

STRENGTH, RURALITY, IDENTITY, DIVERSITY, ELEVATE (STRIDE) PROJECT

A Thesis

Presented to

the Faculty of the College of Science

Morehead State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

by

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July 13, 2023

Accepted by the faculty of the College of Science, Morehead State University, in partial fulfillment of the requirements for the Master of Science degree.

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Abstract

Lesbian, gay, bisexual, transgender, queer, and other sexual and gender-minoritized (LGBTQ+) populations show elevated rates of substance use compared to the general population (Medley et al., 2015). LGBTQ+ individuals also experience higher levels of adversity and discrimination, often referred to as minority stress (Meyer, 2003). Previous research has shown significant associations between discrimination events and substance use while exploring possible resilience factors that may buffer that association. The current study utilized ecological momentary assessment to examine associations between perceived discrimination events and substance use, with emotion regulation as a potential buffer against substance use in LGBTQ+ individuals residing in rural areas. The study involved two distinct phases used to evaluate perceived discrimination experiences, substance use, and emotion regulation skills at the baseline and daily diary levels. The findings revealed that LGBTQ+ individuals living in rural areas

experience high rates of perceived discrimination events, with microaggressions and subtle discrimination occurring more frequently than overt discrimination (e.g., violence). Results also supported a significant relation between perceived discrimination events and substance use at the baseline and across the assessment period. Furthermore, results revealed intricate interactions among different facets of emotion regulation when examining their potential role in mitigating substance use within the relationship between discrimination and substance use. Individuals with greater difficulties accepting and modulating their emotional responses showed greater rates of substance use following perceived discrimination events, while individuals with greater emotional clarity and more access to emotion regulation strategies also showed greater rates of substance use following perceived discrimination events. The findings highlight the need for interventions targeting discrimination and promoting healthier coping strategies for LGBTQ+ individuals in rural communities. Further research with larger and more diverse samples is warranted to validate and expand upon these findings.

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Strength, Rurality, Identity, Diversity, Elevate (STRIDE) Project

Introduction

Individuals who identify as lesbian, gay, bisexual, transgender, queer, or other sexual and gender-minoritized individuals (i.e., LGBTQ+¹) are more likely to engage in substance use across their lifespan compared to general population surveillance data (Parent et al., 2019). Such disparities in substance use emerge in adolescence and persist into adulthood (Jun et al., 2019; Luk et al., 2023; Marshal et al., 2008). Lesbian, gay, and bisexual youth (i.e., sexual-minoritized individuals) are nearly three times more likely to report substance use than heterosexual peers (Marshal et al., 2008). Transgender and gender-expansive or diverse youth (i.e., gender-minoritized individuals) report substance use at 2.5 to 4 times the rates of their non-transgender peers (Day et al., 2017). In adulthood, sexual and gender-minoritized individuals show markedly elevated nicotine, marijuana, alcohol, and other illicit drug use (Operario et al., 2015). Furthermore, sexual minority adults are more likely to be diagnosed with a substance use disorder, including co-occurring substance use disorders, than heterosexual adults (Jun et al., 2019). Notably, a national cross-sectional survey revealed that younger generations of sexual minority individuals experience similar substance use disparities as older age groups, suggesting that these trends have persisted for decades and are likely to continue (Schuler et al., 2019).

Disparities in substance use among sexual and gender-minoritized individuals have been predominantly explained by the minority stress model, which posits that sexual and gender minorities experience unique and hostile stressors related to their identities that increase their risk for physical and mental health problems (Meyer, 2003). The minority stress model suggests

¹ Literature uses various terms to refer to this population, including but not limited to, LGBTQ+ and sexual and gender-minoritized individuals. For the purpose of this paper, sexual minoritized individuals refer to those who identify as not heterosexual (e.g., gay, lesbian, bisexual), and gender minoritized individuals refer to those who do not identify with the gender binary (e.g., nonbinary, transgender).

that in addition to stressors that affect all individuals, there are distal and proximal stressors that disproportionately affect sexual and gender-minoritized individuals (Meyer, 2003). Distal stressors occur outside the individual, such as discrimination (e.g., being denied employment) and victimization (e.g., physical assault), while proximal stressors occur internally, such as minority-based shame (e.g., internalized negative thoughts and beliefs about one's group) and expectations of rejections (Meyer, 2003). Minority stress and discrimination in LGBTQ+ individuals have been linked to poor mental health, emotion dysregulation (a transdiagnostic correlate of mental health concerns), and low self-esteem (Castro et al., 2021; Keating & Muller, 2019; Kneale & Bécaries, 2021). Minority stress has also been associated with increased overall substance use, coping-motivated substance use, and substance use-related problems (e.g., withdrawal) among LGBTQ+ populations (Feinstein & Newcomb, 2016; Felner et al., 2020; Parent et al., 2019; Staples et al., 2017). One hypothesized mechanism is that LGBTQ+ individuals may rely more heavily on substance use as a means of coping with discriminatory experiences (e.g., drinking to cope).

Minority stress theory also emphasizes resources, skills, and characteristics in the individual and the community that contribute to resilience and can lessen the negative effects of stress and discrimination (Meyer, 2015; Perrin et al., 2020). Resilience can be defined as one's ability to achieve a positive and acceptable adjustment to adversity (Fletcher & Sarkar, 2013). Studies have demonstrated that individual characteristics such as positive coping skills, self-esteem, optimism, and personality traits that are considered adaptive (e.g., openness to experience) can help to maintain flexibility during adversity (Mason, 2021; Meyer, 2015). Interpersonally, perceived social support, connectedness with the LGBTQ+ community, and family acceptance contribute to resilience (Mason, 2021; Palangi, 2020; Woodford et al., 2015).

At the community level, tangible and intangible resources, community role models, certain norms and values (e.g., acceptance of other LGBTQ+ individuals), policies and legislatures that affirm LGBTQ+ rights and protections, LGBTQ+ organizations, events, or programs, and avenues of direct social support also contribute to resilience (Mason, 2021; Shilo et al., 2014; Watson et al., 2020). Notably, resilience has been found to be a mediating factor in the relationship between experiencing minority stress and drinking (Livingston et al., 2016). However, much of this research has been cross-sectional, thus hampering the scientific understanding of how discrimination and resilience are temporally associated with one another.

Emotion Regulation as a Resilience Factor

Emotion regulation refers to the monitoring, evaluating, tolerating, acceptance, and modifying of emotional reactions (Thompson, 1991). Emotion regulation can influence the type, intensity, time course, and quality of emotions experienced (Peña-Sarrionandia et al., 2015). Research has demonstrated the importance of emotion regulation in physical and mental well-being (Peña-Sarrionandia et al., 2015; Mayer et al., 2016). Indeed, emotion regulation has been identified as a transdiagnostic factor contributing to mental health (Aldao et al., 2016). People who are able to use emotion regulation strategies in adaptive and flexible ways are able to manage stressful situations more effectively (Aldao et al., 2015; Troy & Mauss, 2011). This suggests that emotion regulation skills may contribute to resilience when facing minority stress.

Difficulty with emotion regulation is a key factor of substance use (Schulte et al., 2010; Siegel, 2014). Substances can alter one's current emotional state by increasing positive emotion and/or alleviating negative emotion (Kober, 2014). Past research has primarily focused on the "self-medication hypothesis" whereby individuals may engage in substance use to alleviate, or cope, with negative emotions (Cooper et al., 1995). Experiencing negative emotions (e.g., stress)

has been associated with increased alcohol use (Park et al., 2004; Veilleux et al., 2014). Stress has also been found to be a major motivator for alcohol consumption (Peirce et al., 1994; Rice & Van Arsdale, 2010). Negative emotions and experiences of trauma and stress are also associated with coping with substances (Colder, 200; Goodman et al., 2017), with one study finding experiences of stigma (unrelated to LGBTQ+ identity) were associated with emotion regulation deficits, which were in turn associated with substance use (Wang et al., 2018). While less studied, substance use may serve as a means to upregulate positive emotions (e.g., drinking to enhance). Indeed, a study of men who have sex with men found drinking to enhance mediated the association between internalized stigma and drinking problems (Feinstein & Newcomb, 2016).

Limits of Past Research

Microaggressions and other forms of subtle discrimination (e.g., demeaning jokes) are more common than physical violence and other forms of overt discrimination toward LGBTQ+ individuals (Woodford et al., 2014). Yet, previous research exploring the disparities among discrimination and substance use in sexual and gender-minoritized populations has predominantly explored overt forms of discrimination experienced (Livingston, 2017). Further, much of the assessment of discrimination and related mental health and substance use behaviors rely upon retrospective cross-sectional surveys (Livingston, 2017). This research method frequently ignores the role of subtle forms of discrimination and is less sensitive to detecting the association between discrimination experiences and within-day fluctuations of mental health outcomes, including substance use. Researchers have turned to ecological momentary assessment (EMA) to assess subtle discrimination and daily substance use habits, and to minimize bias due to retrospective recall (Livingston et al., 2017; Yang et al., 2015). When utilizing ecological

momentary assessment to examine within-day associations, research supports both concurrent and prospective relationships between discrimination and substance use (Livingston et al., 2017).

Additionally, research on LGBTQ+ individuals and communities has disproportionately studied coastal regions and large, urban areas in the United States, with comparatively less research conducted with LGBTQ+ participants in the South and rural areas (Stone, 2018).

Rural communities, in particular, have several characteristics that may add additional stressors for LGBTQ+ individuals, such as greater social isolation, fewer resources for information and support for LGBTQ+ individuals, less anonymity, and more conservative attitudes in general, including negative attitudes or misconceptions about LGBTQ+ identities (Poon & Saewyc, 2009). These location discrepancies in research leave the experiences of LGBTQ+ individuals residing in rural areas within the mid-west and Southern United States relatively unknown.

Purpose of Study and Hypotheses

The current study aims to contribute to current research by targeting several of the aforementioned gaps in the literature. The purpose of this study is to examine associations between perceived discrimination events and substance use, as well as emotion regulation as a buffer to substance use among LGBTQ+ individuals living in rural areas. The primary aims of the study are: 1) identify and understand daily stressors, including minority stress, that LGBTQ+ individuals experience within rural settings, 2) identify substance use behaviors within LGBTQ+ individuals, 3) examine emotion regulation as a potential buffer between minority stress and substance use behaviors within LGBTQ+ individuals, and 4) inform research and substance use interventions tailored for LGBTQ+ individuals. The current study will employ both a baseline assessment of perceived discrimination events, facets of emotion regulation, and substance use as well as an ecological momentary assessment of these constructs of interests. Based upon the

extant literature and minority stress model, hypotheses were posited that utilize both baseline and EMA data:

H1) Past year perceived discrimination events, assessed at baseline, would be positively associated with past month substance use;

H2) The association between past year perceived discrimination and substance use would be moderated by emotion regulation, assessed at baseline. Specifically, the association between perceived discrimination experiences and substance use will be strongest for individuals with lower emotion regulation skills relative to those with higher emotion regulation skills;

H3) Daily experiences of perceived discrimination events would be positively associated with same-day substance use;

H4) The association between daily perceived discrimination and same-day substance use would be moderated by emotion regulation, such that the association between perceived discrimination and substance use is strongest for those with lower emotion regulation.

Given the novel nature of this study, we also conducted an exploratory examination regarding rural/urban differences in LGBTQ+ discrimination experiences. We compared the data gathered on LGBTQ+ individuals living in rural areas to empirical papers recruiting LGBTQ+ individuals living in urban areas to get a better understanding of how location affects the frequency of discrimination and substance use behaviors. Given this study does not directly gather data with individuals in urban areas, we cannot conclusively answer this question, however, it is the hope that this exploration may contribute to future research questions.

Method

Participants

All procedures were approved by the Institutional Review Board at Morehead State University (21-07-02). Participants included individuals 1) aged 18 or older; 2) who self-identify as LGBTQ+; 3) reside in rural areas within the Commonwealth of Kentucky; 4) were fluent in English; 5) had access to a smart device. Individuals were excluded from the study if they indicated that they identified as cisgender and exclusively heterosexual or were under 18 years of age. While there is no universal definition of rurality and rural areas are often defined as the absence of urban locales, the US Census Bureau has consistently defined urbanized areas as locations with a population of 50,000 or more (Ratcliffe et al., 2016). Considering this, the current study defined rural areas as any location with a population of less than 50,000 people. Participants were recruited using a combination of print and online advertisements. Printed advertisements were distributed across public spaces in the Morehead and Lexington communities. Online advertisements were placed on social media platforms, such as Facebook and Twitter.

Participants were recruited from 02/2022 to 05/2023. Individuals who were interested in the study first completed a screening survey ($N = 222$) to determine their eligibility for the study (see Data Validity). Forty-five participants met inclusion criteria and completed an orientation session in which their responses were confirmed, informed consent procedures were provided, and they were sent a link to the baseline survey. Thirty-four participants completed the baseline survey, and 31 participants completed both the baseline and EMA components of the study. Additionally, 12 participants completed the optional debriefing survey at the completion of the study.

The study sample consisted of 34 individuals who identified their sexual orientation as gay ($n = 12$, 35.3%), bisexual ($n = 8$, 23.5%), lesbian ($n = 5$, 14.7%), queer ($n = 3$, 8.8%), pansexual ($n = 2$, 5.9%), heterosexual ($n = 2$, 5.9%), asexual ($n = 1$, 2.9%), and demisexual ($n = 1$, 2.9%). The sample included 12 individuals assigned female at birth and 22 individuals assigned male at birth, with four of those individuals who did not identify with the gender binary including nonbinary ($n = 3$, 8.8%), bigender ($n = 1$, 2.9%), and transmasculine ($n = 1$, 2.9%). Participant ages fell between 22 and 50 years with a majority of participants between the ages of 22 of 30 ($n = 20$, 58.8%). The sample included White ($n = 19$, 55.9%), Black individuals ($n = 14$, 41.2%), and one multiracial individual. Three participants (8.8%) indicated their ethnicity was Hispanic or Latine and one participant indicated their ethnicity was Middle Eastern or Northern African. Information was also collected regarding additional participant demographics, including education, student status, employment status, household income, and relationship status. Complete participant demographics can be found in Table 1.

