BEYOND RISK: EXPLORING PROTECTIVE FACTORS FOR LGBTQ+ YOUTH FOLLOWING PEER VICTIMIZATION

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Introductions

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Content and COI Declarations

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- The content of today's talk is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.
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Purpose of Today's Colloquium

This colloquium explores social and individual factors differentially shaping mental health among cisgender and gender-diverse LGBQ+ adolescents. We will:

- describe the To Be Honest [TBH] study from which our data come.
- explore distinct risk and protective factors that influence mental health outcomes across gender identities.
- highlight potential protective factors and implications for informing intervention to bolster the health of LGBTQ+ youth.

Foundational Definitions: Sexual Orientation & Gender Identity

- Sexual orientation is experienced multidimensionally: sexual attraction, sexual behavior, and self-identification.
- The terms lesbian, gay, bisexual, and heterosexual frequently are used by individuals to refer to their sexual identity, but they may also be used to describe one's sexual desires or behaviors.
- Attraction and behavior, however, may not align with the way that one self-identifies their sexual identity to themselves or others (e.g., adolescents).
- Sexual orientation is fluid across the lifespan, particularly in adolescence, and also may be context dependent.

Foundational Definitions con't

Gender identity and expression are distinct from sexual orientation, although they often overlap experientially.

*Cisgende*r → gender assigned at birth (i.e., on one's birth certificate, typically *male* or *female*).

Transgender and Gender Diverse (TGD) → an umbrella term that captures the experiences of those whose assigned gender does *not* align with their sense of self-identified gender identity or expression. Outside the binary → *non-binary*, *gender queer*, *gender fluid*, *gender-nonconforming*.

Gender expression → varied ways that people consciously and unconsciously communicate their gender to others (e.g., clothing, appearances, mannerisms). Oftentimes this expression conforms to dominant cultural ideologies of the male-female binary.

"Sexual and gender minorities" or SGM is often used to broadly capture this vast array of identities and experiences under a single term.

Peer Victimization (PV): Prevalence and Consequences

- PV is common during adolescence and often **includes bullying and sexual harassment** (Haile et al., 2024).
- Nationally representative data indicate that 34% of U.S. adolescents ages 12–17 experienced **bullying** in the previous year (Haile et al., 2024), while approximately 63% of girls and 37% of boys of U.S. adolescents have reported being **sexually harassed** (US Dept of Education, 2023).
- PV is associated with acute increases in **anxious affect** (Fales et al., 2020), as well as **longer-term adverse outcomes**, including depression and anxiety (Song et al., 2024; Giuliani, et al., 2025) and self-harm (Giuliani et al., 2025).
- PV is associated with **increased risk for subsequent victimization**, both within peer relationships and across later interpersonal contexts, including dating relationships (Chiodo et al., 2009; Kljakovic & Hunt, 2016; Zych et al., 2021).

LGBTQ+ Youth: Peer Victimization

Significant disparities in peer victimization prevalence persist among LGBTQ+ compared to cisgender heterosexual youth:

- Nationally representative U.S. data collected from 2021–2023 indicate that **47% of sexual or gender minoritized adolescents experienced bullying during the previous year** (Haile et al., 2024).

- In a large sample of schools in the Northeastern U.S., (N = 2,766), 66% of sexual minority boys and 76% of sexual minority girls reported past year **sexual harassment** compared with 42% and 61% of their respective heterosexual counterparts (Norris & Orchowski, 2020).

- **Gender minoritized youth (i.e., transgender and gender diverse [TGD]) and those with non-conforming gender expression are at greater risk** than cisgender youth, regardless of sexual identity (Lian et al., 2022; Lambe et al., 2025).

LGBTQ+ Youth: Adverse Health Outcomes

- Compared with cisgender heterosexual youth, LGBTQ+ youth are **more likely to report substance use**, including alcohol, tobacco/nicotine, cannabis, and other drugs (CDC, 2024; Mereish et al., 2026).
- They also report earlier initiation, **steeper escalation to regular alcohol and cannabis use, persistent over lifetime which exacerbate typical developmental challenges associated with the transition to adulthood** (e.g., identify development, establishing support system external to family; Dunbar et al., 2022).
- Compared with cisgender heterosexual youth, SGM youth experience **higher levels of depression, anxiety, psychological distress, self-harm, and suicidality**. These disparities are especially **pronounced among TGD youth**, who report substantially poorer mental health and elevated self-harm and suicidality compared with cisgender youth (Hudson et al., 2025; Klinger et al., 2024; MacArthur et al., 2026).

Minority Stress

Sexual and gender **minority stress reflects the additional, chronic stress LGBTQ+ youth experience because of stigma, discrimination, rejection, victimization, and other identity-related stressors**. These experiences can become internalized or create expectations of future rejection and, over time, contribute to disparities in mental health, substance use, and other health outcomes (Meyer, 2003; Hatzenbuehler, 2009).

Meta-analytic evidence indicates that sexual and gender minority stressors—including bias-based victimization, bullying, family rejection, expectations of rejection, and internalized stigma—are **associated with poorer mental health among LGBTQ+ youth, including depression, anxiety, suicidal ideation, and suicide attempts, and are important contributors to observed mental-health disparities** (e.g., de Lange et al., 2022; Dürrbaum & Sattler, 2020; O'Shea et al., 2025; Pellicane & Ciesla, 2022).

Potential targets?

