal-skill training.

### CITATION

---

Gamarel, K. E., Mereish, E. H., Colby, S. M., Barnett, N. P., Hayes, K., & Jackson, K. M. (2018). Sexual minority disparities in substance use willingness among youth. *Substance use & misuse*, 53(1), 170-175.

## **ARTICLE 5: SUBSTANCE ABUSE PREVENTION, ASSESSMENT, AND TREATMENT FOR LESBIAN, GAY, BISEXUAL, AND TRANSGENDER YOUTH**

---

### SUMMARY

Treatment and interventions for LGBT youth should address the specific challenges that young people face as members of a sexual minority group.

### ***Intervention Development***

This article addresses prevention, screening, and treatment for substance use in LGBT youth. These have been summarized below.

### ***Substance Abuse Prevention***

Preventative strategies can occur in schools, communities, and at regular pediatric visits. Schools and communities can provide substance abuse education as well as gay-straight alliances which help to develop an inclusive community. Doctor visits which screen for overall

health are an opportunity to reinforce a sober lifestyle and identify potential mental health issues, which may increase the likelihood of substance use. Approaches should remain non-judgmental, caring, and inclusive.

### *1) Screening for Substance Use*

Screening can occur at school, at pediatric wellness visits, and in emergency rooms. CRAFFT is one potential screening tool which uses self-reporting to identify substance use. It can be administered via a computer. Two or more positive answers to the following questions may indicate a substance use problem.

C—Have you ever ridden in a car driven by someone (including yourself) who was high or has been using alcohol or drugs?

R—Do you use alcohol or drugs to feel relax, feel better about yourself, or fit in?

A—Do you ever use alcohol or drugs while alone [modified for LGBT youth to: when you feel different or alone]?

F—Do you forget things you did while using alcohol or drugs?

F—Do your family members and friends ever tell you that you should cut down on your drinking or drug use?

T—Have you gotten into trouble while you were using drugs or alcohol?

Confidentiality is particularly important in screening and treating LGBT youth, particularly as they may not be out to their families or greater community.

### ***Substance Use Treatment***

Treatment should be tailored to the individual and take into consideration the whole person, including their community, school, and family. These include Motivational Enhancement Therapy; Cognitive-Behavioral Therapy; Adolescent Community Reinforcement Approach; Family Therapy; and Twelve Step Programs.

#### *1) Motivational Enhancement Therapy*

This approach is useful when a patient does not currently see drug use as a problem. The goal of this therapy is to encourage motivation for change by suggesting the cons of drug use and mitigating the pros of drug use, without challenging or confrontation of the patient.

#### *2) Cognitive-Behavioral Therapy*

This approach is useful once a patient has achieved a level of motivation for change. It is particularly appropriate if a patient is also experiencing anxiety and depression. It helps to develop refusal skills, coping skills, problem solving skills, and relapse.

### *3) Adolescent Community Reinforcement Approach*

This approach uses rewards and consequences for substance use and abuse. It offers vouchers for sober supporting behaviors and the removal of privileges for drug using behaviors. It may also include behavior modification through the use of house arrest or ankle bracelets, if behaviors are particularly maladaptive.

### *4) Family Therapy*

A positive relationship with parents is a protective factor against substance use. Family therapy should focus on understanding substance use as a family problem, not just an individual's problem. It may also address dysfunctional behavior within the family, and support family acceptance of the child's sexual identity. It is important to remember the role of confidentiality, especially if children are not out to their families.

### *5) 12 Step Programs*

Twelve Step programs may be an effective way to treat for substance use. Given the intensive group dynamics of this treatment method, the program should be vetted before recommendation in order to confirm that the environment is non-stigmatizing to LGBT people.

## CITATION

---

Aromin, R. A. (2016). Substance abuse prevention, assessment, and treatment for lesbian, gay, bisexual, and transgender youth. *Pediatric Clinics*, 63(6), 1057-1077.

