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Emotion Regulation Moderates Associations between Discrimination and Cannabis Use Patterns among Sexual Minority Young Adult Women

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ABSTRACT

Background: Sexual minority young adults (SMYAs) experience discrimination and have high cannabis use prevalence. Discrimination may be associated with cannabis use, including hazardous use and co-use with tobacco, depending on emotion regulation and gender. **Methods:** Fall 2020 survey data assessed discrimination, use frequency of emotion regulation strategies (i.e., cognitive reappraisal, expressive suppression), current cannabis use, hazardous use, and cannabis-tobacco dual use among SMYAs (age 18-34) in 6 United States metropolitan areas (women: n=450, M_{age} =24.1, SD=4.7, 69.6% bisexual, 18.2% lesbian/gay, 12.2% other; men: n=254, M_{age}=24.7, SD=4.5, 33.5% bisexual, 54.3% gay, 12.2% other). Multivariable logistic regression examined the moderating roles of cognitive reappraisal and expressive suppression on associations of discrimination with cannabis use outcomes, stratified by gender and adjusted for age, race and ethnicity, and employment. **Results:** Among SMYA women, 89.5% experienced any discrimination; 53.1% reported current cannabis use, of whom 49.4% and 47.7% reported hazardous use and cannabis-tobacco dual use, respectively. Adjusting for sociodemographics, experiencing greater discrimination was associated with greater odds of hazardous cannabis use (aOR=1.08, 95% CI [1.02, 1.15]) and cannabis-tobacco dual use (aOR=1.04, 95% CI [1.01, 1.08]) among SMYA women with greater use of expressive suppression. Among SMYA men, 83.9% experienced any discrimination; 49.2% reported current cannabis use, of whom 55.2% and 44.0% reported hazardous use and cannabis-tobacco dual use. Discrimination and emotion regulation were unrelated to cannabis use outcomes among men. **Conclusions:** Given high rates of discrimination experiences among SMYAs, emotion regulation skills training may empower SMYAs, particularly women, to cope with discrimination without using cannabis.

Key words: = emotion regulation; sexual minority; cannabis; tobacco; discrimination; LGB; expressive suppression

Cannabis use and associated problems are more prevalent among sexual minority (SM) than heterosexual individuals. In a 2016-2017 survey of United States (U.S.) adults, significantly greater proportions of SM women (19.9% - 30.0%, varying by sexual orientation) and SM men (27.3% - 29.1%) reported current cannabis use, versus heterosexual women (6.0%) and heterosexual men (11.5%) (Gonzales, 2020). Cannabis use disparities by sexual orientation

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may be especially pronounced among young adults (YAs). In 2020, 37.0% of lesbian, gay, or bisexual (LGB) YAs (versus 26.1% of LGB adults age 26+) reported past-month cannabis use and 22.9% of LGB YAs (versus 13.6% of LGB adults age 26+) met criteria for cannabis use disorder in the past year (Substance Abuse and Mental Health Services Administration, 2022). Discrimination may contribute to cannabis use disparities observed among some minoritized populations (Feldstein Ewing et al., 2022). Moreover, among sexual minority adults, experiences of discrimination peak in young adulthood (Schuler et al., 2018). SM individuals may be particularly vulnerable to using cannabis to cope with discrimination during young adulthood.

Minority stress theory (Meyer, 2003) states that socially minoritized individuals, such as SM individuals, experience minority-specific stressors (e.g., prejudice, discrimination) that contribute to negative health outcomes. SM individuals may use cannabis to alleviate negative affect following an experience of discrimination (Dyar et al., 2022; Newberger et al., 2022). After experiencing discrimination, SM individuals may ruminate on the event and experience psychological distress (Hatzenbuehler, 2009). Cannabis has both euphoric and calming effects that may temporarily alleviate distress (National Institute on Drug Abuse, 2020). However, using cannabis to cope with discrimination and other stressors may lead to the development of more problematic use patterns, including more use sessions, greater intoxication, consuming a greater quantity of cannabis, and more use consequences, compared to using cannabis for non-coping reasons (Bonar et al., 2017; Dyar et al., 2022). Co-use of cannabis with tobacco products (Cohn et al., 2019) and with alcohol (Cohn et al., 2016) are also common problematic use patterns among young adults. However, examining co-use of cannabis and tobacco is of particular importance due to common underlying vulnerability factors between cannabis and tobacco use (Rabin & George, 2015) and common routes of administration (e.g., smoking, vaping). Some cessation strategies (e.g., discarding smoking and vaping paraphernalia, substituting gum or candy for substances) could help mitigate both cannabis and tobacco use. Among sexual and gender minority (SGM) individuals, experiencing greater discrimination is associated with greater odds of using multiple tobacco products (Budenz et al., 2022), which suggests the potential of co-use to cope with discrimination.