Family Cohesion

- Family cohesion is associated with **better psychosocial adjustment among adolescents, in general,** but peer victimization may compromise that effect (Fredrick et al., 2022)**.**
- **The broader LGBTQ+ literature identifies related family processes—including family connectedness, support, and acceptance—as important protective factors for mental health and well-being** (Simón-Saiz et al., 2024). Overall, relatively little research has examined family cohesion among LGBTQ+ adolescents.
- Evidence suggests that family connectedness is strongly associated with lower suicide risk among both cisgender LGBQ+ and TGD adolescents (Horowitz et al., 2025); however, **whether the effects of family cohesion specifically differ between cisgender LGBQ+ and TGD LGBQ+ adolescents remains largely unexplored**.

Potential targets for mitigating harms associated with PV?

Self-Compassion

- **Across adolescent populations, greater self-compassion is consistently associated with lower depression, anxiety, and psychological distress and greater emotional well-being** (Neuenschwander et al., 2025).
- Some research finds **significantly lower self-compassion among LGBTQ+ adolescents compared to cisgender heterosexual youth** (Vigna et al., 2018).
- Similarly, **self-compassion is another potentially important protective factor for LGBTQ+ populations,** including adolescents (Helminen et al., 2022).
- Self-compassion may help protect LGBTQ+ youth from some of the harmful effects of peer victimization, including the impact of minority stress. Among SGM youth, **greater exposure to bullying is associated with lower self-compassion, while greater self-compassion is associated with better mental health**. However, increased exposure to bias-based bullying may undermine the protective effects of self-compassion (Vigna et al., 2018; Helminen et al., 2023).

Purpose of the To Be Honest (TBH) study

To investigate the acute daily and longitudinal effects of peer victimization (bullying, sexual harassment) on LGBTQ+ adolescent health risk behaviors– specifically, to understand how peer victimization relates to alcohol and other substance use, as well as identify potential protective and risk factors related to these outcomes.

Longitudinal Design using Mixed Methods Approach:

- **Online survey data collected at Baseline, 6-**, 12- and 18-months
- Two 4-week bursts of daily reports (3 and 15 months)
- Qualitative interviews focused on experiences of PV

TBH Target Population: Who?

- "LGBQ+ youth" = those who self-identify as lesbian, gay, bisexual, questioning, or something other than exclusively heterosexual (e.g., queer, pansexual).
- Remember: sexual and gender identity are distinct but overlapping
- For this study: LGBQ+ youth may be cisgender (i.e., gender identity corresponds with sex assigned at birth) or another gender identity (e.g., transgender, non-binary) → LGBTQ+ for ease of communication.

Challenges:

- Fluidity of sexual attraction and identification during this developmental period,
- rapidly changing terminology, and
- heterogeneity of disparities and risks among this diverse group.

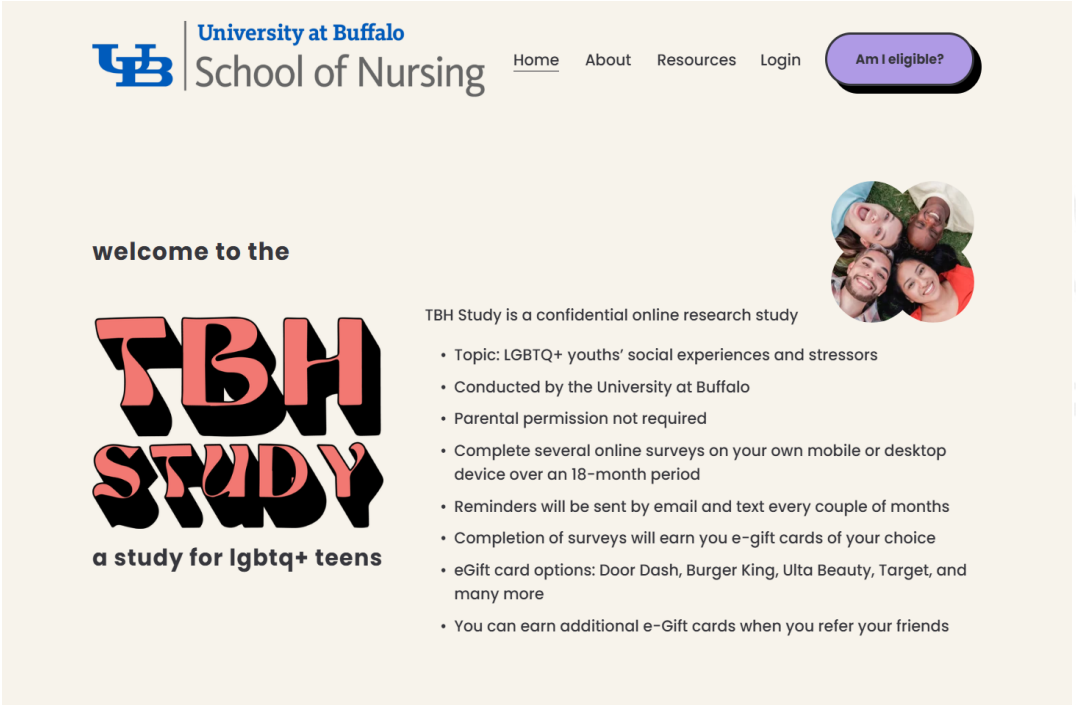
TBH Participants (*N* = 401; 57.6% TGD)

To be eligible for participation at baseline, adolescents had to have been:

- 14-18 years old at recruitment,
- self-identified as LGBQ+,
  - *Which of the following best describes how you identify yourself?* strictly/exclusively heterosexual, mostly heterosexual, bisexual, mostly gay or lesbian, gay or lesbian, queer, pansexual, or other (open-ended).
  - Gender identity (cisgender, transgender, non-binary, queer, other) is assessed at each wave but was not considered for eligibility.
- enrolled in middle or high school (public or private) or home-schooled,
- residing in NYS, and
- have a personal email address and mobile device to which they could privately receive text messages from the study.