Procedures

This study involved two distinct phases and was administered entirely online through email and Survey Monkey, an online survey platform. Survey Monkey is a secure, web-based application that uses 128-bit encryption for managing online surveys and databases. Interested individuals first completed a screening survey (Appendix A) to determine their eligibility to participate in the study. After confirming participant inclusion criteria, eligible participants then completed the orientation session and informed consent procedures. During the orientation session, participants were presented with information regarding the procedures involved in the study and a discussion of participant rights and risks. Orientation also included clarification of classes of drugs and benchmarks for standard drinks (e.g., one 12 oz beer/wine cooler, a 5 oz

glass of wine, one cocktail, or one shot of hard liquor) referred to in the EMA prompts.

Participants who chose to continue with the study following orientation then began the first phase of the study, a baseline survey, to which they were emailed a survey link and instructed to complete it within a week of the orientation session. The first phase of the study aimed to gather baseline information regarding the individual's mental health, past substance use behaviors, life experiences, and emotional knowledge and skills. Participants completed the baseline survey (Appendix B) which consisted of a demographic questionnaire and multiple measures, including a modified version of the Daily Heterosexual Experiences Questionnaire (DHEQ), the Difficulties in Emotion Regulation Scale (DERS), the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST), and the Daily Drinking Questionnaire (DDQ). The baseline survey took participants approximately 30-45 minutes to complete.

After completing the baseline survey, participants began phase two, the EMA portion, of the study. The EMA surveys (Appendix C) assessed within-day experiences of perceived discrimination, subsequent emotions and use of emotion regulation skills, and substance use. EMA surveys were distributed via email twice per day, once in the morning and once in the evening, for ten consecutive days. These daily surveys included modified versions of the Everyday Discrimination Scale (EDS), the State Difficulties in Emotion Regulation Scale (S-DERS), and ASSIST. Of note, participants who did not report substance use received questions assessing their substance use craving and reasons for not using substances to avoid participants skipping questions to shorten the survey. Each daily survey took approximately 10 minutes for participants to complete. At the completion of phase two, participants were administered an optional debriefing survey (Appendix D) to assess their experience with the study and any risks

they may have encountered. Participants were also given the opportunity to request additional resources regarding substance use, coping with discrimination, and LGBTQ+ resources.

Participants were compensated for completing surveys within the study. Participants who completed the baseline survey earned \$10 in the form of an electronic Amazon gift card. Additionally, participants who completed at least 80% (16 out of 20) of the daily surveys earned a chance to win one of three \$75 electronic Amazon gift cards. The electronic gift cards were distributed to participants via email after the completion of the study.

Demographic Measures

Demographic information was gathered during the screening survey and the baseline survey. The demographic questionnaire (Appendix A) was utilized to gather background information of the participants regarding sexual orientation, sex assigned at birth, gender identity, sexual identity, location of residence, age, race, ethnicity, education, student status, employment status, household income, and relationship status. Participants chose between 15 different gender identity options, with a write-in option. Participants chose between 8 different sexual identity options, with a write-in option. The demographic questionnaire was created by the study PI and faculty advisor.

Baseline Measures (Phase 1)

Discrimination. Participants received a modified version of the Daily Heterosexist Experiences Questionnaire (DHEQ) in the baseline survey to assess for 50 different experiences of LGBTQ+ minority stress (Balsam et al., 2013). The DHEQ asks individuals to rate whether an experience occurred in the past 12 months and to rate the amount of subjective distress associated with this experience (0 = *Did not happen to me* to 5 = *It happened and it bothered me extremely*). The measure was modified from asking about perceived discrimination experiences

related to one's sexual identity to ask about perceived discrimination related to one's identity as LGBTQ+. The DHEQ assesses experiences across the following domains: vigilance (e.g., "Watching what you say and do around heterosexual people"), harassment and discrimination (e.g., "Being verbally harassed by strangers because you are LGBTQ+"), gender expression (e.g., "Being harassed in bathrooms because of your gender expression"), parenting (e.g., "Your children being rejected by other children because you are LGBTQ+"), victimization (e.g., "Being punched, hit, kicked, or beaten because you are LGBTQ+"), family of origin (e.g., "Your family avoiding talking about your LGBTQ+ identity"), vicarious trauma (e.g., "Hearing about hate crimes (e.g., vandalism, physical or sexual assault) that happened"), isolation (e.g., "Feeling like you don't fit in with other LGBTQ+ individuals"), and HIV/AIDS (e.g., "Other people assuming that you are HIV positive because you are LGBTQ+"). This measure has demonstrated good psychometric properties including concurrent validity and construct validity (Balsam et al., 2013), and internal consistency with the current sample was excellent ($\alpha = .93$). Participant responses to the DHEQ were used to compute the discrimination experience variable used in the analyses. A sum total of the various types of perceived discrimination the individual experienced over the last 12 months was calculated as the baseline discrimination variable.

Substance Use. Participants received the Alcohol, Smoking, and Substance Involvement Screening Tests (ASSIST) in the baseline survey to assess lifetime and last three-month use of various substances as well as symptoms associated with substance use disorders (World Health Organization, 2002). The ASSIST is an 8-item questionnaire that assesses whether (yes/no) an individual has used ten substances (tobacco, alcohol, cannabis, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, and opioids) in their lifetime and the past three months. The ASSIST qualifies that reported substance use does not include substances

prescribed by a physician and taken as prescribed. This measure has shown good psychometric properties including concurrent validity, construct validity, discriminative validity, and test-retest reliability, and had good internal consistency within the sample ($\alpha = .83$; Humeniuk et al., 2008; World Health Organization, 2002).

Participants also received the Daily Drinking Questionnaire (DDQ) in the baseline survey to measure the quantity of alcohol use (Collins et al., 1985). The DDQ asks participants to estimate the typical number of drinks consumed and hours spent drinking on each day of the week over the past 6 weeks. This measure has been shown to exhibit adequate test-retest reliability and criterion validity (Lac, Handren, & Crano, 2016; Neighbors et al., 2006).

Four substance use outcomes were computed from participant responses to the ASSIST and DDQ, related to the frequency of alcohol, tobacco, and illicit drug use and estimated drinks in a typical week. In the analyses, substance use frequency variables represent the total number of times the individual endorsed substance use over the last three months. Given low base rates of illicit drug use, cannabis and other illegal drug use were combined into a single variable ($\alpha = .81$), while alcohol and tobacco use were calculated separately. An additional alcohol use variable was calculated from the DDQ using participant estimates of the number of standard alcoholic drinks consumed in a typical week over the past six weeks ($\alpha = .89$).

Emotion Regulation. Participants were administered the Difficulties in Emotion Regulation Scale (DERS) in the baseline survey (Gratz & Roemer, 2004). The DERS is a 36-item self-report that measures difficulties within the following six facets of emotion regulation: nonacceptance of emotional responses, impulse control difficulties, limited access to emotion regulation strategies, difficulties engaging in goal-oriented behavior, lack of emotional clarity, and lack of emotional awareness. Participants indicate the extent to which statements describing

emotion regulation are true for them (1 = *Always or almost always* to 5 = *Never to almost never*). Scores were calculated for each of the six subscales, as well as an overall total measure score. Notably, higher scores on the DERS represent greater difficulties with emotion regulation. This measure has robust bifactor latent structure (Hallion et al., 2018), and the total DERS demonstrate excellent internal consistency with this sample ($\alpha=.93$). Mean subscale scores for all facets of the DERS were calculated, with Cronbach's alphas ranging from .71 (Lack of Emotional Awareness scale) to .86 (Nonacceptance of Emotional Responses scale), suggesting acceptable to good internal consistency.

EMA Measures (Phase 2)

Discrimination. Participants received a modified version of the 17-item Everyday Discrimination Scale (EDS) in the EMA surveys to assess daily perceived discrimination experiences ($\alpha = .90$; Williams et al., 1997). The PI and faculty advisor created additional items for the EDS based on current literature surrounding a need for more assessments of covert discrimination. Participants indicated whether (yes/no) they had experienced any of the included discrimination experiences since the last survey prompt and had an opportunity to write in any unlisted discrimination experiences. Examples of items include explicit experiences of harassment (e.g., "You were threatened or harassed") as well as more subtle interpersonal discrimination experiences (e.g., "You were treated with less respect than other people"). A total count of the various types of perceived discrimination experienced over the ten consecutive days of the daily diaries was calculated as the EMA discrimination variable.

Substance Use. Participants received a shortened, modified version of the ASSIST throughout the EMA surveys. These items inquired as to whether (yes/no) participants had consumed any substances since the last prompt, including tobacco, cannabis, cocaine,

amphetamine-type stimulants, inhalants, sedatives, hallucinogens, and opioids. Participants who endorsed substance use since the last prompt were then asked to estimate the quantity of the substance they consumed. The EMA substance use variables were calculated using the estimated substance use frequency and estimated drinks consumed over the ten consecutive days ($\alpha = .89$).

Emotion Regulation. A modified, shortened version of the State Difficulties in Emotion Regulation Scale (S-DERS) (Lavender et al., 2017) was used to assess momentary emotion regulation in the EMA surveys. The S-DERS assesses momentary emotion regulation among four facets: nonacceptance of emotional responses, lack of emotional awareness, difficulties with modulating emotional responses, and lack of emotional clarity. Furthermore, the four scales of the S-DERS have been found to closely overlap with the six scales of the DERS (Lavender et al., 2017). More specifically, the S-DERS scales measuring nonacceptance of emotional responses, lack of emotional awareness, and lack of emotional clarity are directly comparable to the similarly titled scales of the DERS (Lavender et al., 2017). The S-DERS scale that assesses difficulties modulating emotional responses overlaps with the DERS scales that measure limited access to emotion regulation strategies, difficulties with impulse control, and difficulties with goal-directed behaviors (Lavender et al., 2017). This modified, shortened version (10 items) was utilized in a prior study (Davis et al., 2020) and was chosen to offset participant burden. Internal reliability between the two studies was comparable. Internal consistency across subscales within the original study with full items ranged from .65 to .86 and the internal consistency across subscales in the manuscript by Davis and colleagues ranged from .68 to .85. Mean scores across the ten days of EMA surveys were computed for each of the four subscales [Nonacceptance of Emotional Responses ($\alpha = .71$), Lack of Emotional Awareness ($\alpha = .86$), Lack of Emotional Clarity ($\alpha = .65$), and Difficulty Modulating Emotional Responses $\alpha = .82$], as well as a total

measure score ($\alpha = .76$). In the current sample, the internal consistency ranged from .65 to .86, which mirrored the internal consistency of prior studies (Davis et al., 2020; Lavender et al., 2017).

Data Analysis Plan

Data Validity. Due to the online nature of the study and the presence of fraudulent and suspicious participation in online surveys (which has increased since the COVID-19 pandemic; Lawlor et al., 2021), interested individuals' responses were screened for consistency and their IP addresses were examined to confirm their reported location. Individuals' responses to the screening and orientation surveys were compared to ensure consistent responses across repeated items. Additionally, participants were asked to report their current location of residence in multiple forms (county, zip code) which were then compared to their IP addresses to confirm their location. Furthermore, responses to the baseline and EMA surveys were examined for consistency and meaningful responses.

Missing Data. Following exclusion procedures, participants ($N = 45$) fully completed an orientation session in which their previous responses and identity were confirmed. Only 38 participants completed the baseline survey following the orientation session. Four additional participants were removed from the study due to incomplete or inconsistent responses in the baseline survey. Thirty-four participants correctly completed phase one of the study and 31 participants completed both phases of the study. Of those who completed phase two, 26 participants completed at least 80% of the EMA surveys. Participants completed an average of 17 out of 20 total EMA surveys. Additionally, participants occasionally failed to complete all items of the EMA surveys.

Notably, due to an error in survey administration, only participants who endorsed experiencing a discrimination event received the emotion regulation measures in the EMA surveys. This led to missing data among the daily emotion regulation measures, with only 21 participants completing the daily emotion regulation measures.

Data Analyses. Data analyses were completed using SPSS. Due to the small sample size, all 34 final participants were included in the analyses even if they did not complete at least 80% of the EMA surveys. Descriptive statistics were calculated for all key variables. The threshold of statistical significance was set at .05 for all results. Although alpha correction is typically used to protect against Type I error when conducting multiple comparisons, alpha correction was not used with the current study due to the small sample size. Small sample sizes are often associated with a greater likelihood of Type II error, rather than Type I error (Nayak, 2010).

To address Hypotheses 1 and 3, linear regressions were conducted to examine the relation between perceived discrimination events and substance use at the baseline and daily levels. To test Hypotheses 2 and 4, moderation analyses were conducted to examine the extent to which the relation between perceived discrimination events and substance use varied by emotion regulation with separate models for baseline and EMA data. To test Hypothesis 2, stepwise regression was used such that main effects (discrimination, emotion regulation) were entered into the first step, and main effects and the interaction term were entered into the second step. After models were run, non-significant interactions were trimmed. To test Hypothesis 4, stepwise regression was again employed, with perceived discrimination, emotion regulation, and within-person variability in emotion regulation entered as main effects in the first and second steps, and the interaction between perceived discrimination and emotion regulation entered in the second step. Significant interactions were visualized and probed at the mean, at one standard deviation above and below

the mean of emotion regulation using covariance matrices produced in SPSS. Of note, emotion regulation is a multi-faceted construct, and while there is utility in examining it as a single construct, there is also value in examining the different facets of emotion regulation as individual predictors and moderators (Gratz & Roemer, 2004). Thus, analyses to evaluate Hypotheses 2 and 4 with the full DERS and S-DERS scales were computed, followed by exploratory analyses with the different facets of emotion regulation as moderators.

To account for missing data in daily emotion regulation across the EMA surveys, additional analyses were done to compare the individual's baseline emotion regulation skills to their daily experiences of perceived discrimination and substance use. Stepwise regression was again employed, with daily perceived discrimination, baseline emotion regulation, and daily emotion regulation entered as main effects in the first and second step, and the interaction between perceived discrimination and emotion regulation entered in the second step. Models were again trimmed to only include significant interactions. Significant interactions were also visualized and probed at the mean as described above.