Emotion regulation may attenuate the association between discrimination, hazardous cannabis use (i.e., misuse and/or dependence) (Adamson et al., 2010), and co-use with tobacco. Emotion regulation refers to strategies used to influence the experience and expression of one's responses to situations, such as cognitive reappraisal (i.e., reframing one's thoughts around a situation before the emotional response occurs) and expressive suppression (i.e., inhibiting outward expression of the emotional response once it has occurred) (Gross, 1998; Gross & John, 2003). Cognitive reappraisal is typically more effective and adaptive than expressive suppression; thus, lesser use of cognitive reappraisal and/or greater use of expressive suppression may reflect emotion dysregulation, or difficulty identifying, selecting, and implementing an appropriate strategy (Gross, 2015).

Experiencing discrimination may tax individuals' emotion regulation ability. As a minority stressor, discrimination may prompt SM individuals to use cannabis to cope. In the general population, emotion dysregulation is associated with using cannabis to cope with stress and distress, and with experiencing more cannabis-related problems (Buckner et al., 2017; Bujarski et al., 2012; Cavalli & Cservenka, 2021; Lucke et al., 2021). The association of psychological distress with cannabis use is stronger among SGM than non-SGM individuals (Bränström & Pachankis, 2018), and experiencing discrimination is concurrently associated with cannabis use at the daily level among SM women and gender diverse individuals who report using cannabis to cope (Dyar et al., 2023). Ultimately, the effects of discrimination may compound over time, culminating in risk of harmful cannabis use patterns among SMYAs who have difficulty with emotion regulation.

Associations between discrimination, cannabis use, and emotion regulation may differ by gender. Studies have shown that, among SM men but not women, ever experiencing discrimination was associated with substance use disorders (Lee et al., 2016). Moreover, in the general population, emotion dysregulation was more strongly associated with problematic

cannabis use among men than women (Cavalli & Cservenka, 2023). However, other research has found that among women (relative to men), coping motives (i.e., intentionally using cannabis to manage difficult emotions or problems) are more strongly associated with cannabis use (Simons et al., 1998). Compared to among men, coping motives more strongly mediate distress intolerance and cannabis use-related problems among women (Bujarski et al., 2012), and emotion regulation is a stronger mediator in the relationship between cannabis use and mental health among women than men (Weidberg et al., 2023). These mixed findings underscore the need for more research addressing these associations. Moderation analyses may help identify subpopulations of SMYAs who could most benefit from targeted interventions to build emotion regulation skills.

This study examined associations between discrimination, emotion regulation, and cannabis use outcomes (i.e., current use, hazardous use, co-use with tobacco) among SMYAs in the U.S. We hypothesized that main effects of discrimination and emotion regulation on cannabis use outcomes would be qualified by significant interactions. Specifically, we predicted that experiencing more (vs. less) discrimination would be associated with greater odds of: a) current cannabis use, b) hazardous cannabis use, and c) co-use with tobacco, among SMYAs with: a) lower (vs. higher) use of cognitive reappraisal, and b) higher (vs. lower) use of expressive suppression.

METHODS

Participants and Procedures

This study analyzed survey data from a 2-year longitudinal study of YAs (aged 18-34) designed to examine correlates of cigarette and e-cigarette use among individuals recruited from 6 metropolitan statistical areas (MSAs: Atlanta, Boston, Minneapolis, Oklahoma City, San Diego, Seattle) with varied tobacco legislative contexts (Public Health Law Center, 2020). This study, detailed elsewhere (Berg, 2021), was approved by the George Washington University Institutional Review Board.

Participants were recruited in Fall 2018 and surveyed biannually until Fall 2020 (total of 5 waves). To recruit participants, advertisements were posted on Facebook and Reddit and targeted individuals by using indicators reflecting those eligible (i.e., ages 18-34, residing in one of the 6 MSAs, English speaking). After clicking on an ad, individuals were directed to a webpage with a study description, consent form, and eligibility screener. Eligible individuals then completed the online Wave 1 survey via Alchemer. Upon completion, participants were asked to confirm their participation in the study a week later. Other fraud prevention efforts included not disclosing eligibility requirements before screening and performing validity checks (e.g., duplicate IP addresses, email addresses, or phone numbers; illogical responses; unrealistically short survey completion time) prior to distributing incentives (Bauermeister et al., 2012; Sullivan et al., 2013). Purposive, quota-based sampling ensured the sample represented sufficient numbers of cigarette and e-cigarette users (roughly one-third each), roughly equal numbers of men and women, and 40% racial or ethnic minority (subgroup enrollment was capped by MSA).