## CONCLUSION

This review of the research demonstrated the unique challenges faced by LGBT youth, and the relationship between these challenges, grouped by “minority stress theory,” and subsequent substance use and misuse. LGBT youth use illicit substances at a rate three times higher than non-LGBT youth, stemming from a predominance of risk factors associated with simply being “out” (i.e., publicly disclosing their sexual identity). The authors of this review noted a number of risk factors, and some protective factors, associated with this specific population.

Noting that LGBT youth use illicit substances at higher rates than non-sexual-minoritized youth, Goldbach et al (2014) described a number of risk factors that contribute to this use, including: the danger of negative consequences from “coming out” to friends, family, and communities; lack of supportive environments; challenges in finding and securing housing; and stress and psychological distress from victimization. Goldbach and colleagues noted that successful interventions should be tailored to the unique experience of LGBT youth.

Interventions that require LGBT youth to disclose their sexual identity create a risk for youth, and so Schwinn and colleagues (2015) developed a web-based intervention that individuals could complete without fear of being “outed.” The authors created a three-part online program based on the concepts of managing stress, responsible decision-making, and drug refusal skills, demonstrating a number of positive results from this online intervention

In earlier research, Goldbach and colleagues (2014) use the concept of “minority stress theory” to suggest that LGBT youth use illicit substances at higher rates than their non-sexual-minoritized youth because of the unique stressors they face. In this article, Goldbach and team (2015) tested whether this theory would predict marijuana use. The authors found that LGBT youth face a number of stressors, predominantly internalized homophobia, linked with higher rates of marijuana use. Protective factors include community connectedness and strong intrapersonal development.

Gamarel (2015) investigated the willingness of LGBT youth to use tobacco, alcohol, and marijuana, finding that these youth were more willing to use tobacco and marijuana, though eventually this tapered off. The authors suggested that youth interventions focus on social norms and youth refusal skills.

Aromin (2015) described effective prevention and treatment options for LGBT youth, including a screening survey to assess potential substance abuse, and treatments including motivation enhancement, cognitive behavior therapy, and family therapy.

Overall, these authors described the unique challenges facing LGBT youth, including potential negative consequences of coming out, internalized homophobia, and environmental stressors, and risk factors such as community connectedness, solid intrapersonal skills, and drug refusal skills.

---

## AUTHOR INFORMATION

Jeremy Goldbach, PhD, LMSW, is an Associate Professor at the Suzanne Dworak-Peck School of Social Work and Director of the USC Center for LGBT Health Equity. He joined the faculty in 2012 after completing both his master's and doctoral degrees in social work at The University of Texas at Austin. His work is primarily focused on LGBT adolescent health and has been funded through the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Prevention, the National Institute on Minority Health and Health Disparities (NIMHD; 1R01MD012252; R21MD013971), the National Institute of Child Health and Human Development, the Health Resources and Services Administration (HRSA), the Department of Defense (DOD) and The Trevor Project.

Benjamin Gleason, PhD, is the Director of Applied Research for the Prospectus Group. He earned a PhD in Educational Psychology & Educational Technology from Michigan State University, researching how to best support communities of learners through educational technology. He is Assistant Professor of Educational Technology at Iowa State University, researching and teaching about the ways that educational technology can support the development of literacy, identity, and engaged communities. Before academia, Benjamin worked in youth and adult-serving learning spaces for almost 15 years, from designing youth-initiated community service projects and teaching high school in Richmond, California, to working as a university instructor in Guatemala. Benjamin is also a founder of the Prospectus Group.

Marie Heath, Ed.D., is an Assistant Professor in the School of Education at Loyola University Maryland. She researches the ways that education, civic engagement, and technology can foster social change and encourage a more robust democracy. Marie has 15 years of experience in political and community activism and teacher labor organization. She has run political campaigns, organized teacher activism, and led political action groups in Baltimore City and the greater Baltimore region. Before teaching and researching in academia, Marie taught high school history for seven years in Baltimore County Public Schools.