Recruitment

- Participants recruited via school-based Gender & Sexuality Alliances and incentivized referrals (i.e., Respondent Driven Sampling). Interested youth completed an online screener on the TBH website to determine eligibility.
- All participants were rigorously screened to ensure authenticity.

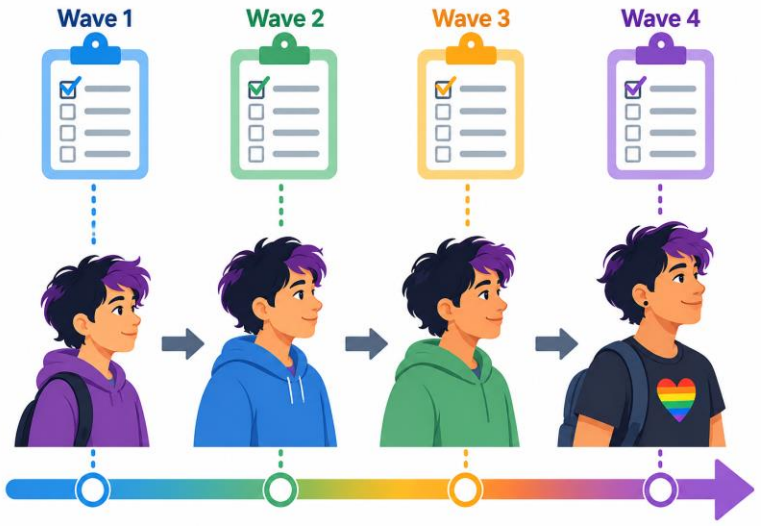


Waiver of Parental Consent

Allowable per U.S. Health and Human Services, article §46.408 when the research protocol is *designed for a subject population for which parental or guardian permission is not a reasonable requirement to protect the subjects, and an appropriate mechanism for protecting the children who will participate as subjects in the research is substituted.*

- Why in current study?
  - LGBQ+ youth may not have disclosed their sexual identity to parent or guardian and, thus, it is not reasonable to require parental consent to protect the subjects.
  - 14-17 year old adolescents are sufficiently mature to provide consent on their own behalf given that the study is of minimal risk.

Procedures: Longitudinal Surveys



- Four web-based assessments: every 6-months over a 2-year period (i.e., **baseline**, **6-months**, 12-months, 18-months).
- Survey length: approximately 1- 1.5 hours each
- Compensated ($40) for completion of each wave of survey.
- Focus: peer victimization (bullying, sexual harassment), heterosexist experiences, substance use and related risk and protective factors, as outlined in conceptual framework
- Participants have the opportunity to stop and re-start the interview at a later time. Study staff track incomplete surveys and provide text reminders to participants about completing the survey. Additional bonuses (e.g., lottery) were incorporated to improve retention.

Purpose & Hypotheses of Current Study

The purpose of the current study is to examine the risk and protective pathways through which peer victimization contributes to mental health outcomes among LGBTQ+ youth. We considered self-compassion, family cohesion, and minority stress as potential mediators in this relationship.

Specifically, we expected that:

1) peer victimization would be positively associated with minority stress, which in turn would be positively associated with alcohol use, internalizing symptoms, and self-harm,
2) there would be an indirect effect from PV to the target outcomes via minority stress, and
3) self-compassion and family cohesion would mediate the association between peer victimization and minority stress, such that youth with greater self-compassion and more family cohesion will experience less minority stress, indirectly resulting in less alcohol use, fewer internalizing symptoms and self-harming behavior.

We also explored whether these paths differed for cisgender and TGD youth.

Measures: Predictor

Peer Victimization (bullying + sexual harassment by peers) reported at **baseline.**

- California **Bullying Victimization** Scale: Felix et al., 2011; past 6 months; 6 items summary score; 7-point scale (never to almost every day).
- Modified AAUW **Sexual Harassment** Survey: American Association of University Women, 2001; past 6 months; 10 items summary score; 7-point scale (never to almost every day).
- Bullying ($\alpha = 0.824$) and sexual harassment ($\alpha = 0.875$) were correlated ($r = 0.615$) and, therefore, averaged, with **higher scores meaning more experiences of peer victimization**.

Mediator

Minority Stress reported at **baseline.**

- Sexual Minority Adolescent Stress Inventory: Goldbach et al., 2023; 45 items (yes/no) summary score; e.g., "I am questioning how to label my sexual orientation," "I am concerned that if I am LGBTQ+, I will have a worse life than if I were straight," and "I have heard a family member make negative comments about LGBTQ+ people;" **higher scores indicating greater minority stress**; reliability: good reliability (KR-20 = 0.856).

Measures Con't: Outcomes

Alcohol Use reported at 6 months.

- 1 item: "On how many occasions (if any) have you had beer, wine, or other alcoholic drink (e.g., liquor, mixed drink, malt liquor, hard lemonade) in the past 6 months?" 6-point scale (0 - 20-30 days). **Higher score indicated more reported drinking days in the past 6 months**.

Internalizing Symptoms (Mental Health: Anxiety + Depression) reported at 6 months.

- Past 2 weeks **Anxiety**: Generalized Anxiety Disorder-7; Spitzer et al., 2006; 4-point scale (not at all to nearly everyday); 7 items summary score; e.g., "Feeling nervous, anxious or on edge"
- Past 2 weeks **Depression**: Patient Health Questionnaire-8; Kroenke et al., 2001; 4-point scale (not at all to nearly everyday); 9 items summary score; e.g., "Little interest or pleasure in doing things"
- Anxiety ($\alpha = 0.925$) and depression ($\alpha = 0.904$) were correlated ($r = 0.758$) and, therefore, averaged, with **higher scores reflecting greater internalizing symptoms.**

Self-Harm (i.e., non-suicidal self-injury) reported at 6 months.