Baseline Results

Descriptives & Frequencies. Table 2 shows descriptive statistics for the key variables of the overall sample in the baseline data. Notably, participants reported experiencing an average of 26.56 ($SD = 10.96$) different types of perceived discrimination over the last 12 months. Of those perceived discrimination experiences, participants reported experiencing nearly two times as many subtle forms of discrimination ($M = 17.66$, $SD = 5.77$) than overt forms of discrimination ($M = 8.94$, $SD = 5.87$). The sample produced a minimum of ten perceived discrimination experiences over the last year. Some participants reported not engaging in any alcohol ($n = 4$, 11.8%), tobacco ($n = 19$, 55.9%), or cannabis and other illegal drugs ($n = 18$, 52.9%) over the

last three months. However, 52.9% of participants reported consuming alcohol at least once per week over the last three months and 29.4% of participants reported using tobacco at least once per week over the last three months. Of those who endorsed alcohol use, 50% of participants indicated they consumed at least six standard drinks within a typical week. While endorsement of cannabis and other illegal drugs was less common in the sample, six participants (17.6%) reported engaging in daily or almost daily cannabis use.

Hypothesis 1. Table 3 contains the full results from the baseline linear regression analyses. Results supported Hypothesis 1. Results of the linear regression analysis of baseline data revealed a significant, positive relation between perceived discrimination experiences and substance use frequency. Alcohol use frequency showed a significant positive association with discrimination experiences ($\beta = .524, p = .001$), as well as estimated drinks in a typical week ($\beta = .520, p = .002$). Perceived discrimination experiences accounted for 27.4% of the variance in alcohol use frequency and 24.7% of the variance in estimated drinks in a typical week. Tobacco ($\beta = .381, p = .026$) and cannabis and other illegal drug use frequency ($\beta = .425, p = 0.012$) also showed a significant, positive association with perceived discrimination experiences. Perceived discrimination experiences accounted for 14.5% of the variance in tobacco use frequency and 18.1% of cannabis and other illegal drug use frequency.

Hypothesis 2. Separate models were utilized to evaluate the effects of emotion regulation at the DERS total score and subscale levels for each substance use outcome variable. Hypothesis 2 was partially supported. Table 4 contains the outputs for models using DERS total scores, while Table 5 contains the outputs for the models using the DERS subscales. At the total score level, the results did not reach the conventional threshold for statistical significance.

The moderation analyses at the subscale level revealed five significant interaction effects between facets of emotion regulation and perceived discrimination experiences and substance use. Results revealed that the DERS Limited Access to ER Strategies scale significantly moderated the relationship between alcohol use frequency and perceived discrimination events ($\beta = -.846, p = .009$). After trimming the model to only include significant interactions, the DERS Limited Access to ER Strategies scale remained significant ($\beta = -.399, p = .020$). Contrary to hypotheses, for individuals with more access to ER strategies, perceived discrimination was positively associated with frequency of alcohol use ($t(31) = 5.763, p < .001$). The association between perceived discrimination and alcohol use frequency was not significant for those with less access to ER strategies. The DERS Difficulties with Goal-Directed Behaviors scale moderated the association between perceived discrimination and tobacco use frequency in the model ($\beta = .752, p = .004$). However, after trimming the model to only include significant interactions the DERS Difficulties with Goal-Directed Behaviors scale did not remain significant ($\beta = .153, p = .433$). Similarly, the DERS Difficulties with Goal-Directed Behaviors scale moderated the association between perceived discrimination and cannabis and other illegal drug use in the model ($\beta = .608, p = .031$). However, after trimming the model to only include significant interactions, the DERS Difficulties with Goal-Directed Behaviors scale did not remain significant ($\beta = .140, p = .449$). Results revealed that the DERS Lack of Emotional Awareness scale ($\beta = -.491, p = .014$) and the DERS Difficulties with Goal-Directed Behaviors scale ($\beta = .715, p = .003$) moderated the association between estimated drinks in a typical week and perceived discrimination events. When trimming the model to only include significant interactions the DERS Difficulties with Goal-Directed Behaviors scale did not remain significant ($\beta = .320, p = .116$), while the Lack of Emotional Awareness scale did remain significant ($\beta = -$

.549, $p = .010$). Contrary to hypotheses, for those with more emotional awareness, perceived discrimination was positively associated with the number of drinks in a typical week ($t(31) = 3.477$, $p = .002$), whereas the association between perceived discrimination and estimated drinks in a typical week was not significant for those with less emotional awareness. Graphs of significant interactions following model trimming can be found in Figures 1 and 2.

EMA Results

Descriptives & Frequencies. Table 6 shows the descriptive statistics for all hypothesized variables from the EMA data. Participants reported experiencing an average of 20.94 ($SD = 31.07$) various types of perceived discrimination events across the ten consecutive days of daily surveys. Participants endorsed experiencing at least one perceived discrimination event at an average of 2.56 days out of the ten total days. Notably, 12 participants (35.3%) indicated that they did not experience any perceived discrimination events over the course of the ten days. Additionally, there was one statistical outlier who reported more perceived discrimination events than any other participant. This participant indicated they had experienced 128 perceived discrimination events across the ten days which was 39 more than the next highest participant. However, we did not remove this outlier from the analyses due to the small sample size. Moreover, it is possible that this participant may have truly experienced discrimination at a higher rate than other participants suggesting that their reported experience is still relevant to the study. Regarding substance use, nine participants (26.5%) indicated that they did not drink any alcohol, 26 participants (76.5%) did not use any tobacco, and 17 participants (50%) did not use any cannabis or other illegal drugs over the course of the study. Participants endorsed using any substances, including alcohol, at an average of 4.71 days out of the ten total days.

Hypothesis 3. Table 7 contains the full results from the EMA linear regression analyses. Hypothesis 3 was partially supported, such that perceived discrimination across the week was positively associated with alcohol frequency, number of drinks per week, and tobacco use. Results of the linear regression analysis of baseline data showed a significant positive relationship with alcohol use frequency ($\beta = .608, p < .001$), as well as estimated drinks across the ten days ($\beta = .573, p = .005$). Perceived discrimination experiences accounted for 37% of the variance in alcohol use frequency and 32.8% of the variance in estimated drinks. Perceived discrimination experiences were significantly, positively associated with tobacco use frequency ($\beta = .381, p < .001$), with the model accounting for 32.6% of the variance in tobacco use frequency. The relationship between perceived discrimination experiences and cannabis and other illegal drug use frequency was not significant across the assessment period.

Hypothesis 4. Separate models were run to evaluate the effects of emotion regulations at the S-DERS total score and subscale levels for each substance use outcome. Table 8 contains the full results for models using the S-DERS total scores, while Table 9 contains the outputs for the models using the S-DERS subscales. At the total score level, results revealed that emotion regulation significantly moderated the relationship between perceived discrimination events and tobacco use frequency ($\beta = -.556, p < .001$). The regression model accounted for 79.8% of the variance in tobacco use frequency. Although, contrary to hypotheses, for individuals with better emotion regulation skills, perceived discrimination was positively associated with frequency of tobacco use ($t(31) = 9.633, p < .001$). The association between perceived discrimination and tobacco use frequency was not significant for those with lower emotion regulation skills. A visualization of this interaction can be found in Figure 3. Other models using S-DERS total score

and alcohol use frequency, cannabis and other illegal drug frequency, and drinks consumed across the EMA surveys were not significant.

At the subscale level, the S-DERS Lack of Emotional Clarity scale significantly moderated the relationship between alcohol use frequency and perceived discrimination ($\beta = -2.039, p = .007$). However, after trimming the model to only include significant interactions, the S-DERS Lack of Emotional Clarity scale did not remain significant ($\beta = -.413, p = .069$). When examining the model using estimated drinks across the ten days of EMA surveys, three significant interactions emerged. The S-DERS Nonacceptance of Emotional Responses scale ($\beta = 1.126, p = .038$), Difficulties Modulating Emotional Responses scale ($\beta = 2.447, p = .014$), and Lack of Emotional Clarity scale ($\beta = -3.003, p = <.001$) significantly moderated the relationship between perceived discrimination events and drinks consumed across the EMA surveys. After trimming the model, each interaction remained significant (Nonacceptance: $\beta = 1.201, p = .024$; Difficulties with Modulation: $\beta = 2.056, p = .010$; and Lack of Clarity: $\beta = -2.797, p = <.001$). Consistent with Hypothesis 4, for those with greater nonacceptance of emotional responses, perceived discrimination was positively associated with drinks consumed across the EMA surveys ($t(31) = 5.868, p = <.001$). Also consistent with Hypothesis 4, for those with greater difficulties with modulating emotional responses, perceived discrimination was positively associated with drinks consumed across the EMA surveys ($t(31) = 4.945, p = <.001$). The association between perceived discrimination and number of drinks was not significant for those with lower nonacceptance of emotional responses and less difficulties with modulating emotional responses. However, contrary to hypotheses, for those with more emotional clarity, perceived discrimination was positively associated with drinks consumed ($t(31) = 8.289, p = <.001$). Those with less emotional clarity, perceived discrimination was negatively associated with

drinks consumed ($t(31) = -5.120, p = <.001$). All other models were insignificant in the sample. Graphs of significant interactions following model trimming can be found in Figures 4, 5, and 6.

Baseline ER & Daily Discrimination & Substance Use

To account for missing data among the emotion regulation measures of the EMA surveys, additional analyses were conducted to examine the interaction of perceived discrimination across the daily diary period and baseline emotion regulation skills on substance use across the daily diary period. Analyses were conducted similarly to above, with separate models for DERS total scores and subscales. Table 10 contains the full results for models using DERS total scores, while Table 11 contains the results for models using the DERS subscales. At the total score level, the results did not reach the threshold for statistical significance.

At the subscale level, results revealed that the DERS Limited Access to ER Strategies scale significantly moderated the relationship between tobacco use frequency and perceived discrimination events ($\beta = -1.214, p = .003$). After trimming the model to only include significant interactions, the DERS Limited Access to ER Strategies remained significant ($\beta = -.853, p = <.001$). Contrary to hypotheses, for those with more access to ER strategies, discrimination was positively associated with tobacco use frequency ($t(31) = 4.524, p = <.001$), while for those with less access to ER strategies, perceived discrimination was negatively associated with tobacco use frequency ($t(31) = -5.604, p = <.001$). A visualization of this interaction can be found in Figure 7. Additionally, results revealed that the DERS Nonacceptance of Emotional Responses scale ($\beta = -.778, p = .009$) and Difficulties with Goal-Directed Behaviors scale ($\beta = 1.807, p = .020$) significantly moderated the relationship between cannabis and other illegal drug use and perceived discrimination events. However, after

trimming the model to only include significant interactions, these interactions did not remain significant.

Limitations

The current results must be contextualized within the limitations of the present study. Thus, before discussing these results, we must recognize the limitations of the study. Despite continued recruitment efforts for over one year, the study was limited to a small sample size ($N = 34$), which limits the statistical power of the study. With limited power, the statistical analyses may have been unable to detect small or moderate effects, leading to overlooked effects (i.e., Type II error; Nayak, 2010). Furthermore, small sample sizes can lead to sampling bias that could potentially skew results and limit the external validity of the findings (Nayak, 2010). Consequently, the results must be considered preliminary, exploratory and likely do not accurately represent the larger population for rural sexual and gender-minoritized adults. Caution should be exercised when interpreting the findings as well as extrapolating the findings to other contexts or populations. Future research examining these associations with larger samples is necessary to validate and extend these findings.

The present study is also limited due to missing responses among the EMA surveys. Despite efforts to minimize missing data, participants often failed to fully complete the EMA surveys. These missing responses in the EMA surveys may introduce nonresponse bias into the study that can affect the reliability and validity of the results. Furthermore, due to errors in survey administration, participants often did not receive the emotion regulation measures through the EMA surveys. These missing responses further reduced the statistical power of the study. Future studies should aim to enhance participant compliance and engagement while exploring alternative strategies to handle missing data effectively.

Research with populations who are diverse across intersecting social identities is crucial. Notably, 14 participants (approximately 41% of the sample) self-identified as Black or African American, however, the majority of the sample was white, assigned male at birth, and the majority identified within the gender binary. Their experiences of discrimination and substance use may be different than those who do not possess these identities. The study also primarily captured experiences of perceived discrimination related to gender and/or sexual minoritized identities, which does not capture the intersectional nature of oppression and discrimination. Research with larger samples and comprised of diversity across identities is crucial. It is also important to note that while this study examined substance use as an outcome, the sample was not recruited for substance use. Results may not apply to individuals who regularly use substances and/or would meet the criteria for a substance use disorder. Considering these limitations, the following discussion and implications must be treated with speculation.

Discussion

The overall aim of the present study was to examine the associations between perceived discrimination, emotion regulation, and substance use among LGBTQ+ adults in rural areas. The first aim of the present study was to identify and understand the daily stressors that LGBTQ+ individuals experience within rural settings. Results revealed that LGBTQ+ individuals residing in rural settings experienced perceived discrimination events at an elevated rate. Furthermore, results revealed that microaggressions and more subtle discrimination events occur more frequently than overt discrimination events, supporting a need for future research to be sensitive to the effect of these experiences.

When comparing our findings to other studies exploring discrimination and substance use in LGBTQ+ populations in urban areas, preliminary comparisons suggest that individuals living

in rural areas may experience more frequent discrimination experiences than those in urban areas (Livingston et al., 2017; Mereish et al., 2021). One similar study that utilized EMA procedures to explore the association between discrimination events and within-day substance use in an LGBTQ+ sample residing in an urban area ($N = 50$) reported a total of 93 discrimination experiences across 63 prompts, and 210 other mistreatment experiences across 137 prompts (Livingston et al., 2017). Meanwhile, the current sample ($N = 34$) reported a total of 691 perceived discrimination events across 551 completed prompts. Furthermore, another similar study that utilized EMA procedures to explore the relationship between minority stress and positive and negative affect among sexual minority adolescents residing in a Mid-Atlantic metropolitan city ($N = 94$) reported an average of 16.96 experiences of minority stress reported across their 21-day monitoring period (Mereish et al., 2021). The current sample reported an average of 20.94 perceived discrimination experiences across the ten-day monitoring period. Although these disparities in frequencies of discrimination may be explained by other factors, such as differences in measurement of discrimination events and age of participants, it is possible that rural LGBTQ+ individuals may experience discrimination at higher rates than those residing in urban areas due to several characteristics of rural communities that may present additional stressors, such as greater social isolation, fewer resources for information and support for LGBTQ+ individuals, less anonymity, and more conservative attitudes in general (Poon & Saewyc, 2009). While the current study cannot answer this question conclusively, these results support the need for future research to explore the differences in LGBTQ+ experiences based on location.