Of the 10,433 individuals who clicked on ads, 9,847 consented, of whom 2,751 (27.9%) were excluded due to: (a) ineligibility (n=1,472) and/or (b) their subgroup target being met (n=1,279). Among the remaining 7,096 individuals, 48.8% (n=3,460) provided complete data, and 86.9% (n=3,006) confirmed participation (Berg, 2021). The current analyses involve the use of baseline sociodemographic data and Fall 2020 data (n=2,476, 82.4%), which assessed perceived discrimination, emotion regulation, and cannabis use outcomes. A greater proportion of men (versus women, χ^2=4.69, p=.030) dropped out of the study prior to the Fall 2020 wave. Moreover, those who dropped out prior to Fall 2020 were significantly younger in age (t= -2.66, p=.008). There were no significant differences in attrition based on sexual orientation, race, ethnicity, or employment. Current analyses focus on SM-identifying (i.e., gay/lesbian, bisexual, or another non-heterosexual identity) YAs with baseline and Fall 2020 data (N=450 women, N=254 men).

Measures

Sample Selection Variable: Sexual Orientation

Participants were asked, "Do you consider yourself: heterosexual or straight; gay or lesbian; bisexual; another sexual orientation; prefer not to answer." Those who reported gay or lesbian,

bisexual, or another sexual orientation were included in current analyses.

Stratification Variable: Gender

Participants were asked, "What is your gender: male; female; or other." Participants who selected "other" (n=68) were excluded from primary analyses due to stratification but explored in descriptive analyses.

Cannabis Use Outcomes

To assess current cannabis use, participants indicated whether they used cannabis ≥1 day of the past 30 days (yes, no). Among current cannabis users, hazardous cannabis use was assessed via The Cannabis Use Disorder Identification Test – Revised (CUDIT-R), which assesses cannabis consumption, misuse, and dependence. Scores were dichotomized such that scores of ≥8 indicate engagement in hazardous cannabis use (Adamson et al., 2010). Finally, among current cannabis users, a dichotomous variable was created for current cannabis-tobacco dual use, using data from past 30-day assessments of tobacco use (specifically cigarettes, e-cigarettes, traditional cigars, little cigars/cigarillos, hookah). Those who reported using any tobacco product ≥1 day of the past 30 days were coded as a current cannabis-tobacco dual user.

Primary Predictor: Discrimination

Participants completed the Everyday Discrimination Scale (Short Version) (Sternthal et al., 2011), a 6-item scale designed to measure the frequency of perceived discrimination across multiple domains on a 6-point scale (0=Never to 5=Almost every day). Sample items include: "In your day-to-day life how often have any of the following happened to you: you are treated with less courtesy or respect than other people; people act as if they think you are not smart." Responses were summed with higher scores indicating more frequent experiences of discrimination (α=.84).

Moderators: Emotion Regulation Strategies

Participants completed the Emotion Regulation Questionnaire (Gross & John, 2003), a 10-item scale designed to measure respondents' tendency to regulate their emotions in 2 ways: cognitive reappraisal (6 items) and expressive suppression (4 items) on a 7-point scale (1=Strongly disagree to 7=Strongly agree). Sample items include: "I control my emotions by changing the way I think about the situation I'm in" (reappraisal) and "I keep my emotions to myself" (suppression). Responses to each subscale were averaged with higher scores indicating greater cognitive reappraisal (α=.87) and expressive suppression (α=.80), respectively.

Sociodemographic Covariates

Participants self-reported their age (continuous variable), race (categorized as White, Black, Asian, or another race due to group sizes), ethnicity (Hispanic vs. non-Hispanic), and employment status (i.e., student, unemployed, employed full-time, employed part-time). Due to limited racial and ethnic variability among SM women and men, participants were categorized as non-Hispanic White versus racial or ethnic minority for primary analyses.