- 1 item: "in the past six months, have you done something to purposely hurt yourself without wanting to die, such as cutting, scraping, or burning yourself on purpose?" (yes/no)

Measures Con't: Protective Factors

Family Cohesion reported **at baseline.**

- Family cohesion scale from FACES III; Olson et al., 2013; 10 items average score; 5-point scales (almost never to almost always); e.g., "Members of my family ask each other for help," and "Family members consult other family members on their decisions;" **higher scores meant higher degree of cohesion between family members**; excellent internal consistency (α = 0.907).

Self-Compassion reported **at baseline.**

- Short Form of the Self-Compassion Scale; Raes et al., 2011; 12 items average score (after reverse coding 6 items); 5-point scale (almost never to almost always); e.g., "When I fail at something important to me, I become consumed by feelings of inadequacy." and "When I'm going through a very hard time, I give myself the caring and tenderness I need."; **higher scores indicate greater self-compassion**; good internal consistency (α = 0.858).

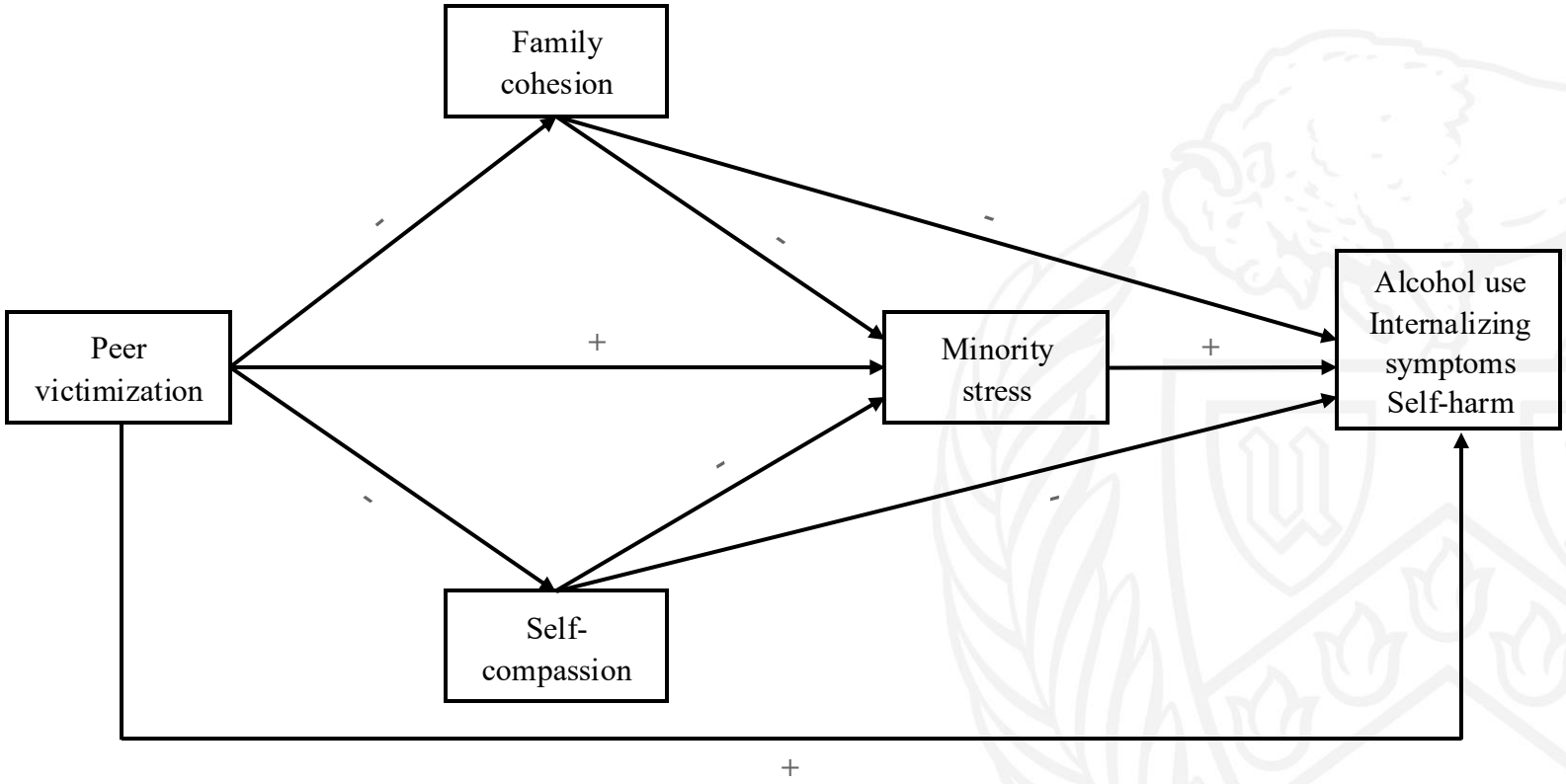
Analytic Approach

- Sequential mediation models were used to examine the direct and indirect effects of peer victimization on health outcomes via family cohesion, self-compassion, and minority stress (Muthén et al., 2017).
- Models were also used to examine outcomes based on gender identity
- IVs were assessed at baseline, mental health outcomes were assessed at 6-months.
- Analyses were conducted in Mplus Version 9.0, using Bayesian estimation (Muthén & Muthén, 2017).
- Missing data were dealt with full information maximum likelihood, and all available data were analyzed. All statistical tests were two-tailed, and statistical significance was established at $p < .05$.