The second aim of this study was to identify substance use behaviors within LGBTQ+ individuals in relation to perceived discrimination events. At the baseline level, results

consistently supported Hypothesis 1 and showed a significant positive association between perceived discrimination experiences and alcohol use frequency, tobacco use frequency, cannabis and other illegal drug use frequency, and drinks consumed in a typical week. Across the daily diary assessment period, results partially supported Hypothesis 3, revealing a significant positive association between perceived discrimination and alcohol use frequency, tobacco use frequency, and drinks consumed across the ten days of EMA surveys. The current findings are consistent with previous research showing similar associations and lend support to the minority stress model as a conceptual model for understanding LGBTQ+ patterns of substance use.

The third aim of the study was to examine emotion regulation as a potential buffer between minority stress and substance use behaviors within LGBTQ+ individuals. While Hypotheses 2 and 4 were partially supported, there were some unexpected findings suggesting a complex interplay between facets of emotion regulation and the relationship between discrimination and substance use. Unexpectedly, some aspects of emotion regulation appeared iatrogenic; at the baseline level, results revealed a significant positive association between perceived discrimination events and alcohol use frequency and drinks consumed in a typical week for participants with more adaptive emotional awareness. Similar trends emerged across the daily diary period, with individuals with greater emotional clarity showing a significant positive association between perceived discrimination and drinks consumed across the ten days relative to those with less emotional clarity. Because emotional awareness and clarity refer to the ability to recognize and understand one's own emotions, it is plausible that individuals who are more aware of their emotions may be more attuned to the emotional distress caused by discrimination. As a result, they may consume alcohol as a means to regulate or cope with the emotional distress triggered by discrimination events. In other words, the findings suggest that a

deeper understanding and awareness of one's emotions may not serve as a protective factor in the face of discrimination and instead may prompt them to rely on substances as a coping mechanism. If such findings are replicated in other samples, it may suggest that one needs additional skills to cope with the increased awareness and clarity of emotional responses.

Furthermore, the results suggested inconsistent findings regarding the role of emotion regulation strategies in the association between perceived discrimination and substance use. At the baseline level, perceived discrimination experiences were associated with alcohol use for individuals with more access to emotion regulation strategies relative to those with less access. This suggests that individuals who experience discrimination events may resort to using alcohol as a coping mechanism, even when they possess a higher repertoire of emotion regulation strategies and emotion regulation strategies alone may not always be sufficient to counteract the negative effects of discrimination on alcohol use behaviors. However, across the assessment period, the ability to modulate emotional responses (the corresponding subscale to access to emotion regulation strategies within the state DERS) buffered the association between discrimination and alcohol use. Taken together, these findings suggest that although an individual may have greater access to emotion regulation strategies, they may not be able to effectively implement these strategies following minority stress. Factors such as learned behavior and cultural influences can shape an individual's coping repertoire and predispose them to choose substance use as a coping strategy, regardless of their access to emotion regulation strategies (Green & Feinstein, 2012). Alternatively, this inconsistency in findings may be related to differences in measurement of discrimination and substance use across the baseline measures, such that discrimination was measured over a 12-month period and substance use was measured over a three-month period which may introduce increased variability. Furthermore, recall bias

could also be a contributing factor, as participants may have differing levels of accuracy and reliability when recalling their previous experiences at the baseline measures.

Additionally, in support of Hypothesis 4, the EMA results revealed that the relationship between perceived discrimination events and alcoholic drink consumption is influenced by an individual's difficulties with nonacceptance. Individuals who struggle with accepting and tolerating their emotions may find it challenging to cope with the distressing feelings that are often elicited by discrimination experiences, such as shame, guilt, and sadness. One of the hallmarks of emotional nonacceptance is feelings of shame in response to one's own emotions (Gratz & Roemer, 2004). It is possible that in addition to the shame, guilt, and sadness associated with discrimination, participants experience secondary negative emotions due to their emotional nonacceptance, thus prompting them to engage in alcohol consumption, potentially as a means of downregulating these emotions. Interestingly, a recent meta-analysis exploring the role of shame in substance use behaviors reported repeated positive associations between state shame and alcohol consumption in constrained time periods (Luoma et al., 2019). Considering this, the findings of the current study may reflect an underlying influence of shame on substance use behaviors following discrimination events.

Finally, the current study revealed more robust associations among emotion regulation, perceived discrimination, and alcohol use variables, as opposed to tobacco or other illegal drug use variables. This variability in results based on type of substance may reflect varying relationship between specific emotion regulation strategies for different substances, which provide different psychoactive effects (e.g., physiological stimulation vs. depressogenic effects). These results underscore the need for further investigation into the nuanced mechanisms

underlying the relationships between discrimination events, emotion regulation, emotional awareness, and alcohol use.

Implications

Although preliminary and exploratory, the current study highlights the high rates of perceived discrimination events in rural LGBTQ+ populations, emphasizing the need for LGBTQ+ advocacy and LGBTQ+-affirming policies and mental health treatment. Advocacy efforts can work to raise awareness, challenge stereotypes, and promote tolerance and acceptance within rural communities. Advocacy and affirming policies can promote positive social change, ultimately leading to more acceptance and compassion towards LGBTQ+ individuals. Additionally, it is essential that clinicians are sensitive to the experiences of LGBTQ+ individuals. Creating a safe and affirming therapeutic space, where clients' identities are respected and their experiences are validated, can encourage therapeutic progress.

Furthermore, the findings of this study suggest implications for exploring emotion regulation skills as a protective factor in LGBTQ+ individuals. Techniques used to improve emotional clarity and awareness, such as mindfulness strategies, may not be adequate to protect against substance use following discrimination experiences. Rather, LGBTQ+ individuals may need interventions that go beyond mindfulness and are tied to constructs such as acceptance, values, and community resources. By incorporating acceptance-based techniques into interventions, individuals can develop a greater sense of self-acceptance, promoting a sense of belonging within the LGBTQ+ community, and encouraging the exploration and alignment of personal values. Therapeutic approaches, such as Acceptance and Commitment Therapy (ACT), which incorporate acceptance-based strategies to address emotions as well as emphasize values-consistent actions may be particularly relevant in helping individuals to develop healthier coping

strategies and reduce the reliance on substances as a means of emotional regulation. However, before such interventions are implemented, there is a need for further research to utilize multi-methods of assessing the associations between discrimination, emotion regulation, and substance use to clarify the role of emotion regulation. Further, future research that actively includes the perspectives of LGBTQ+ individuals in rural settings is critical to ensure acceptable and community-grounded approaches.

Conclusion

The current study highlights the elevated rates of perceived discrimination events experienced by LGBTQ+ individuals in rural settings. The study also reveals significant associations between perceived discrimination events and substance use behaviors, both at the baseline level and in daily diary analysis. Additionally, the role of emotion regulation in moderating the relationship between discrimination and substance use is complex, with unexpected findings indicating a need for further investigation. While this study has limitations, it underscores the importance of addressing discrimination and promoting healthier coping strategies for LGBTQ+ individuals in rural communities. Future research with larger and more diverse samples is needed to validate and extend these findings.

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Tables & Figures

Table 1

Participant Demographics

Demographics	Frequency (%) (N = 34)
Sexual Orientation	
Asexual	1 (2.9%)
Bisexual	8 (23.5%)
Demisexual	1 (2.9%)
Gay	12 (35.3%)
Lesbian	5 (14.7%)
Pansexual	2 (5.9%)
Queer	3 (8.8%)
Heterosexual (straight)	2 (5.9%)
Sex Assigned at Birth	
Female	12 (35.3%)
Male	22 (64.7%)
Gender Identity	
Bigender	1 (2.9%)
Cisgender Female	4 (11.8%)
Cisgender Male	5 (14.7%)
Female	8 (23.5%)
Male	12 (35.3%)
Nonbinary	3 (8.8%)
Transmasculine	1 (2.9%)
Age	
22-27	13 (38.2%)
28-32	10 (29.4%)
33-38	3 (8.8%)
39-44	4 (11.8%)
45-50	4 (11.8%)
Race	
Black or African American	14 (41.2%)
Multiracial or Mixed Race	1 (2.9%)
White/Caucasian	19 (55.9%)
Ethnicity	
Hispanic or Latine	3 (8.8%)
Middle Eastern or Northern African	1 (2.9%)
None/Not Sure	30 (88.2%)
Completed Education	
Some college	4 (11.8%)
Associate degree	2 (5.9%)
Bachelor's degree	22 (64.7%)
Master's degree	5 (14.7%)
Doctorate	1 (2.9%)
Current Student Status	

Full Time	4 (11.8%)
Part Time	6 (17.6%)
Not enrolled at this time	24 (70.6%)
Current Employment Status	
Full Time	21 (61.8%)
Part Time	8 (23.5%)
Not employed at this time	5 (14.7%)
Estimated Household Income	
\$11,000-\$20,999/year	2 (5.9%)
\$21,000-\$30,999/year	4 (11.8%)
\$31,000-\$40,999/year	7 (20.6%)
\$41,000-\$50,999/year	4 (11.8%)
\$51,000-\$60,999/year	5 (14.7%)
More than \$61,000/year	12 (35.3%)
Relationship Status	
Not dating or in a relationship, not looking for a partner	4 (11.8%)
Not dating or in a relationship, looking for a partner	8 (23.5%)
Dating, not exclusively	6 (17.6%)
Dating, exclusively for less than 6 months	4 (11.8%)
Dating, exclusively for more than 6 months	1 (2.9%)
Cohabiting with partner or partners	6 (17.6%)
Engaged	1 (2.9%)
Married	4 (11.8%)

Note: Response options listed in Table 1 include only those that participants selected. Please see Appendices for a full list of response options.

Table 2*Baseline Descriptive Statistics*

Variable	Min-Max	Mean	Median	Mode	Standard Deviation
Discrimination Experiences					
Total Discrimination Experiences	10-49	26.56	24.50	16	10.96
Overt Discrimination Experiences	0-21	8.94	8	4 ^a	5.87
Subtle Discrimination Experiences	6-29	17.66	17	17	5.77
Substance Use					
Alcohol Use Frequency	0-4	2.18	3	3	1.21
Tobacco Use Frequency	0-4	1.26	0	0	1.64
Cannabis & Other Illegal Drug Use Frequency	0-20	3.00	5.50	2	4.67
Estimated Drinks in a Typical Week	0-20	6.47	0	0	5.80
Emotion Regulation					
DERS Total Score	50-137	94.82	104	67 ^a	23.49
DERS Nonacceptance of Emotional Responses Scale	6-29	16.62	16.50	12 ^a	5.88
DERS Lack of Emotional Awareness Scale	8-26	15.91	15	14	4.69
DERS Lack of Emotional Clarity Scale	6-22	12.97	13	8 ^a	4.37
DERS Difficulties with Goal-Directed Behavior Scale	7-25	15.29	15	8 ^a	5.19
DERS Impulse Control Difficulties Scale	6-23	13.35	12	7	5.25
DERS Limited Access to ER Strategies	10-29	20.79	21.50	27	6.07

^a = Multiple modes exist. The smallest value is shown.

Table 3*Baseline Linear Regression with Discrimination as the Sole Predictor*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency	.274	.524	.001
Tobacco Use Frequency	.145	.381	.026
Cannabis & Other Illegal Drug Use Frequency	.181	.425	.012
Estimated Drinks in a Typical Week	.247	.520	.002

Table 4*Baseline Interaction Models - DERS Total Score*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency Model	.337		
Discrimination Experiences		.536	.002
DERS Total Score		.002	.990
Discrimination x Total Score		-.304	.062
Tobacco Use Frequency Model	.213		
Discrimination Experiences		.385	.029
DERS Total Score		-.031	.857
Discrimination x Total Score		-.319	.071
Cannabis & Other Illegal Drug Use Frequency Model	.171		
Discrimination Experiences		.416	.022
DERS Total Score		-.061	.727
Discrimination x Total Score		-.121	.494
Estimated Drinks in a Typical Week Model	.330		
Discrimination Experiences		.536	.002
DERS Total Score		-.047	.765
Discrimination x Total Score		-.307	.061