Data Analysis

All analyses were conducted among women (N=450) and men (N=254), separately, using Mplus version 8.8. First, bivariate analyses (i.e., Chi-square tests, independent samples t-tests) examined associations among sociodemographics (i.e., age, race, ethnicity, employment), discrimination, and emotion regulation strategies (i.e., cognitive reappraisal, expressive suppression) with cannabis use outcomes (i.e., current cannabis use, hazardous cannabis use, cannabis-tobacco dual use). Next, multivariable logistic regression models were built for each cannabis use outcome and included: 1) sociodemographic covariates; 2) discrimination and emotion regulation strategies; and 3) interactions between discrimination and emotion regulation strategies (i.e., discrimination X reappraisal, discrimination X suppression).

RESULTS

Discrimination, Emotion Regulation Strategies, and Cannabis Use Outcomes among Women

Among women (M_{age}=24.11 [SD=4.65]; 3.8% Black, 8.0% Asian, 12.4% another race, 10.0% Hispanic), 69.6% identified as bisexual, 18.2% lesbian, and 12.2% another sexual orientation (i.e., queer, pansexual, asexual). Additionally,

53.1% reported current cannabis use. Among those reporting current cannabis use, 49.4% and 47.7% reported hazardous cannabis use and cannabis-tobacco dual use, respectively. Moreover, 89.5% reported experiencing any discrimination. Use of cognitive reappraisal (M=4.53, SD=1.18) and expressive suppression (M=3.46, SD=1.40) averaged near the midpoint of the 7-point scale, with higher scores indicating greater use of each strategy. Bivariate analyses (Table 1) indicated that women who reported hazardous cannabis use (vs. no hazardous use) and cannabis-tobacco dual use (vs. no dual use) reported significantly greater discrimination frequency. Those who reported cannabis-tobacco dual use (vs. no dual use) were also more likely to indicate any (vs. no) discrimination and reported significantly greater suppression.

Multivariable logistic regressions indicated that, among women (Table 3, upper panel), greater discrimination predicted greater odds of hazardous cannabis use (aOR=1.06, 95% CI=1.01, 1.11) and cannabis-tobacco dual use (aOR=1.09, 95% CI=1.03, 1.15). A significant interaction among discrimination and suppression emerged for hazardous cannabis use (aOR=1.08, 95% CI=1.02, 1.15) and cannabis-tobacco dual use (aOR=1.04, 95% CI=1.01, 1.08), such that discrimination was associated with greater odds of both outcomes among women with higher levels of suppression (hazardous use: simple slope=0.51, p=.026; dual use: simple slope=0.63, p=.015), but not lower levels of suppression (hazardous use: simple slope=0.01, *ns*; dual use: simple slope=0.01, *ns*). Regarding sociodemographic correlates, older age (aOR=0.94, 95% CI=0.90-0.99) and being a student (vs. employed full-time; aOR=0.45, 95% CI=0.26, 0.80) were associated with lower odds of current cannabis use. Being unemployed (vs. employed full-time) was associated with greater odds of hazardous cannabis use (aOR=3.23, 95% CI=1.29, 8.12) and cannabis-tobacco dual use (aOR=3.65, 95% CI=1.37, 9.71). Being employed part-time (vs. full-time) was also associated with greater odds of cannabis-tobacco dual use (aOR=2.24, 95% CI=1.12, 4.49).

Discrimination, Emotion Regulation Strategies, and Cannabis Use Outcomes among Men

Among men (M_{age}=24.68 [SD=4.48]; 3.9% Black, 6.7% Asian, 9.8% another race, 13.0% Hispanic), 33.5% identified as bisexual, 54.3% gay, and 12.2% another sexual orientation (i.e., queer, pansexual, asexual). Additionally, 49.2% reported current cannabis use. Among those reporting current cannabis use, 55.2% and 44.0% reported hazardous cannabis use and cannabis-tobacco dual use, respectively. Moreover, 83.9% reported experiencing any discrimination. Similar to women, men's use of cognitive reappraisal (M=4.37, SD=1.17) and expressive suppression (M=3.81, SD=1.44) averaged around the scale's midpoint. Bivariate analyses (Table 2) indicated that a greater proportion of men employed part-time and a smaller proportion of men employed full-time reported hazardous cannabis use (vs. no hazardous use). Additionally, a greater proportion of men identifying as racial or ethnic minority reported current (vs. no) cannabis-tobacco dual use.

Multivariable logistic regressions (Table 3, lower panel) indicated no significant associations between discrimination or emotion regulation and cannabis use outcomes among men. With regard to sociodemographic correlates, men employed part-time (vs. full-time) displayed greater odds of hazardous cannabis use (aOR=5.36, 95% CI=1.66, 7.25) and those identifying as racial or ethnic minority (vs. non-Hispanic White) displayed greater odds of cannabis-tobacco dual use (aOR=2.47, 95% CI=1.02-5.99).