Participant Characteristics

- Baseline N = 401 LGBTQ+ adolescents, 281 of them had data at 6 months (70% response rate)
- Mean age = 15.95 years old (SD =1.03; range = 14-18)
- Most were female assigned at birth (80.3%)
- 57.6% were identified as transgender or gender diverse (TGD) and 42.4% were cisgender
- 73.6% White, 9.7% Black, 12.2% Multi-racial; 13.5% identified as Hispanic/Latino/a.

Figure 1. Conceptual Model of the Effects of Peer Victimization Mental Health Outcomes among LGBTQ+ Youth



Descriptive Results

Table 1: *Gender Identity Differences*

Note. [a] TGD = transgender or gender diverse. *$p < .05$. **$p < .01$. ***$p < .001$.

Variable	Cisgender		TGD [a]		t-test, t(df)
	Mean	SD	Mean	SD	
Peer victimization	0.53	0.61	0.75	0.77	t(399) = -3.151**
Family cohesion	3.33	0.86	3.14	0.90	t(399) = 2.161*
Self-compassion	31.58	9.07	28.73	7.54	t(399) = 3.422***
Minority stress	13.51	7.56	17.31	7.51	t(399) = -4.993***
Alcohol use	0.76	1.36	0.45	0.99	t(273) = 2.077*
Internalizing symptoms	7.83	5.81	10.10	5.66	t(252) = -2.231***
Self-harm, yes, %	18.3		34.6		χ^2 (1, 268) = 8.813**

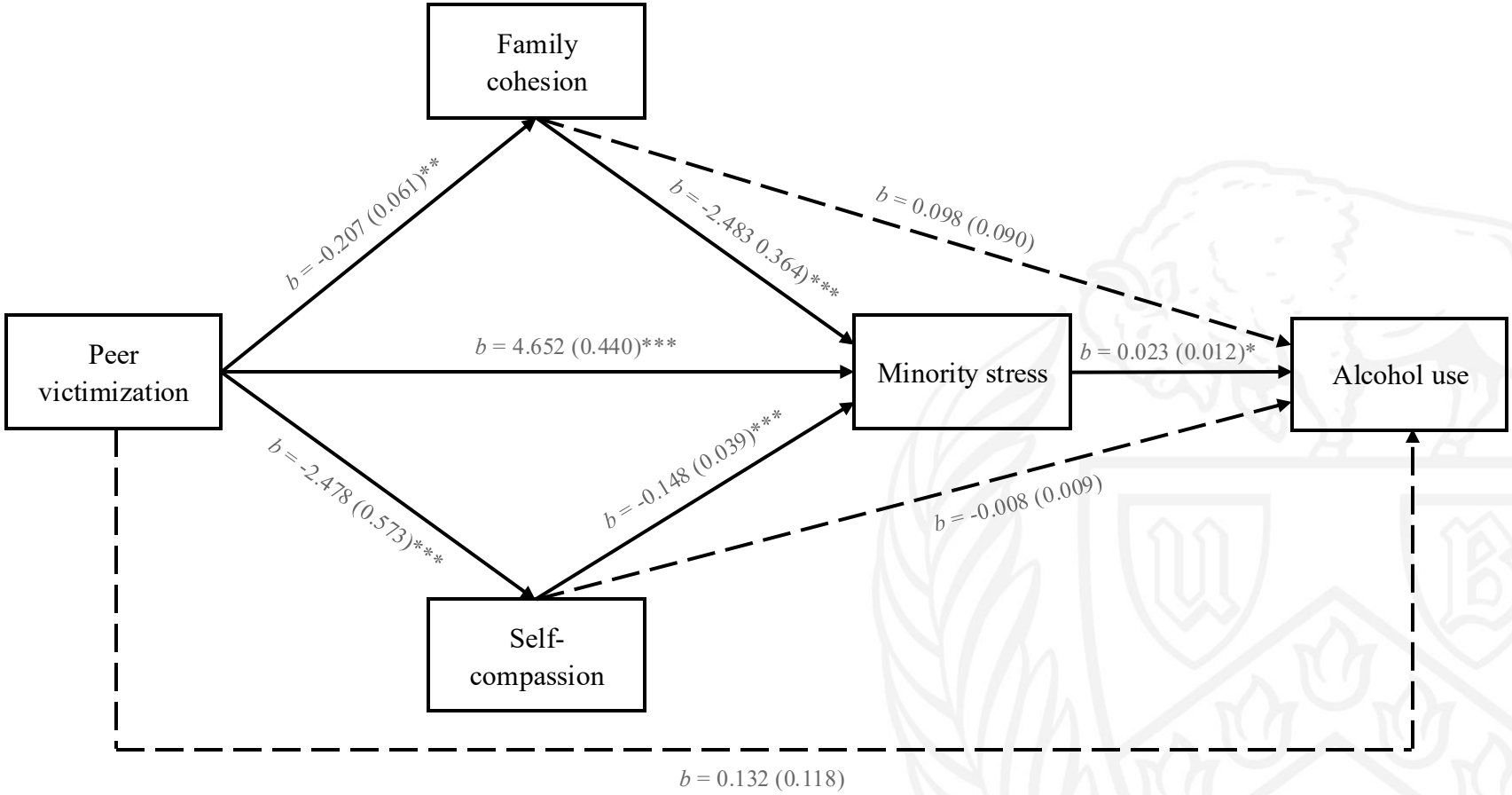
Compared to cisgender youth, TGD youth reported more experience of peer victimization and minority stress, poorer mental health, and lower family cohesion, self-compassion, alcohol use, and more likely to report self-harm

Table 2 *Pearson Correlations among Study Variables*

Note. [a] Self-harm (0 = no; 1 = yes). [b] Gender identity (0 = cisgender; 1 = transgender or gender diverse).