Table 5*Baseline Interaction Models - DERS Subscales*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency Model	.567		
Discrimination Experiences		.537	.034
DERS Nonacceptance of Emotional Responses Scale		.152	.498
DERS Lack of Emotional Awareness Scale		-.062	.794
DERS Lack of Emotional Clarity Scale		-.290	.183
DERS Difficulties with Goal-Directed Behavior Scale		.247	.346
DERS Impulse Control Difficulties Scale		.043	.847
DERS Limited Access to ER Strategies		-.166	.592
Discrimination x Nonacceptance		.079	.764
Discrimination x Emotional Awareness		-.185	.390
Discrimination x Emotional Clarity		-.179	.356
Discrimination x Goal-Directed Behavior		.499	.059
Discrimination x Impulse Control Difficulties		.323	.267
Discrimination x Limited Access to ER Strategies		-.846	.009
Tobacco Use Frequency Model	.636		
Discrimination Experiences		.658	.006
DERS Nonacceptance of Emotional Responses Scale		.177	.391
DERS Lack of Emotional Awareness Scale		-.132	.548
DERS Lack of Emotional Clarity Scale		.153	.438
DERS Difficulties with Goal-Directed Behavior Scale		.362	.139
DERS Impulse Control Difficulties Scale		.107	.605
DERS Limited Access to ER Strategies		-.570	.054
Discrimination x Nonacceptance		-.323	.190
Discrimination x Emotional Awareness		-.235	.238
Discrimination x Emotional Clarity		-.081	.648
Discrimination x Goal-Directed Behavior		.752	.004
Discrimination x Impulse Control Difficulties		.006	.983
Discrimination x Limited Access to ER Strategies		-.501	.078
Cannabis & Other Illegal Drug Use Frequency Model	.518		
Discrimination Experiences		.481	.067
DERS Nonacceptance of Emotional Responses Scale		-.098	.677
DERS Lack of Emotional Awareness Scale		-.216	.396
DERS Lack of Emotional Clarity Scale		.236	.300
DERS Difficulties with Goal-Directed Behavior Scale		.445	.115
DERS Impulse Control Difficulties Scale		.085	.720
DERS Limited Access to ER Strategies		-.503	.132
Discrimination x Nonacceptance		-.135	.629
Discrimination x Emotional Awareness		-.233	.307
Discrimination x Emotional Clarity		.062	.761
Discrimination x Goal-Directed Behavior		.608	.031
Discrimination x Impulse Control Difficulties		.259	.396
Discrimination x Limited Access to ER Strategies		-.590	.072
Estimated Drinks in a Typical Week Model	.680		

Discrimination Experiences		.586	.009
DERS Nonacceptance of Emotional Responses Scale		.251	.200
DERS Lack of Emotional Awareness Scale		-.137	.506
DERS Lack of Emotional Clarity Scale		-.051	.779
DERS Difficulties with Goal-Directed Behavior Scale		.123	.582
DERS Impulse Control Difficulties Scale		.113	.562
DERS Limited Access to ER Strategies		-.404	.138
Discrimination x Nonacceptance		-.273	.235
Discrimination x Emotional Awareness		-.491	.014
Discrimination x Emotional Clarity		-.144	.386
Discrimination x Goal-Directed Behavior		.715	.003
Discrimination x Impulse Control Difficulties		.230	.356
Discrimination x Limited Access to ER Strategies		-.516	.055

Figure 1

Interaction Graph – DERS Limited Access to ER Strategies on Baseline Alcohol Use Frequency & Discrimination

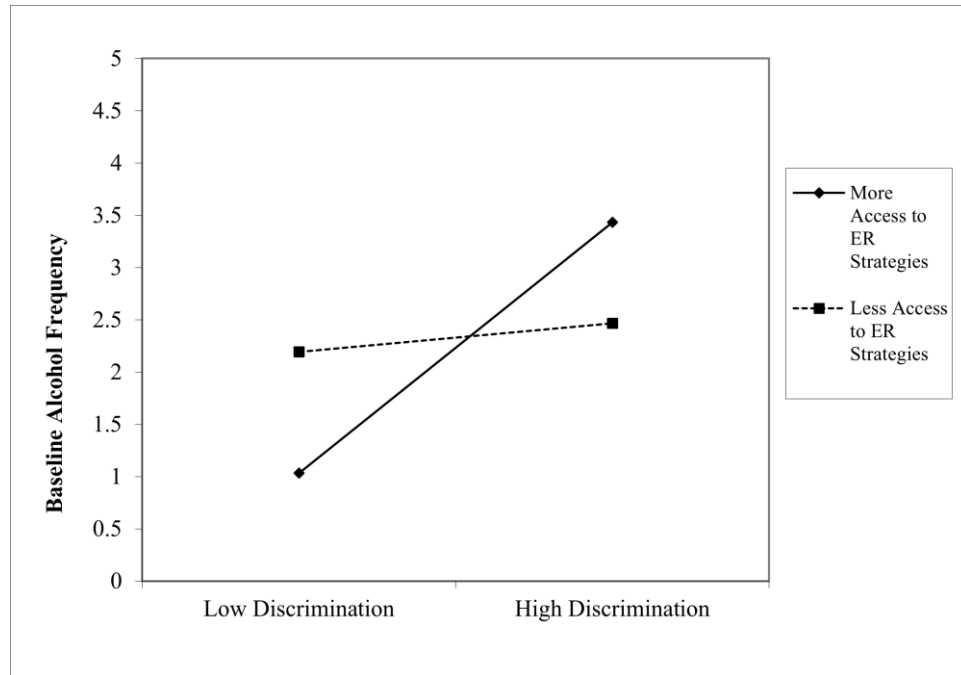


Figure 2

Interaction Graph – DERS Lack of Emotional Awareness on Baseline Estimated Drinks in a Typical Week & Discrimination

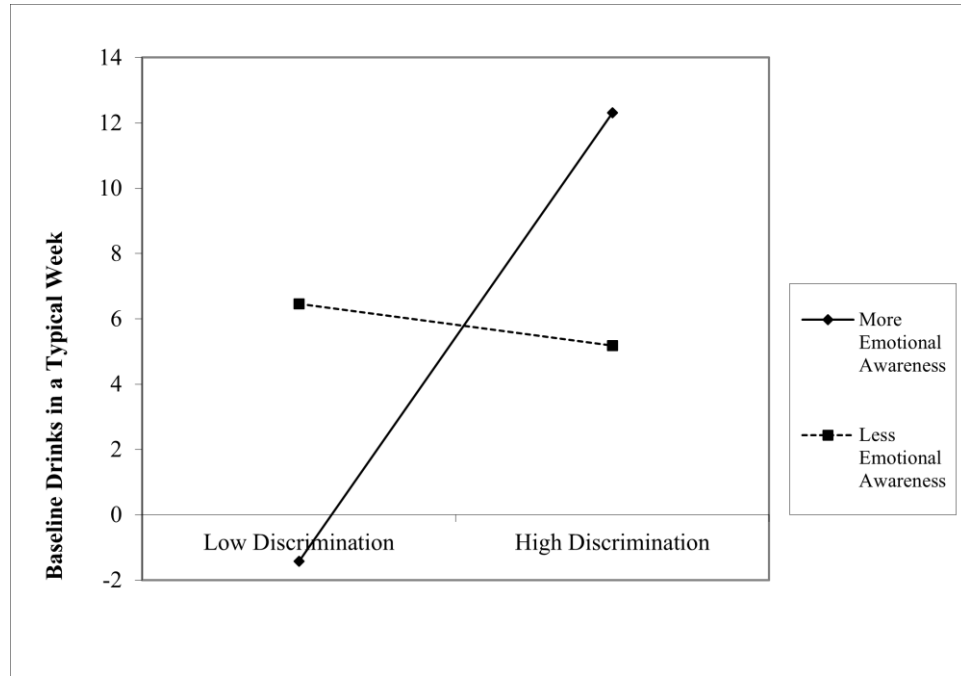


Table 6*EMA Descriptive Statistics*

Variable	Min-Max	Mean	Median	Mode	Standard Deviation
Discrimination Experiences					
Total Discrimination Experiences	0-128	20.94	8	0	31.066
Substance Use					
Alcohol Use Frequency	0-20	4.77	2	0	6.021
Tobacco Use Frequency	0-20	1.06	0	0	3.881
Cannabis & Other Illegal Drug Use Frequency	0-18	3.48	0	0	5.065
Estimated Drinks Across 10 Days	1-33	9.95	6	2	9.878
Emotion Regulation					
S-DERS Total Score	0-46	25.05	27	9	13.165
S-DERS Nonacceptance of Emotional Responses Scale	0-15	6.80	6.72	0	5.008
S-DERS Lack of Emotional Awareness Scale	3-15	9.54	10	10	3.129
S-DERS Difficulties Modulating Emotional Responses	0-20	7.73	6.61	2	6.322
S-DERS Lack of Emotional Clarity Scale	0-5	1.89	1.36	0	1.921

Table 7*EMA Linear Regressions*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency	.370	.608	<.001
Tobacco Use Frequency	.326	.571	<.001
Cannabis & Other Illegal Drug Use Frequency	.005	.070	.707
Estimated Drinks Across 10 Days	.328	.573	.005

Table 8*EMA Interaction Models - S-DERS Total Score*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency Model	.469		
Discrimination Experiences		.581	.008
S-DERS Total Score		.133	.475
Discrimination x Total Score		-.219	.267
Tobacco Use Frequency Model	.798		
Discrimination Experiences		.530	<.001
S-DERS Total Score		-.172	.147
Discrimination x Total Score		-.556	<.001
Cannabis & Other Illegal Drug Use Frequency Model	.013		
Discrimination Experiences		-.075	.941
S-DERS Total Score		.369	.717
Discrimination x Total Score		.057	.829
Estimated Drinks Across Ten Days Model	.395		
Discrimination Experiences		.558	.047
S-DERS Total Score		.117	.631
Discrimination x Total Score		-.150	.561

Figure 3

Interaction Graph – S-DERS Total Score on EMA Tobacco Use Frequency & Discrimination

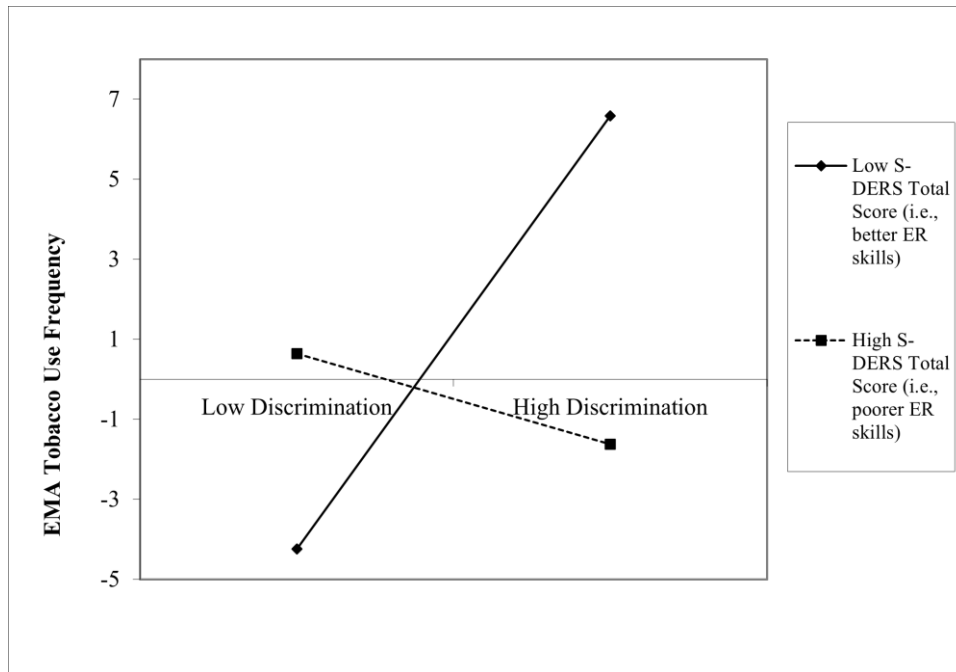


Table 9*EMA Interaction Models - S-DERS Subscales*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency Model	.787		
Discrimination Experiences		.825	.017
S-DERS Nonacceptance of Emotional Responses Scale		.369	.358
S-DERS Lack of Emotional Awareness Scale		.016	.956
S-DERS Difficulties Modulating Emotional Responses		-.255	.412
S-DERS Lack of Emotional Clarity Scale		.067	.873
Discrimination x Nonacceptance		.603	.287
Discrimination x Emotional Awareness		.260	.393
Discrimination x Modulation		1.444	.064
Discrimination x Emotional Clarity		-2.039	.007
Tobacco Use Frequency Model	.879		
Discrimination Experiences		.533	.034
S-DERS Nonacceptance of Emotional Responses Scale		-.332	.277
S-DERS Lack of Emotional Awareness Scale		-.289	.122
S-DERS Difficulties Modulating Emotional Responses		-.302	.211
S-DERS Lack of Emotional Clarity Scale		.449	.175
Discrimination x Nonacceptance		-.673	.128
Discrimination x Emotional Awareness		-.431	.079
Discrimination x Modulation		-.858	.132
Discrimination x Emotional Clarity		.799	.111
Cannabis & Other Illegal Drug Use Frequency Model	.300		
Discrimination Experiences		-.029	.957
S-DERS Nonacceptance of Emotional Responses Scale		.263	.712
S-DERS Lack of Emotional Awareness Scale		-.477	.273
S-DERS Difficulties Modulating Emotional Responses		.079	.887
S-DERS Lack of Emotional Clarity Scale		-.211	.781
Discrimination x Nonacceptance		1.005	.326
Discrimination x Emotional Awareness		.602	.281
Discrimination x Modulation		.506	.695
Discrimination x Emotional Clarity		-1.404	.230
Estimated Drinks Across Ten Days Model	.955		
Discrimination Experiences		1.466	.003
S-DERS Nonacceptance of Emotional Responses Scale		-.002	.996
S-DERS Lack of Emotional Awareness Scale		.043	.801
S-DERS Difficulties Modulating Emotional Responses		.150	.638
S-DERS Lack of Emotional Clarity Scale		-.092	.822
Discrimination x Nonacceptance		1.126	.038
Discrimination x Emotional Awareness		.216	.335
Discrimination x Modulation		2.447	.014
Discrimination x Emotional Clarity		-3.003	<.001

Figure 4

Interaction Graph – S-DERS Nonacceptance of Emotional Responses on Drinks Consumed Across Ten Days & Discrimination