Sub-analyses: "Other" Reports for Gender

Of the 68 participants excluded from primary analyses due to reporting another gender (M_{age}=23.65 [SD=4.04]; 4.4% Black, 2.9% Asian, 16.2% another race, 10.9% Hispanic), 33.8% identified as bisexual, 23.5% gay or lesbian, and 42.6% another sexual orientation (i.e., queer, pansexual, asexual). Additionally, 97.1% reported experiencing any discrimination, and 52.9% reported current cannabis use, of whom 58.3% and 47.2% reported hazardous cannabis use and cannabis-tobacco dual use, respectively.

Table 1. *Bivariate Analyses Characterizing Cannabis Use Outcomes among SMYA Women*

		Current Cannabis Use			Hazardous Cannabis Use			Cannabis-Tobacco Dual Use		
Variables	**Total (N=450, 100.0%)**	**Yes (N=239, 53.1%)**	**No (N=211, 46.9%)**	**p**	**Yes (N=118, 49.4%)**	**No (N=121, 50.6%)**	**p**	**Yes (N=114, 47.7%)**	**No (N=125, 52.3%)**	**p**
Women Sociodemographics										
Age, M (SD)	24.11 (4.65)	23.79 (4.49)	24.46 (4.82)	.128	23.79 (4.35)	23.80 (4.63)	.981	**23.11 (4.47)**	**24.42 (4.42)**	**.025**
Race, N (%)				.050			.374			.069
White	341 (75.8)	187 (78.2)	154 (73.0)		87 (73.7)	100 (82.6)		81 (71.1)	106 (84.8)	
Black	17 (3.8)	4 (1.7)	13 (6.2)		2 (1.7)	2 (1.7)		2 (1.8)	2 (1.6)	
Asian	36 (8.0)	16 (6.7)	20 (9.5)		9 (7.6)	7 (5.8)		11 (9.6)	5 (4.0)	
Another race	56 (12.4)	32 (13.4)	24 (11.4)		20 (16.9)	12 (9.9)		20 (17.5)	12 (9.6)	
Hispanic, N (%)	49 (10.9)	29 (12.1)	20 (9.5)	.367	18 (15.3)	11 (9.1)	.145	12 (10.5)	17 (13.6)	.467
Racial or ethnic minority, N (%)	140 (31.1)	73 (30.5)	67 (31.8)	.782	**44 (37.3)**	**29 (24.0)**	**.025**	**42 (36.8)**	**31 (24.8)**	**.044**
Employment status, N (%)				**.002**			**.031**			**.002**
Student	110 (24.4)	**46 (19.2)**	**64 (30.3)**		23 (19.5)	23 (19.0)		**15 (13.2)**	**31 (24.8)**	
Unemployed	53 (11.8)	29 (12.1)	24 (11.4)		19 (16.1)	10 (8.3)		**19 (16.7)**	**10 (8.0)**	
Employed full-time	141 (31.3)	74 (31.0)	67 (31.8)		**27 (22.9)**	**47 (38.8)**		**28 (24.6)**	**46 (36.8)**	
Employed part-time	146 (32.4)	**90 (37.7)**	**56 (26.5)**		49 (41.5)	41 (33.9)		**52 (45.6)**	**38 (30.4)**	
Any discrimination, N (%)[a]	400 (89.5)	215 (90.0)	185 (88.9)	.727	110 (93.2)	105 (86.8)	.098	**110 (96.5)**	**105 (84.0)**	**.001**
Discrimination, M (SD)[b]	8.23 (5.64)	8.15 (5.53)	8.32 (5.77)	.743	**9.03 (5.29)**	**7.29 (5.64)**	**.015**	**9.54 (5.73)**	**6.88 (5.03)**	**<.001**
Cognitive reappraisal, M (SD)[c]	4.53 (1.18)	4.57 (1.20)	4.49 (1.16)	.479	4.60 (1.27)	4.54 (1.26)	.684	4.56 (1.20)	4.58 (1.20)	.876
Expressive suppression, M (SD)[c]	3.46 (1.40)	3.39 (1.40)	3.53 (1.39)	.268	3.45 (1.46)	3.33 (1.34)	.507	**3.63 (1.46)**	**3.17 (1.32)**	**.012**

Note. Bold values denote statistical significance at p<.05. [a]Assessed as experiencing any discrimination (≥ 1 discriminatory experience; vs. no discrimination). [b]Assessed on a scale of 0=Never to 5=Almost every day. [c]Assessed on a scale of 1=Strongly disagree to 7=Strongly agree.