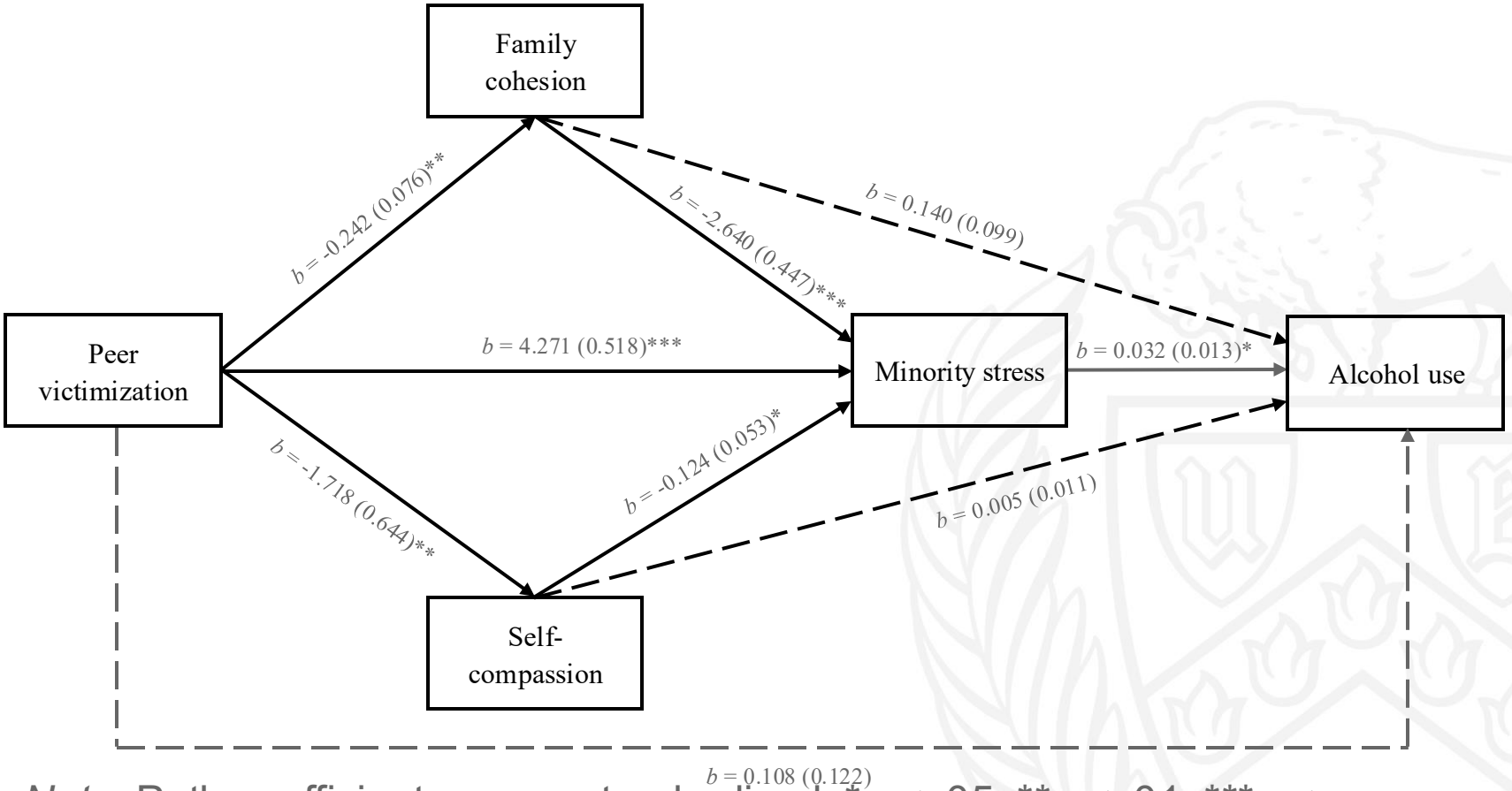
Variable	Correlations							
	1	2	3	4	5	6	7	8
1. Peer victimization	--							
2. Family cohesion	-.168**	--						
3. Self-compassion	-.214**	.259**	--					
4. Minority stress	.513**	-.397**	-.325**	--				
5. Alcohol use	.135*	-0.012	-0.069	.153*	--			
6 Internalizing symptoms	.227**	-.244**	-.482**	.234**	0.009	--		
7. Self-harm [a]	.166**	-.218**	-.324**	.165**	0.104	.358**	--	
8. Gender identity [b]	.156**	-.108*	-.169**	.243**	-.125*	.194**	.181**	--
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

Figure 2. Indirect Effects of Peer Victimization on Alcohol Use (N = 401)