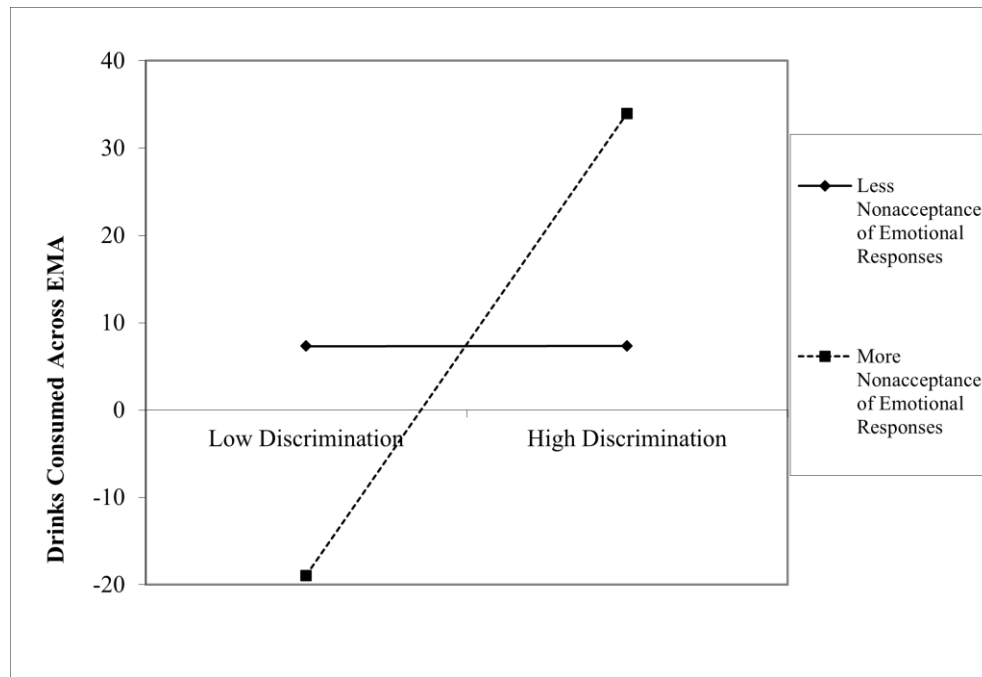


Figure 5

Interaction Graph – S-DERS Modulation of Emotional Responses on Drinks Consumed Across Ten Days & Discrimination

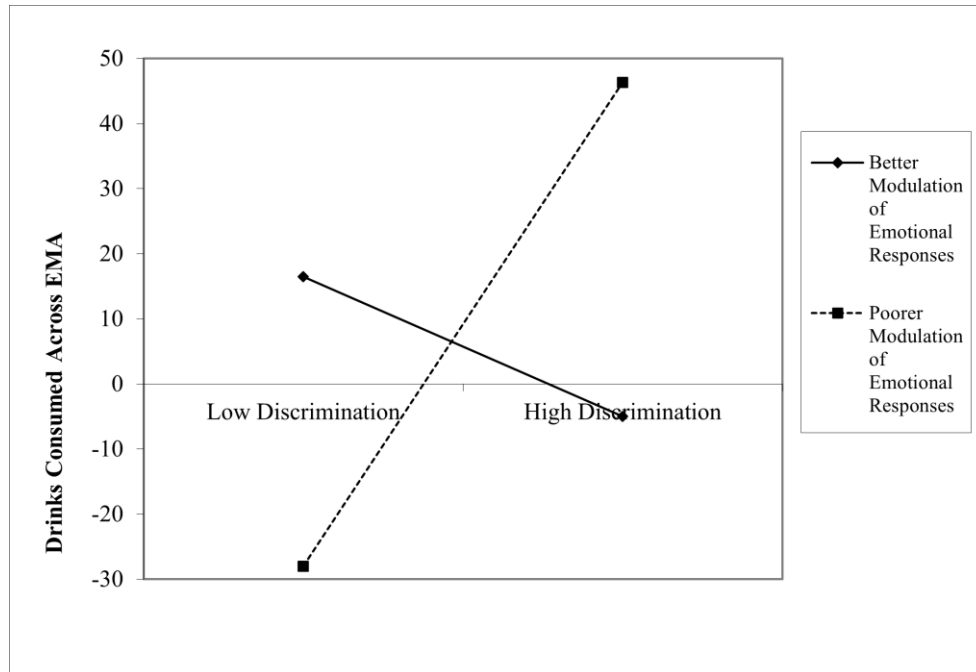


Figure 6

*Interaction Graph – S-DERS Lack of Emotional Clarity on Drinks Consumed Across Ten Days
& Discrimination*

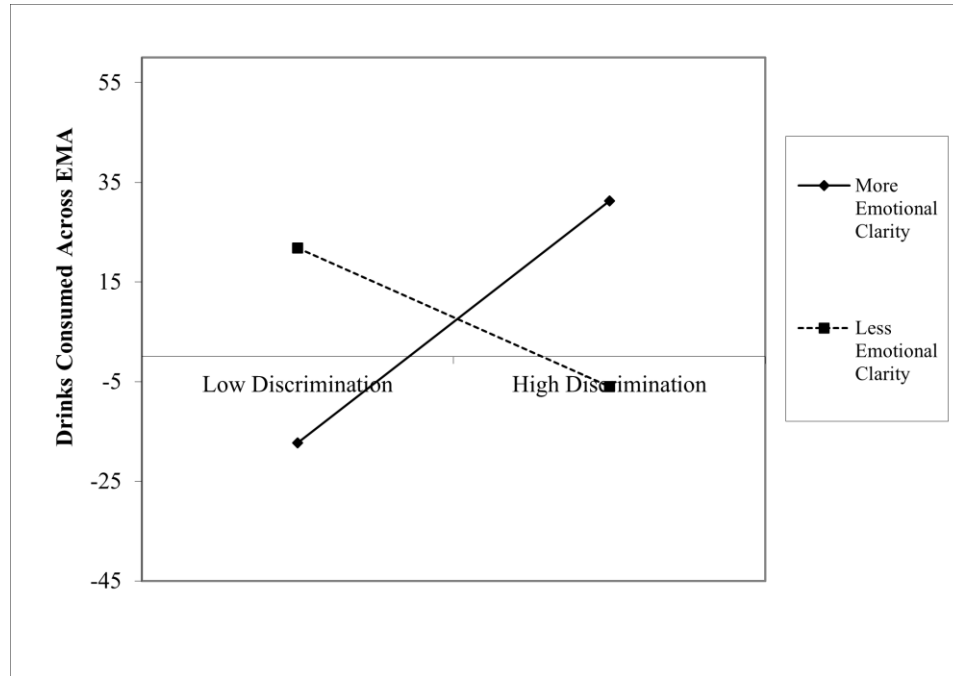


Table 10*Interaction Models- Baseline DERS Total Score & Daily Substance Use & Discrimination*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency Model	.480		
Discrimination Experiences		.401	.024
DERS Total Score		-.306	.047
Discrimination x Total Score		-.324	.067
Tobacco Use Frequency Model	.415		
Discrimination Experiences		.398	.034
DERS Total Score		-.004	.981
Discrimination x Total Score		-.344	.067
Cannabis & Other Illegal Drug Use Frequency Model	.103		
Discrimination Experiences		-.128	.567
DERS Total Score		.088	.650
Discrimination x Total Score		-.331	.149
Estimated Drinks in a Typical Week Model	.583		
Discrimination Experiences		.339	.083
DERS Total Score		-.470	.010
Discrimination x Total Score		-.317	.099

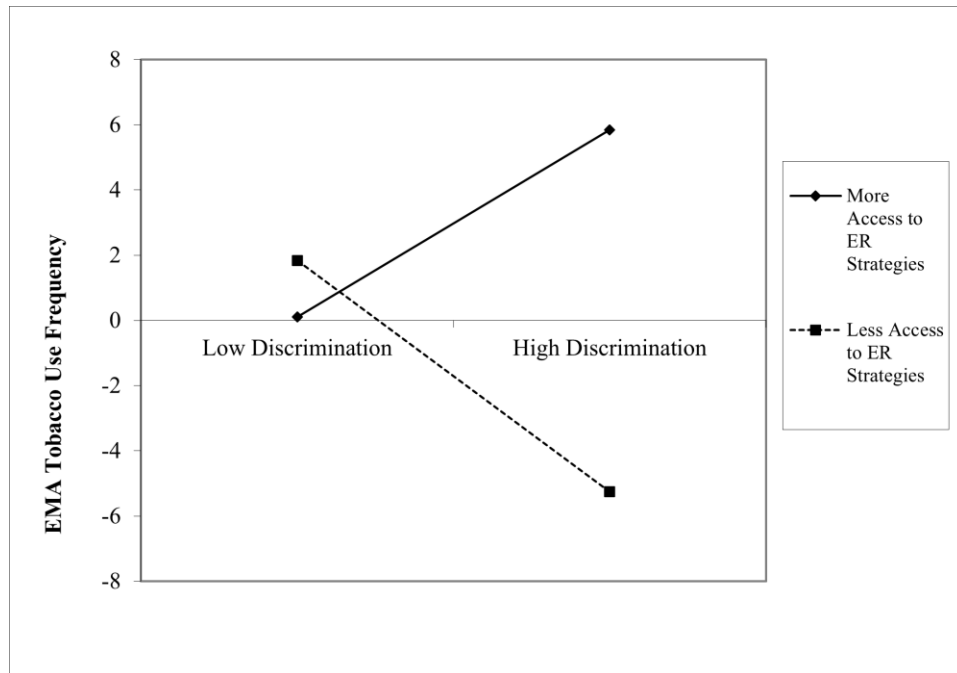
Table 11*Interaction Models- Baseline DERS Subscales & Daily Substance Use & Discrimination*

Variables	R²	Standardized Coefficient (β)	Significance Value
Alcohol Use Frequency Model	.668		
Discrimination Experiences		.360	.291
DERS Nonacceptance of Emotional Responses Scale		-.159	.427
DERS Lack of Emotional Awareness Scale		-.018	.946
DERS Lack of Emotional Clarity Scale		.138	.633
DERS Difficulties with Goal-Directed Behavior Scale		.167	.652
DERS Impulse Control Difficulties Scale		.282	.189
DERS Limited Access to ER Strategies		-.653	.058
Discrimination x Nonacceptance		-.381	.114
Discrimination x Emotional Awareness		-.553	.238
Discrimination x Emotional Clarity		.234	.570
Discrimination x Goal-Directed Behavior		.842	.188
Discrimination x Impulse Control Difficulties		-.140	.550
Discrimination x Limited Access to ER Strategies		-.736	.205
Tobacco Use Frequency Model	.866		
Discrimination Experiences		-.013	.952
DERS Nonacceptance of Emotional Responses Scale		.272	.043
DERS Lack of Emotional Awareness Scale		.035	.842
DERS Lack of Emotional Clarity Scale		.158	.393
DERS Difficulties with Goal-Directed Behavior Scale		.173	.465
DERS Impulse Control Difficulties Scale		.125	.352
DERS Limited Access to ER Strategies		-.687	.004
Discrimination x Nonacceptance		.124	.404
Discrimination x Emotional Awareness		-.138	.638
Discrimination x Emotional Clarity		.094	.719
Discrimination x Goal-Directed Behavior		.504	.213
Discrimination x Impulse Control Difficulties		.036	.810
Discrimination x Limited Access to ER Strategies		-1.214	.003
Cannabis & Other Illegal Drug Use Frequency Model	.562		
Discrimination Experiences		.451	.251
DERS Nonacceptance of Emotional Responses Scale		-.461	.056
DERS Lack of Emotional Awareness Scale		-.589	.074
DERS Lack of Emotional Clarity Scale		.354	.291
DERS Difficulties with Goal-Directed Behavior Scale		1.053	.022
DERS Impulse Control Difficulties Scale		-.319	.197
DERS Limited Access to ER Strategies		-.083	.924
Discrimination x Nonacceptance		-.778	.009
Discrimination x Emotional Awareness		-1.019	.066
Discrimination x Emotional Clarity		.272	.566
Discrimination x Goal-Directed Behavior		1.807	.020
Discrimination x Impulse Control Difficulties		-.050	.851
Discrimination x Limited Access to ER Strategies		-.818	.220
Estimated Drinks in a Typical Week Model	.859		

Discrimination Experiences		.960	.039
DERS Nonacceptance of Emotional Responses Scale		-.176	.356
DERS Lack of Emotional Awareness Scale		.576	.090
DERS Lack of Emotional Clarity Scale		-.532	.108
DERS Difficulties with Goal-Directed Behavior Scale		-.142	.680
DERS Impulse Control Difficulties Scale		.358	.113
DERS Limited Access to ER Strategies		-.278	.410
Discrimination x Nonacceptance		-.267	.309
Discrimination x Emotional Awareness		-.415	.466
Discrimination x Emotional Clarity		-.420	.355
Discrimination x Goal-Directed Behavior		.538	.447
Discrimination x Impulse Control Difficulties		-.121	.648
Discrimination x Limited Access to ER Strategies		.558	.405

Figure 7

Interaction Graph – DERS Limited Access to ER Strategies on EMA Tobacco Use Frequency & Discrimination



Appendix A – Screening Survey

1. What is your age?
2. Are you fluent in English?
3. Do you have access to a smart device (e.g., iPhone, iPad, Android, Google phone, etc.)?
4. What county in KY are you currently residing in? (Drop down)

a. I'm not sure	u. Carlisle	oo. Grant	iii. Knox	cccc. Mason	www. Robertsor
b. Adair	v. Carter	pp. Graves	jjj. LaRue	dddd. Meade	xxxx. Rockcastle
c. Allen	w. Casey	qq. Grayson	kkk. Laurel	eeee. Menifee	yyyy. Rowan
d. Anderson	x. Christian	rr. Green	lll. Lawrence	ffff. Mercer	zzzz. Russell
e. Ballard	y. Clark	ss. Greenup	mmm. Lee	gggg. Metcalfe	aaaaa. Scott
f. Barren	z. Clay	tt. Hancock	nnn. Leslie	hhhh. Monroe	bbbbb. Shelby
g. Bath	aa. Clinton	uu. Hardin	ooo. Letcher	iiii. Montgomery	ccccc. Simpson
h. Bell	bb. Crittenden	vv. Harlan	ppp. Lewis	jjjj. Morgan	ddddd. Spencer
i. Boone	cc. Cumberland	ww. Harrison	qqq. Lincoln	kkkk. Muhlenberg	eeeee. Taylor
j. Bourbon	dd. Daviess	xx. Hart	rrr. Livingston	llll. Nelson	ffff. Todd
k. Boyd	ee. Edmonson	yy. Henderson	sss. Logan	mmmm. Nicholas	ggggg. Trigg
l. Boyle	ff. Elliott	zz. Henry	ttt. Lyon	nnnn. Ohio	hhhhh. Trimble
m. Bracken	gg. Estill	aaa. Hickman	uuu. McCracken	oooo. Oldman	iiiii. Union
n. Breathitt	hh. Fayette	bbb. Hopkins	vvv. McCreary	pppp. Owen	jjjjj. Warren
o. Breckinridge	ii. Fleming	ccc. Jackson	www. McLean	qqqq. Owsley	kkkkk. Washington
p. Bullitt	jj. Floyd	ddd. Jefferson	xxx. Madison	rrrr. Pendleton	lllll. Wayne
q. Butler	kk. Franklin	eee. Jessamine	yyy. Magoffin	ssss. Perry	mmmmm. Webster
r. Caldwell	ll. Fulton	fff. Johnson	zzz. Marion	tttt. Pike	nnnnn. Whitley
s. Calloway	mm. Gallatin	ggg. Kenton	aaaa. Marshall	uuuu. Powell	ooooo. Wolfe
t. Campbell	nn. Garrard	hhh. Knott	bbbb. Martin	vvvv. Pulaski	ppppp. Woodford