Table 2. *Bivariate Analyses Characterizing Cannabis Use Outcomes among SMYA Men*

		Current Cannabis Use			Hazardous Cannabis Use			Cannabis-Tobacco Dual Use		
Variables	**Total (N=254, 100.0%)**	**Yes (N=125, 49.2%)**	**No (N=129, 49.2%)**	**p**	**Yes (N=69, 55.2%)**	**No (N=56, 44.8%)**	**p**	**Yes (N=55, 44.0%)**	**No (N=70, 56.0%)**	**p**
Men										
Sociodemographics										
Age, M (SD)	24.68 (4.48)	24.30 (4.57)	25.04 (4.39)	.192	24.07 (4.52)	24.59 (4.65)	.531	24.73 (4.90)	23.97 (4.29)	.360
Race, N (%)				.651			.830			.255
White	202 (79.5)	101 (80.8)	101 (78.3)		56 (81.2)	45 (80.4)		43 (78.2)	58 (82.9)	
Black	10 (3.9)	3 (2.4)	7 (5.4)		1 (1.4)	2 (3.6)		3 (5.5)	0 (0.0)	
Asian	17 (6.7)	8 (6.4)	9 (7.0)		4 (5.8)	4 (7.1)		3 (5.5)	5 (7.1)	
Another race	25 (9.8)	13 (10.4)	12 (9.3)		8 (11.6)	5 (8.9)		6 (10.9)	7 (10.0)	
Hispanic, N (%)	33 (13.0)	17 (13.6)	16 (12.4)	.777	9 (13.0)	8 (14.3)	.840	11 (20.0)	6 (8.6)	.064
Racial or ethnic minority, N (%)	71 (28.0)	34 (27.2)	37 (28.7)	.792	19 (27.5)	15 (26.8)	.925	**20 (36.4)**	**14 (20.0)**	**.041**
Employment status, N (%)				.393			**.046**			.784
Student	78 (30.7)	35 (28.0)	43 (33.3)		20 (29.0)	15 (26.8)		14 (25.5)	21 (30.0)	
Unemployed	14 (5.5)	9 (7.2)	5 (3.9)		5 (7.2)	4 (7.1)		3 (5.5)	6 (8.6)	
Employed full-time	116 (45.7)	55 (44.0)	61 (47.3)		**24 (34.8)**	**31 (55.4)**		25 (45.5)	30 (42.9)	
Employed part-time	46 (18.1)	26 (20.8)	20 (15.5)		**20 (29.0)**	**6 (10.7)**		13 (23.6)	13 (18.6)	
Any discrimination, N (%)[a]	208 (83.9)	103 (83.7)	105 (84.0)	.956	57 (83.8)	46 (83.6)	.978	45 (83.3)	58 (84.1)	.914
Discrimination, M (SD)[b]	7.61 (6.41)	7.33 (5.85)	7.89 (6.93)	.497	7.53 (5.45)	7.09 (6.36)	.681	7.74 (6.23)	7.01 (5.56)	.497
Cognitive reappraisal, M (SD)[c]	4.37 (1.17)	4.51 (1.10)	4.24 (1.22)	.066	4.49 (0.95)	4.54 (1.27)	.776	4.69 (1.10)	4.37 (1.09)	.102
Expressive suppression, M (SD)[c]	3.81 (1.44)	3.79 (1.48)	3.82 (1.41)	.890	3.74 (1.52)	3.87 (1.44)	.622	3.81 (1.44)	3.79 (1.51)	.943

Note. Bold values denote statistical significance at p<.05. [a]Assessed as experiencing any discrimination (≥ 1 discriminatory experience; vs. no discrimination). [b]Assessed on a scale of 0=Never to 5=Almost every day. [c]Assessed on a scale of 1=Strongly disagree to 7=Strongly agree.