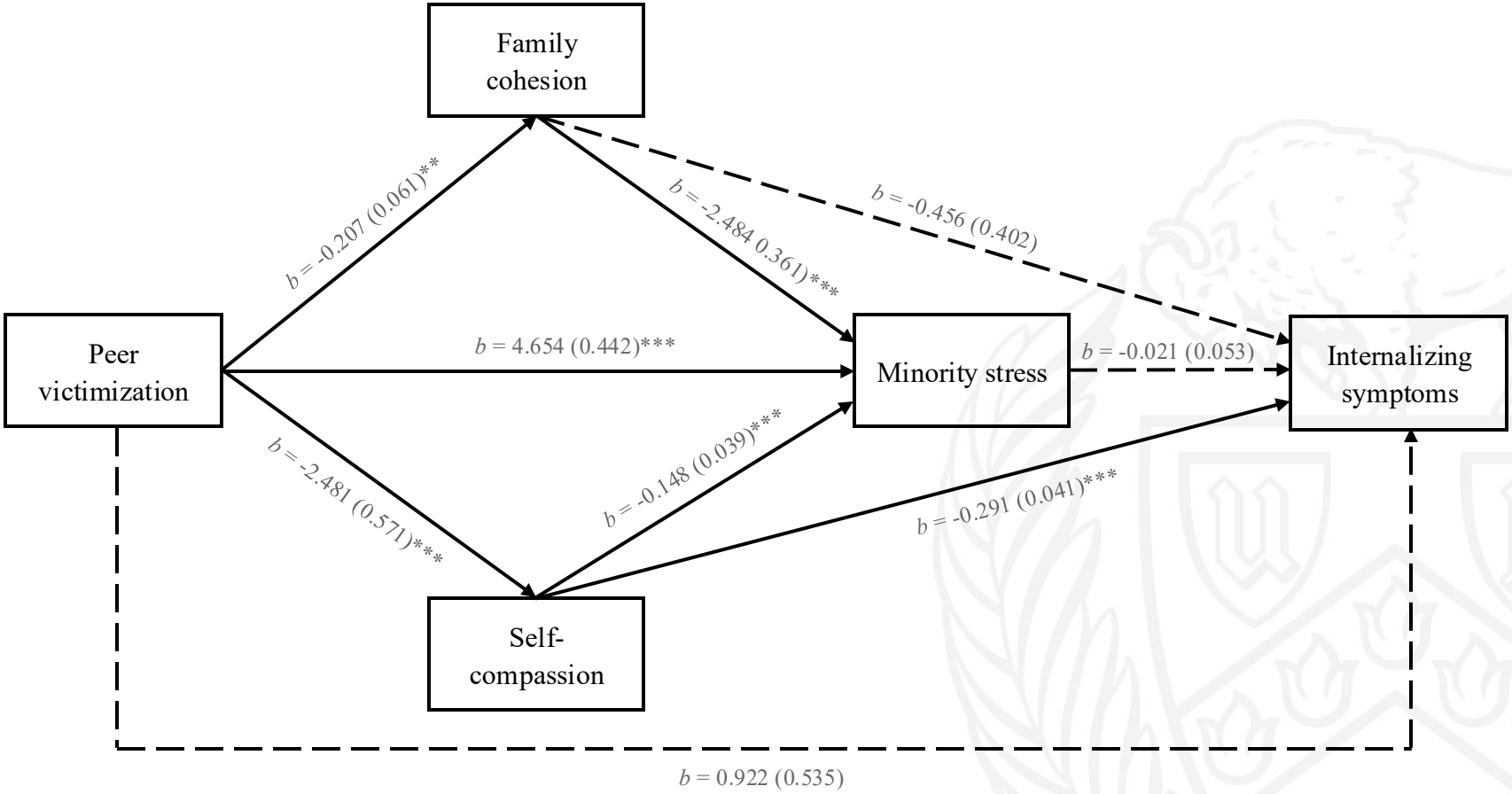
Note. Gender identity was included as a control variable for alcohol use. Path coefficients are unstandardized. *$p < .05$. **$p < .01$. ***$p < .001$.

Figure 3. Indirect Effects of Peer Victimization on Alcohol Use for TGD Youth (N = 231)



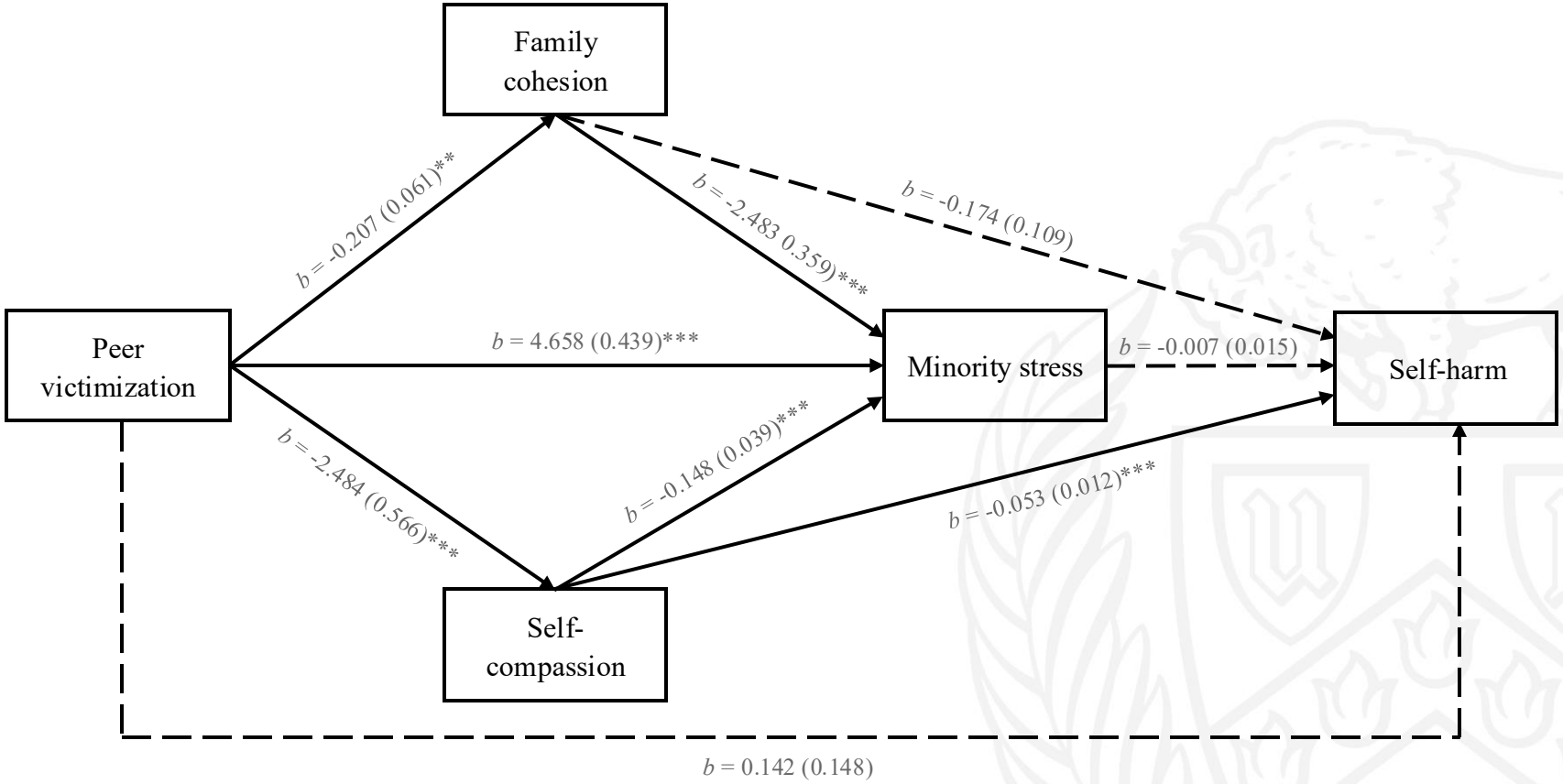
Note. Path coefficients are unstandardized. *$p < .05$. **$p < .01$. ***$p < .001$.