5. What is the zip code for where you are currently residing?
6. Do you identify as LGBTQ+?
 - a. Yes
 - b. No
 - c. Prefer not to answer
7. What sex were you assigned at birth?
 - a. Female
 - b. Intersex
 - c. Male

- d. Prefer not to answer
8. With the understanding that gender is dynamic and complex, what is your primary gender identity today?
- a. Agender
 - b. Androgyne
 - c. Bigender
 - d. Cisgender Female
 - e. Cisgender Male
 - f. Demigender
 - g. Female
 - h. Gender Fluid
 - i. Gender Nonconforming
 - j. Genderqueer
 - k. Male
 - l. Nonbinary
 - m. Transfeminine
 - n. Transmasculine
 - o. Two-spirit
 - p. Prefer not to answer
 - q. Not listed: _____
9. With the understanding that sexuality is dynamic and complex, what is your primary sexual orientation?
- a. Asexual

- b. Bisexual
 - c. Gay
 - d. Lesbian
 - e. Pansexual
 - f. Queer
 - g. Same-gender loving
 - h. Straight (heterosexual)
 - i. Prefer not to answer
 - j. Not Listed: _____
10. Which statement best describes your sexual experience?
- a. Entirely heterosexual
 - b. Largely heterosexual but some homosexual experience
 - c. Largely heterosexual but considerable homosexual experience
 - d. Equally heterosexual and homosexual
 - e. Largely homosexual but considerable heterosexual experience
 - f. Largely homosexual but some heterosexual experience
 - g. Entirely homosexual
 - h. Prefer not to answer
11. Which statement best describes your sexual desire?
- a. Entirely heterosexual
 - b. Largely heterosexual but some homosexual experience
 - c. Largely heterosexual but considerable homosexual experience
 - d. Equally heterosexual and homosexual

- e. Largely homosexual but considerable heterosexual experience
- f. Largely homosexual but some heterosexual experience
- g. Entirely homosexual
- h. Prefer not to answer

Appendix B – Baseline Survey

Demographics

The following questions will ask you about some basic things about yourself and your life.

1. Please enter your 6-digit study ID that you selected on the Orientation Survey (Reminder: birth year and phone number).
2. What is your height?
3. What is your weight?
4. What is your age?
5. What county in KY are you currently residing in? (drop down)

a. I'm not sure	u. Carlisle	oo. Grant	iii. Knox	cccc. Mason	www. Robertsor
b. Adair	v. Carter	pp. Graves	jjj. LaRue	dddd. Meade	xxxx. Rockcastle
c. Allen	w. Casey	qq. Grayson	kkk. Laurel	eeee. Menifee	yyyy. Rowan
d. Anderson	x. Christian	rr. Green	lll. Lawrence	ffff. Mercer	zzzz. Russell
e. Ballard	y. Clark	ss. Greenup	mmm. Lee	gggg. Metcalfe	aaaaa. Scott
f. Barren	z. Clay	tt. Hancock	nnn. Leslie	hhhh. Monroe	bbbbb. Shelby
g. Bath	aa. Clinton	uu. Hardin	ooo. Letcher	iiii. Montgomery	ccccc. Simpson
h. Bell	bb. Crittenden	vv. Harlan	ppp. Lewis	jjjj. Morgan	ddddd. Spencer
i. Boone	cc. Cumberland	ww. Harrison	qqq. Lincoln	kkkk. Muhlenberg	eeee. Taylor
j. Bourbon	dd. Daviess	xx. Hart	rrr. Livingston	llll. Nelson	ffff. Todd
k. Boyd	ee. Edmonson	yy. Henderson	sss. Logan	mmmm. Nicholas	ggggg. Trigg
l. Boyle	ff. Elliott	zz. Henry	ttt. Lyon	nnnn. Ohio	hhhhh. Trimble
m. Bracken	gg. Estill	aaa. Hickman	uuu. McCracken	oooo. Oldman	iiiii. Union
n. Breathitt	hh. Fayette	bbb. Hopkins	vvv. McCreary	pppp. Owen	jjjjj. Warren
o. Breckinridge	ii. Fleming	ccc. Jackson	www. McLean	qqqq. Owsley	kkkkk. Washington
p. Bullitt	jj. Floyd	ddd. Jefferson	xxx. Madison	rrrr. Pendleton	lllll. Wayne
q. Butler	kk. Franklin	eee. Jessamine	yyy. Magoffin	ssss. Perry	mmmmm. Webster
r. Caldwell	ll. Fulton	fff. Johnson	zzz. Marion	tttt. Pike	nnnnn. Whitley
s. Calloway	mm. Gallatin	ggg. Kenton	aaaa. Marshall	uuuu. Powell	ooooo. Wolfe
t. Campbell	nn. Garrard	hhh. Knott	bbbb. Martin	vvvv. Pulaski	ppppp. Woodford

6. What is the zip code for where you are currently residing?
7. What is your racial identification? Check all that apply:
 - k. American Indian or Alaska Native
 - l. Arab or Middle Eastern or Northern African

- m. Asian or Asian American
 - n. Black or African American
 - o. Hispanic or Latino
 - p. Multiracial or Mixed race
 - q. Native Hawaiian or Pacific Islander
 - r. White/Caucasian
 - s. Prefer not to answer
 - t. Other: _____
8. What is your ethnic background? Check all that apply:
- a. Hispanic or Latino
 - b. Middle Eastern or Northern African
 - c. None/not sure
 - d. Prefer not to answer
 - e. Other: _____
9. What is your highest level of education?
- a. Less than a high school diploma
 - b. High school diploma
 - c. Vocational degree
 - d. Some college
 - e. Associate degree
 - f. Bachelor's degree
 - g. Master's degree
 - h. Doctorate (e.g., MD, PhD, JD, etc)

- i. Prefer not to answer
10. Are you currently enrolled as a student?
- a. Yes – full time
 - b. Yes – part time
 - c. No, not enrolled as a student
 - d. Prefer not to answer
11. What is your household income (please include any family support, etc)
- a. Less than \$10,999/year
 - b. \$11,000-\$20,999/year
 - c. \$21,000-\$30,999/year
 - d. \$31,000-\$40,999/year
 - e. \$41,000-\$50,999/year
 - f. \$51,000-\$60,999/year
 - g. More than \$61,000/year
 - h. Prefer not to answer
12. What is your relationship status?
- a. Not dating or in a relationship, not looking for a relationship or dating partner
 - b. Not dating or in a relationship, looking for a relationship or dating partner
 - c. Dating, not exclusively
 - d. Dating, exclusively for less than 6 months
 - e. Dating, exclusively for more than 6 months
 - f. Cohabiting with partner or partners
 - g. Engaged

- h. Married
 - i. Consensual non-monogamy
 - j. Separated/divorced
 - k. Widowed
 - l. Other
 - m. Prefer not to answer
13. Are you employed?
- a. Yes, full time (30 or more hours per week)
 - b. Yes, part time (fewer than 30 hours per week)
 - c. Not employed at this time
 - d. Prefer not to answer
14. What sex were you assigned at birth?
- a. Female
 - b. Intersex
 - c. Male
 - d. Prefer not to answer
15. With the understanding that gender is dynamic and complex, what is your primary gender identity today?
- a. Agender
 - b. Androgyne
 - c. Bigender
 - d. Cisgender Female
 - e. Cisgender Male

- f. Demigender
- g. Female
- h. Gender Fluid
- i. Gender Nonconforming
- j. Genderqueer
- k. Male
- l. Nonbinary
- m. Transfeminine
- n. Transmasculine
- o. Two-spirit
- p. Prefer not to answer
- p. Not listed: _____

16. With the understanding that sexuality is dynamic and complex, what is your primary sexual orientation?

- a. Asexual
- b. Bisexual
- c. Gay
- d. Lesbian
- e. Pansexual
- f. Queer
- g. Same-gender loving
- h. Straight (heterosexual)
- i. Prefer not to answer

i. Not Listed: _____

17. Which statement best describes your sexual experience?

- a. Entirely heterosexual
- b. Largely heterosexual but some homosexual experience
- c. Largely heterosexual but considerable homosexual experience
- d. Equally heterosexual and homosexual
- e. Largely homosexual but considerable heterosexual experience
- f. Largely homosexual but some heterosexual experience
- g. Entirely homosexual
- h. Prefer not to answer

18. Which statement best describes your sexual desire?

- a. Entirely heterosexual
- b. Largely heterosexual but some homosexual experience
- c. Largely heterosexual but considerable homosexual experience
- d. Equally heterosexual and homosexual
- e. Largely homosexual but considerable heterosexual experience
- f. Largely homosexual but some heterosexual experience
- g. Entirely homosexual
- h. Prefer not to answer

Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST)

*The following questions are going to ask you about your experience with alcohol, tobacco products, and other drugs across your **lifetime** and in the **past 3 months**. These substances can be smoked, swallowed, snorted, inhaled, injected, or taken in pill form.*

*Some of the substances listed may be prescribed by a doctor (e.g., sedatives, pain medication, amphetamines, etc.). For this survey, please **don't report any medications that you used as prescribed by your doctor**. However, if you have taken such drugs for **reasons other than prescription** or have taken them **more frequently** or at a **higher dose** than prescribed, please report that.*

19. In your life, which of the following substances have you ever used? (NON-MEDICAL USE ONLY)

	No	Yes	Prefer not to answer
Alcohol			
Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)			
Cannabis (marijuana, pot, grass, hash, etc.)			
Cocaine (coke, crack, etc.)			
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)			
Inhalants (nitrous, glue, petrol, paint thinner, etc.)			
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)			
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)			
Opioids (heroin, morphine, methadone, codeine, etc.)			

20. In the past three months, how often have you used substances? (NON-MEDICAL USE ONLY)

	Never	Once or Twice	Monthly	Weekly	Daily or almost daily	Prefer not to answer
Alcohol						

Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)						
Cannabis (marijuana, pot, grass, hash, etc.)						
Cocaine (coke, crack, etc.)						
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)						
Inhalants (nitrous, glue, petrol, paint thinner, etc.)						
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)						
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)						
Opioids (heroin, morphine, methadone, codeine, etc.)						

21. In the past three months, how often have you had a strong desire or urge to use substances? (NON-MEDICAL USE ONLY)

	Never	Once or Twice	Monthly	Weekly	Daily or almost daily	Prefer not to answer
Alcohol						
Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)						
Cannabis (marijuana, pot, grass, hash, etc.)						
Cocaine (coke, crack, etc.)						
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)						
Inhalants (nitrous, glue, petrol, paint thinner, etc.)						
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)						
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)						

Opioids (heroin, morphine, methadone, codeine, etc.)						
--	--	--	--	--	--	--

22. In the past three months, how often has your use of substances led to health, social, legal, or financial problems? (NON-MEDICAL USE ONLY)

	Never	Once or Twice	Monthly	Weekly	Daily or almost daily	Prefer not to answer
Alcohol						
Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)						
Cannabis (marijuana, pot, grass, hash, etc.)						
Cocaine (coke, crack, etc.)						
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)						
Inhalants (nitrous, glue, petrol, paint thinner, etc.)						
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)						
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)						
Opioids (heroin, morphine, methadone, codeine, etc.)						

23. In the past three months, how often have you failed to do what was normally expected of you because of your substance use? (NON-MEDICAL USE ONLY)

	Never	Once or Twice	Monthly	Weekly	Daily or almost daily	Prefer not to answer
Alcohol						
Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)						
Cannabis (marijuana, pot, grass, hash, etc.)						

Cocaine (coke, crack, etc.)						
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)						
Inhalants (nitrous, glue, petrol, paint thinner, etc.)						
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)						
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)						
Opioids (heroin, morphine, methadone, codeine, etc.)						

24. Has a friend, relative, or anyone else ever expressed concern about your use of substances? (NON-MEDICAL USE ONLY)

	No, never	Yes, in the past 3 months	Yes, but not in the past 3 months	Prefer not to answer
Alcohol				
Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)				
Cannabis (marijuana, pot, grass, hash, etc.)				
Cocaine (coke, crack, etc.)				
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)				
Inhalants (nitrous, glue, petrol, paint thinner, etc.)				
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)				
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)				
Opioids (heroin, morphine, methadone, codeine, etc.)				

25. Have you ever tried and failed to control, cut down, or stop using substances? (NON-MEDICAL USE ONLY)

	No, never	Yes, in the past 3 months	Yes, but not in the past 3 months	Prefer not to answer
Alcohol				
Tobacco products (cigarettes, e-cigarettes, flavored vaping, chewing tobacco, cigars, etc.)				
Cannabis (marijuana, pot, grass, hash, etc.)				
Cocaine (coke, crack, etc.)				
Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)				
Inhalants (nitrous, glue, petrol, paint thinner, etc.)				
Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)				
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)				
Opioids (heroin, morphine, methadone, codeine, etc.)				

26. Have you ever used any drug by injection? (NON-MEDICAL USE ONLY)

- a. No, never
- b. Yes, in the past 3 months
- c. Yes, but not in the past 3 months

Daily Drinking Questionnaire (DDQ)

This questionnaire refers to your current alcohol use habits and your drinking history. Please use the following scale to determine standard drinks. Whenever we ask about drinking alcohol we mean having more than just a sip and using alcohol for religious purposes does not count.