Table 3. *Multivariable Logistic Regression Analyses Predicting Current Cannabis Use, Hazardous Cannabis Use, and Cannabis-Tobacco Dual Use among Women and Men*

	Current Cannabis Use		Hazardous Cannabis Use		Cannabis-Tobacco Dual Use	
Variable	**aOR**	**95% CI**	**aOR**	**95% CI**	**aOR**	**95% CI**
Women						
Age	**0.94**	**0.90, 0.99**	1.02	0.96, 1.09	**0.92**	**0.86, 0.99**
Racial or ethnic minority	0.98	0.64, 1.50	1.73	0.94, 3.16	1.28	0.68, 2.40
Employment status (ref: Employed full-time)						
Student	**0.45**	**0.26, 0.80**	2.08	0.91, 4.76	0.68	0.28, 1.63
Unemployed	1.05	0.55, 2.00	**3.23**	**1.29, 8.12**	**3.65**	**1.37, 9.71**
Employed part-time	1.16	0.69, 1.94	**2.24**	**1.12, 4.49**	1.91	0.93, 3.94
Discrimination	0.99	0.96, 1.03	**1.06**	**1.01, 1.11**	**1.09**	**1.03, 1.15**
Cognitive Reappraisal	1.08	0.92, 1.28	1.06	0.85, 1.33	1.06	0.83, 1.35
Expressive Suppression	0.91	0.79, 1.04	1.02	0.83, 1.25	1.19	0.96, 1.47
Discrimination X Reappraisal	0.99	0.96, 1.02	0.99	0.95, 1.04	1.03	0.98, 1.09
Discrimination X Suppression	1.01	0.99, 1.04	**1.08**	**1.02, 1.15**	**1.04**	**1.01, 1.08**
Nagelkerke R^2		**.060**		**.106**		**.218**
Men						
Age	0.94	0.88, 1.01	1.02	0.92, 1.12	1.03	0.93, 1.13
Racial or ethnic minority	0.90	0.50, 1.61	0.99	0.41, 2.40	**2.47**	**1.02, 5.99**
Employment status (ref: Employed full-time)						
Student	0.65	0.32, 1.33	2.01	0.69, 5.88	0.65	0.22, 1.95
Unemployed	1.91	0.58, 6.34	1.70	0.40, 7.21	0.47	0.10, 2.25
Employed part-time	1.23	0.58, 2.63	**5.36**	**1.66, 7.25**	1.25	0.43, 3.60
Discrimination	0.99	0.95, 1.04	0.99	0.93, 1.06	1.02	0.95, 1.09
Cognitive Reappraisal	1.23	0.98, 1.55	0.90	0.63, 1.28	1.31	0.91, 1.89
Expressive Suppression	1.00	0.83, 1.20	0.95	0.72, 1.24	0.96	0.74, 1.26
Discrimination X Reappraisal	1.01	0.98, 1.04	1.01	0.96, 1.05	0.97	0.93, 1.02
Discrimination X Suppression	1.02	0.99, 1.05	1.03	0.98, 1.08	1.02	0.97, 1.07
Nagelkerke R^2		**.059**		**.108**		**.118**

Note. Bold values denote statistical significance at $p<.05$.

DISCUSSION

This study examined how emotion regulation may moderate associations between discrimination and cannabis use among SMYA women and men. Among SMYA women with greater use of expressive suppression (e.g., keeping emotions to oneself), which can indicate emotion dysregulation (Gross, 2015), greater discrimination was associated with greater odds of hazardous cannabis use and cannabis-tobacco dual use. Among SMYA women with lower use of expressive suppression, experiencing discrimination was not associated with cannabis use. Discrimination and emotion regulation were not significantly associated with cannabis use outcomes for SMYA men.

Associations of greater discrimination with greater odds of hazardous cannabis use and cannabis-tobacco dual use among SMYA women are consistent with extant literature suggesting that using cannabis to cope is associated with more frequent and problematic cannabis use patterns, at the daily level or event level (Bonar et al., 2017; Dyar et al., 2022). The present study supports the possibility of a cumulative effect, such that SMYA women who experience discrimination over an extended period of time may develop problematic or hazardous cannabis use patterns, which can develop into clinically significant cannabis use disorder (Adamson et al.,

2010). Moreover, co-using cannabis with tobacco is associated with nicotine dependence and poorer tobacco cessation outcomes among young adults (Dugas et al., 2022; Vogel et al., 2018). However, current cannabis use was not associated with discrimination, which might suggest other reasons for cannabis use, such as to think creatively, fit in socially, and enhance experiences (Simons et al., 1998).

As hypothesized, among SMYA women, discrimination was associated with cannabis use outcomes only for those reporting greater use of expressive suppression, potentially implying their use of cannabis as a coping mechanism. Those who suppress emotional expression may use cannabis to alleviate negative affect rather than effectively processing their emotions with others. Using cannabis may further exacerbate expressive suppression, as cannabis use is associated with deficits in emotion processing (Troup et al., 2016). SMYA women with stronger emotion regulation may cope with discrimination earlier in the emotion regulation process by removing themselves from the situation, modifying the situation, or redirecting their attention (Gross, 2015). Expression suppression and substance use are both examples of response modulation, which occurs when the response is well underway (Gross, 2015). Using cognitive reappraisal may also be an effective way to cope with discrimination; however, cognitive reappraisal did not moderate associations between discrimination and cannabis use, suggesting strategy selection even earlier (e.g., situation selection).