Figure 4. Indirect Effects of Peer Victimization on Mental Health (N = 401)



Note. Gender identity was included as a control variable for alcohol use. Path coefficients are unstandardized. *$p < .05$. **$p < .01$. ***$p < .001$.

Figure 5. Indirect Effects of Peer Victimization on Self-Harm (N = 401)



Note. Gender identity was included as a control variable for self-harm. Path coefficients are unstandardized. *p < .05. **p < .01. ***p < .001.

Summary and Conclusions

- Peer victimization indirectly contributes to alcohol use among LGBTQ+ youth via its effects on minority stress. This is especially true for TGD youth.
- Family cohesion and self-compassion are protective against minority stress, and indirectly against alcohol use, even after accounting for the negative effects of peer victimization.
- Self-compassion is protective against adverse mental health outcomes including internalizing symptoms (i.e., anxiety and depression) and self-harm.
- Self-compassion may be a fruitful target for intervention, especially among LGBTQ+ youth who have experienced peer victimization. Interventions that promote mindfulness and self-kindness may help youth overcome the adverse effects of peer victimization, thereby reducing the downstream adverse effects on mental health (Stutts, 2022).
- Pathways from PV to mental health outcomes are similar for cis gender and TGD youth for all outcomes with the exception of alcohol use. Minority stress predicted alcohol use for TGD but not cis gender youth.

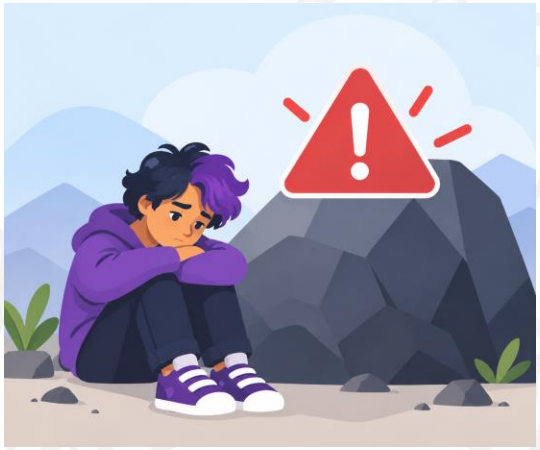
TBH Study

Strengths:

- Prospective analysis of outcomes
- Inclusion of protective factors
- Examined whether there were gender identity differences among LGBTQ+ youth

Limitations:

- Sample largely recruited from Gender & Sexuality Alliances
- Sample comprised predominately of White, female assigned at birth youth
- Gender identity was collapsed into two categories precluding nuanced examination of diverse identities



Future Directions

- Re-examine these prospective relationships using data from additional follow-up surveys (12-, 18-months) when data collection is complete
- Consider the roles of other protective factors including self-regulatory skills, family and schools supports, as well as policies to protect rights and safety of LGBTQ+ youth
- Examine the circumstances under which peer victimization can erode family cohesion and self-compassion from a mixed-methods perspective.
- Develop interventions to promote family cohesion and self compassion, especially following peer victimization.
- Conduct research with more ethnically diverse samples to better understand intersectionality of race and gender.
- Examine the acute impact of bystander intervention/support on affect/mood following peer victimization using daily level reports.

TBH Study Implications

- Understanding the role of peer victimization in the development of health risk behaviors and poor mental health among LGBQT+ youth is a critical first step towards reducing health disparities among this vulnerable and at-risk group.

- Results will inform targeted interventions to address the unique needs of LGBTQ+ youth. Preliminary results suggest emphasis should be placed on identifying factors that can uniquely protect transgender/gender diverse youth against poor mental health outcomes by promoting indvidual and family supports.

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Participants

- Many thanks to the brave and resilient TBH youth who candidly shared their stories and experiences to make this grant possible.

Positionality

Amy Hequembourg (PI), PhD, Professor, University at Buffalo (UB) School of Nursing. Self-described as a heterosexual, White, non-disabled, cisgender woman who also is a passionate LGBTQ+ advocate.

Jennifer Livingston (PI), PhD, Associate Professor, University at Buffalo (UB) School of Nursing. Self-described as a heterosexual, White, non-disabled, cisgender woman who is committed to advancing the health and safety among youth and emerging adults

Questions?

Thank you to the University at Buffalo Alberti Center for Bullying Abuse Prevention!