	Beer	Malt liquor	Wine	Cordial, Liqueur, Apéritif	Brandy	Spirits
	-Budweiser -Coors -Corona -Heinken -Labatt Blue -Miller -Etc.	-Cott 45 -Mike's Hard Lemonade -Ole English "800" -Etc.	-Red wine -White wine -Champagne	-Amaretto -Jägermeister -Kahlúa -Schnapps -Etc.	-Hennessey -Courvoisier -Rémy Martin -Etc.	-Bourbon -Gin -Rum -Scotch -Tequila -Whiskey -Vodka -All mixed drinks or cocktails that use alcohol types above
Ounces:	12 16	12 40	5	2.5	1.5	1.5
Drinks:	1 1.3	1.5 5	1	1	1	1

Standard Drink Scale

27. Did you drink any alcohol in the past month?
28. At what age did you first have more than a sip of beer, wine, wine coolers, or liquor to drink?
29. At what age did you first drink enough alcohol to feel drunk?
30. Consider a typical week in the past 6 weeks. Please indicate for each day of the week the typical number of standard drinks you usually consume on that day.

	0	1-2	3-4	5-6	7-8	9-10	11+	Prefer not to answer
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								

31. Consider a typical week in the past 6 weeks. Please indicate for each day of the week the typical number of hours you usually spend consuming alcohol on that day. (e.g., if you drink your first drink at 5 pm and your last drink at 10 pm, you would select 5 hours)

	0	1-2	3-4	5-6	7-8	9-10	11+	Prefer not to answer

Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								

Difficulties in Emotion Regulation Scale

Using the scale below as a guide, please indicate to what extent you agree with it or believe the statement is true for you.

Almost never	Sometimes	About half the time	Most of the time	Almost always	Prefer not to answer
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32. I am clear about my feelings.
33. I pay attention to how I feel.
34. I experience my emotions as overwhelming and out of control.
35. I have no idea how I am feeling.
36. I have difficulty making sense of my feelings.
37. I am attentive to my feelings.
38. I know exactly how I am feeling.
39. I care about what I am feeling.
40. I am confused about how I feel.
41. When I'm upset, I acknowledge my emotions.
42. When I'm upset, I become angry with myself for feeling that way.
43. When I'm upset, I become embarrassed for feeling that way.
44. When I'm upset, I have difficulty getting work done
45. When I'm upset, I become out of control.

46. When I'm upset, I believe that I will remain that way for a long time.
47. When I'm upset, I believe that I'll end up feeling very depressed.
48. When I'm upset, I believe that my feelings are valid and important.
49. When I'm upset, I have difficulty focusing on other things.
50. When I'm upset, I feel out of control..
51. When I'm upset, I can still get things done.
52. When I'm upset, I feel ashamed with myself for feeling that way.
53. When I'm upset, I know that I can find a way to eventually feel better.
54. When I'm upset, I feel like I am weak.
55. When I'm upset, I feel like I can remain in control of my behaviors.
56. When I'm upset, I feel guilty for feeling that way.
57. When I'm upset, I have difficulty concentrating.
58. When I'm upset, I have difficulty controlling my behaviors.
59. When I'm upset, I believe there is nothing I can do to make myself feel better.
60. When I'm upset, I become irritated with myself for feeling that way.
61. When I'm upset, I start to feel very bad about myself.
62. When I'm upset, I believe that wallowing in it is all I can do.
63. When I'm upset, I lose control over my behaviors.
64. When I'm upset, I have difficulty thinking about anything else.
65. When I'm upset, I take time to figure out what I'm really feeling.
66. When I'm upset, it takes me a long time to feel better.
67. When I'm upset, my emotions feel overwhelming.

Daily Heterosexist Experiences Questionnaire

The following is a list of experiences that LGBTQ+ people sometimes have. Please read each one carefully, and then respond to the following question:

How much has this problem distressed or bothered you during the past 12 months?

Did not happen/not applicable to me	It happened, and it bothered me NOT AT ALL	It happened, and it bothered me A LITTLE BIT	It happened, and it bothered me MODERATELY	It happened, and it bothered me QUITE A BIT	It happened, and it bothered me EXTREMELY	Prefer not to answer
-------------------------------------	--	--	--	---	---	----------------------

68. Difficulty finding a partner because you are LGBT
69. Difficulty finding LGBT friends
70. Having very few people you can talk to about being LGBT
71. Watching what you say and do around heterosexual people
72. Hearing about LGBT people you know being treated unfairly
73. Hearing about LGBT people you don't know being treated unfairly
74. Hearing about hate crimes (e.g., vandalism, physical or sexual assault) that happened to LGBT people you don't know
75. Being called names such as "fag" or "dyke"
76. Hearing other people being called names such as "fag" or "dyke"
77. Hearing someone make jokes about LGBT people
78. Family members not accepting your partner as a part of the family
79. Your family avoiding talking about your LGBT identity
80. Your children being rejected by other children because you are LGBT
81. Your children being verbally harassed because you are LGBT

82. Feeling like you don't fit in with other LGBT people
83. Pretending that you have an opposite-sex partner
84. Pretending that you are heterosexual
85. Hiding your relationship from other people
86. People staring at you when you are out in public because you are LGBT
87. Worry about getting HIV/AIDS
88. Constantly having to think about "safe sex"
89. Feeling invisible in the LGBT community because of your gender expression
90. Being harassed in public because of your gender expression
91. Being harassed in bathrooms because of your gender expression
92. Being rejected by your mother for being LGBT
93. Being rejected by your father for being LGBT
94. Being rejected by a sibling or siblings because you are LGBT
95. Being rejected by other relatives because you are LGBT
96. Being verbally harassed by strangers because you are LGBT
97. Being verbally harassed by people you know because you are LGBT
98. Being treated unfairly in stores or restaurants because you are LGBT
99. People laughing at you or making jokes at your expense because you are LGBT
100. Hearing politicians say negative things about LGBT people
101. Avoiding talking about your current or past relationships when you are at work
102. Hiding part of your life from other people
103. Feeling like you don't fit into the LGBT community because of your gender expression

104. Difficulty finding clothes that you are comfortable wearing because of your gender expression
105. Being misunderstood by people because of your gender expression
106. Being treated unfairly by teachers or administrators at your children's school because you are LGBT
107. People assuming you are heterosexual because you have children
108. Being treated unfairly by parents of other children because you are LGBT
109. Difficulty finding other LGBT families for you and your children to socialize with
110. Being punched, hit, kicked, or beaten because you are LGBT
111. Being assaulted with a weapon because you are LGBT
112. Being raped or sexually assaulted because you are LGBT
113. Having objects thrown at you because you are LGBT
114. Worrying about infecting others with HIV
115. Other people assuming that you are HIV positive because you are LGBT
116. Discussing HIV status with potential partners
117. Worrying about your friends who have HIV

Appendix C – EMA Survey

1. Please enter your 6-digit research ID number (Reminder: birth year and phone number).
2. Have you experienced any of the following discriminatory events, meaning any unfair, unjust, or adverse action against you based upon one or more of your identities, since the last prompt?
 - a. Yes
 - b. No
3. Which of your identities was this discrimination event related to? (Check all that apply)
 - a. Gender identity
 - b. Sexual orientation
 - c. Race
 - d. Class
 - e. Ability status
 - f. Other
 - g. None
 - h. Unsure
4. Which of the following discriminatory events did you experience since the last prompt?
(Check all that apply?)

	Yes	No
You were treated with less courtesy or respect than others.		
People avoided or ignored you.		
People rejected or excluded you.		
Someone threatened or harassed you.		
Someone called you names or insulted you.		
You received poorer service than other people at restaurants or stores.		
People act as if they think they're better than you are.		
You heard someone make jokes about a group that you are a member of.		
Someone was physically violent with you.		

You received less resources, attention, or assistance than others.		
Someone made you concerned for your safety.		
Someone assumed something about you based on a stereotype (e.g., Gay men enjoy shopping)		
Someone said something to put-down or belittle a group that you are a member of (e.g., someone saying “that’s so gay”)		
People acted as if they think you are not smart.		
People acted as if they are afraid of you.		
People acted as if they think you are dishonest.		
None		

5. Did you experience any other discrimination events since the last prompt?

a. If yes, please briefly describe what happened.

6. How much did this experience (insert selected option from Q4) bother you?

a. Rate on a scale of 1 (not at all) to 10 (very much so)

7. To what extent did you continue to think about this discriminatory event (insert selected option from Q4)?

a. I forgot about it as soon as it happened.

b. I thought about it a little.

c. I thought about it a lot.

8. Please read each statement and indicate how much it applies to your emotions after the discrimination event.

	Not at all	Somewhat	Moderately	Very much	Completely
I feel guilty for feeling this way.					
I am paying attention to how I feel.					
I feel out of control.					
I am embarrassed for feeling this way.					
I am feeling very bad about					

myself.					
I am acknowledging my emotions.					
I have no idea how I am feeling.					
I feel ashamed with myself for feeling this way.					
I am having difficulty doing the things I need to do right now.					
I believe that I will continue feeling this way for a long time.					
I care about what I am feeling.					
I am angry with myself for feeling this way.					
I am having difficulty controlling my behaviors.					
I am confused about how I feel.					
I believe that I am going to end up feeling very depressed.					
I am taking time to figure out what I am really feeling.					
My emotions feel out of control.					
I am irritated with myself for feeling this way.					
I believe that my feelings are valid and important.					
I feel like I'm a weak person for feeling this way.					
My emotions feel overwhelming.					

9. Did any other stressors (e.g., you got in a fight with a friend or you got a bad grade) occur since the last prompt?

a. Yes

i. If yes, briefly describe what happened.

- b. No
10. Since the last prompt, did you engage in any of the following behaviors to manage your distress?
- a. Exercise
 - b. Meditate
 - c. Spend time with friends or family
 - d. Listen to music
 - e. Read a book
 - f. Write in a journal
 - g. Self-care practices
 - h. Participate in a hobby
 - i. Distract myself
 - j. Went on social media
 - k. Watched tv
 - l. Other
 - m. None
11. Since the last prompt, did you use any of the following substances for the purpose of getting high, not due to prescribed medication? (Check all that apply)
- a. Alcohol
 - b. Nicotine
 - c. Cannabis (e.g., marijuana, weed)
 - d. Hallucinogens (e.g., mushrooms, LSD)
 - e. Non-prescribed medication (e.g., amphetamines, Ritalin, Adderall)

- f. Club drugs (e.g., MDMA, ecstasy, molly)
 - g. Cocaine
 - h. Opiates (e.g., heroin, morphine)
 - i. Methamphetamine
 - j. Xanax or Klonopin
 - k. Other substances
12. If yes to alcohol, how many standard drinks did you consume since the last prompt? One standard drink is equivalent to one 12 oz beer or wine cooler, one 5 oz glass of wine, one cocktail, or one shot (1.25 oz) of hard liquor.
13. If yes to alcohol, approximately how many hours did you spend drinking? (e.g., if you started drinking at 4 pm and stopped at 10 pm, that would equal 6 hours of drinking)
14. If yes to nicotine, how many cigarettes or cigars did you smoke since the last prompt?
15. If yes to nicotine, how many times did you use nicotine via e-cigarettes, hookah, or chew since the last prompt?
16. If yes to anything else on substance list, how much of those substances did you use?
17. Which of the following describes your reason(s) for using substances? Check all that apply.
- a. To forget your worries.
 - b. Because your friends pressure you to use substances.
 - c. Because it helps you enjoy a party.
 - d. Because it helps you when you feel depressed or nervous.
 - e. To be sociable.
 - f. To cheer up when you are in a bad mood.

- g. Because you like the feeling.
- h. So that others won't kid you about not using substances
- i. Because it's exciting.
- j. To get high.
- k. Because it makes social gatherings more fun.
- l. To fit in with a group you like.
- m. Because it gives you a pleasant feeling.
- n. Because it improves parties and celebrations.
- o. Because you feel more self-confident and sure of yourself.
- p. To celebrate a special occasion with friends.
- q. To forget about your problems.
- r. Because it's fun.
- s. To be liked.
- t. So you won't feel left out.

18. If you did not use any substances since the last prompt, what was your reason not to?

Appendix D – Debriefing Survey

1. During the study, to what extent did your substance use change compared to before the study?
 - a) Decreased by a large amount
 - b) Decreased a little
 - c) Stayed the same
 - d) Increased a little
 - e) Increased by a large amount
2. How did the level of discrimination you experienced during the study compare to the level of discrimination you experience regularly?
 - a) The level of discrimination I experienced during the study was about less than the level of discrimination I usually experience.
 - b) The level of discrimination I experienced during the study was about equal to the level of discrimination I usually experience.
 - c) The level of discrimination I experienced during the study was greater than the level of discrimination I usually experience.
3. To what extent did participating in this study cause you any distress?
 - a) No distress
 - b) A little distress
 - c) Some distress
 - d) Moderate distress
 - e) Extreme distress
4. To what extent did you find it helpful to disclose these experiences here?

- a) Not helpful at all
 - b) A little helpful
 - c) Somewhat helpful
 - d) Very helpful
5. I think it is important that researchers ask LGBTQ+ individuals about these experiences
- a) Strongly disagree
 - b) Disagree
 - c) Neutral
 - d) Agree
 - e) Strongly agree
6. I want my participation in this study to be helpful to other LGBTQ+ individuals.
- a) Strongly disagree
 - b) Disagree
 - c) Neutral
 - d) Agree
 - e) Strongly agree
7. Overall, how was your experience participating in this study?
8. To what extent did the pacing and frequency of surveys feel doable?
- a. Too many, not doable at all
 - b. A bit too many, but reasonably doable
 - c. Just the right amount
 - d. Not enough questions

9. Are you in need of any further resources to help you cope with the things discussed in this study?
10. What do you think it would be helpful for researchers to know about your experience and how we can make surveys more useful, more accessible, and more doable for LGBTQ+ participants?

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