Interactions between discrimination and emotion regulation that would imply use of cannabis to cope were not observed among men. Use of cannabis to cope may be more prevalent among women than men (Simons et al., 1998). However, this study only measured use of cognitive reappraisal and use of expressive suppression. Prior research has found that among adults who use cannabis, associations between problematic cannabis use and several dimensions of emotion regulation were stronger among males than females. Specifically, males with more severe (versus less severe) problematic cannabis use reported greater overall emotion dysregulation, nonacceptance of emotional responses, difficulty with goal-oriented behavior and with impulse control, and limited access to emotion regulation strategies (Cavalli & Cservenka, 2023). SMYA men may use cannabis to cope with discrimination if they have difficulty using effective emotion regulation strategies in general. Future research measuring additional facets of emotion regulation (e.g., difficulty with impulse control) would enhance understanding of discrimination, emotion regulation, and cannabis use among SMYAs of all genders.

Notably, 89.5% of women and 83.9% of men reported experiencing discrimination. Cannabis use prevalence was also high, with 53.1% of women and 49.2% of men reporting current cannabis use. Discrimination has profound impacts on health and well-being, including but not limited to substance use (Meyer, 2003). Structural-level and individual-level discrimination toward SM individuals persist, as evidenced by widespread workplace harassment, housing discrimination, non-affirming medical and mental health care, and insufficient legal non-discrimination protections (Medina & Mahowald, 2023). Societal change is urgently needed to protect the health and well-being of the SM community. Emotion regulation skill development interventions may additionally empower SMYAs, especially women, to cope with discrimination without resorting to hazardous cannabis use patterns.

Limitations and Future Directions

First, this analysis was cross-sectional. We adjusted for several factors known to influence cannabis use outcomes. Reverse causation is possible (i.e., cannabis use leading to discrimination), or a third variable may influence discrimination, emotion regulation, and cannabis use. However, discrimination leading to cannabis use, with emotion regulation as a moderator, is both plausible and well-supported by the literature. Second, motives for cannabis use were not measured in this study. Results suggest that SMYA women with greater expressive suppression may use cannabis to cope with discrimination; however, future research should additionally measure cannabis use motives. Third, all participants resided in metropolitan areas in the U.S. While their states of residence had varying legislative contexts around cannabis use, it is unknown whether results generalize to individuals in rural areas or other countries.

Greater diversity would enable examination of differences in the strength or direction of associations between discrimination, emotion regulation, and cannabis use among SMYAs of different races and ethnicities. This is especially important because sexual identity may intersect with other minoritized identities. Survey items regarding discrimination were not specific to sexual identity, and some participants' responses may reflect experiences of discrimination on the basis of race, ethnicity, gender, or other characteristics. Future research could account for intersecting identities in analyses, or specifically ask about discrimination based on sexual identity.

Fourth, not all problematic cannabis use patterns were measured in this study. For example, future research should examine associations between discrimination, emotion regulation, frequent and/or heavy cannabis use, and co-use of cannabis with heavy alcohol use. Fifth, response options for "gender" in the baseline survey were "male," "female," and "other." Best practice is to measure sex and gender separately (National Academies of Sciences Engineering and Medicine et al., 2022). Some participants who selected "male" or "female" may be transgender men or women, who may experience discrimination based on their minoritized gender identity. The subsample of participants who selected "other" as their gender was too small to include in stratified analyses, but nearly all (97.1%) reported experiencing discrimination, and 52.9% reported current cannabis use. SMYAs who identify outside the gender binary should be included in future research. Finally, rates of cannabis use in this study should not be interpreted as prevalence estimates, as young adults with tobacco use were intentionally oversampled and may be more likely than their peers to use cannabis.

Conclusions

SMYAs experience discrimination on the basis of their minoritized identity that may tax their ability to effectively regulate their emotions without resorting to behaviors such as hazardous cannabis use patterns. This study found that among SMYA women who use expressive suppression to regulate their emotions, experiencing discrimination was associated with hazardous cannabis use and cannabis-tobacco co-use. Bolstering emotion regulation skills may help SMYA women cope with discrimination when the experience cannot be avoided.

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