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Perceived Discrimination, Coping Styles, and Internalizing Symptoms Among a Community Sample of Hispanic and Somali Adolescents

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A B S T R A C T

Purpose: Perceived discrimination, perceptions of receiving differential treatment due to negative attitudes, and stereotypes about one's racial/ethnic group can increase vulnerability to depression and anxiety. Although ethnic minority youth now represent over half of the U.S. youth population, few studies have investigated potential protective factors in the relationship between perceived discrimination and mental health across diverse ethnic minority immigrant youth from different cultural backgrounds.

Methods: We examined the association between perceived discrimination and past week symptoms of depression and anxiety and whether patterns of problem and emotion-focused coping moderate these relationships among Somali and Hispanic immigrant youth (N = 353) in an urban midwestern setting (mean age = 15; 53% male, 39% first generation, 75% low income). Path analysis models examined the main effects of perceived discrimination for depression and anxiety and whether problem and emotion-focused coping moderated these associations.

Results: Path analysis models suggest that perceived discrimination was positively associated with past week symptoms of depression (β = .37, standard error = .06) and anxiety (β = .16, standard error = .06) across ethnicity. However, adolescents who reported high levels of discrimination and who used predominantly problem-focused coping strategies experienced fewer internalizing problems than youth who relied predominantly on emotion-focused coping strategies.

Conclusions: Our findings suggest that strengthening youths' problem-focused coping strategies in the face of discriminatory stress is a promising health promotion and risk prevention approach.

IMPLICATIONS AND CONTRIBUTION

This study assessed the role of problem- and emotion-focused coping in the association between perceived discrimination and past week internalizing symptoms among a sample of ethnic minority adolescents. Although emotion-focused coping exacerbated the negative effects of perceived discrimination, problem-focused coping strategies mitigated the harmful consequences of perceived discrimination for internalizing symptoms.

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Robust cross-disciplinary research has demonstrated that discriminatory stressors can compromise the emotional and behavioral health of ethnic minority populations, that they are especially detrimental for children and adolescents [1], and that these stressors contribute to disparities in economic and health outcomes in adulthood [2]. In the context of adolescent development, perceived discrimination—perceptions of receiving differential treatment due to negative attitudes and stereotypes about one's specific racial/ethnic group—can undermine youths' positive self-image, sense of self-worth, and increase in vulnerability to depression, anxiety, and risky behaviors [1,3,4]. In fact, the harmful effects of discrimination are independent of, and extend beyond, the effects of perceived general stress [5] and are linked to biological markers of disease across age cohorts and ethnic backgrounds [6].

Investigating the role of perceived discrimination in adolescent health and development is critical given that estimates suggest that <40% of the U.S. youth population will be non-Hispanic white by 2050 and that currently more than half of school-aged youth identify as members of an ethnic minority group [7]. Despite these trends, most studies exploring what factors protect individuals from the harmful physiological and psychological effects of discrimination have been conducted among adults. According to diathesis-stress models, the consequences of the physiological wear and tear from psychosocial stressors such as perceived discrimination include damage to the stress response system and the processes that limit the intensity and duration of the stress response [8]. These disturbances can heighten susceptibility for internalizing (e.g., depression, anxiety) symptoms and perpetuate a cycle of distress and maladaptive behavior. Although building and investing in environments that facilitate multiculturalism and cultural tolerance is a long-term goal, research that can identify what factors promote resilient functioning has important implications for school and community-based prevention work.

Coping classifications

Coping strategies, the cognitive and behavioral tactics used by adolescents to adapt to stressful situations and conditions that strain or tax their available resources [9], can either exacerbate or limit the effects of stressors on adaptation and psychological or biological functioning. Given the individual-level variability in coping responses and that young peoples' coping strategies develop over time, examining their role in immigrant adolescents' mental and behavioral health will prove useful for the promotion of positive adaptation and psychosocial adjustment [10]. Coping strategies have been broadly classified as *problem* (*approach*) and *emotion* (*avoidant*) focused approaches. *Problem-focused* coping strategies directly address the stressor such as support seeking, cognitive reframing, evaluating the potential impact of specific actions on the situation, and planning and engaging in efforts to change or alter the problem. *Emotion-focused* coping strategies are aimed at reducing the psychological distress associated with a problem and include removing oneself from a situation, minimizing a situation, seeking alternative rewards, resignation, and engaging in behavioral distractions [10]. The coping literature suggests that most individuals cope with stressors by using a combination of problem- and emotion-focused coping strategies [9], that coping strategies interact [11], and that generally problem-focused coping strategies tend to be more effective and adaptive than emotion-focused approaches.

Coping with discriminatory stressors

Although emotion-focused coping strategies are associated with poorer psychological adjustment, anxiety, and depression [12] and problem-focused coping strategies can limit internalizing symptoms [13] and promote better academic and social competencies [14], few studies have investigated the link among perceived discrimination, coping strategies, and young people's mental health. The studies that have explored these relationships have yielded mixed results. Researchers have found that neither coping style mitigates the association between discriminatory stressors and well-being, that problem-focused coping can limit the negative effect of discrimination on self-esteem, and that emotion-focused coping strategies exacerbate the relationship between perceived discrimination and depressive symptoms among Mexican youth and Asian international students [15,16]. In contrast, Utsey et al. [17] and Brittian et al. [18] found that emotion-focused coping offsets the negative consequences of discrimination for self-esteem and life satisfaction among African American college students and reduced internalizing and externalizing symptoms among young Hispanic youth. However, the literature examining the potential protective effects of coping styles for internalizing problems among immigrant or immigrant descendant youth is extremely limited.

To fill this gap, the present study evaluated the role of emotion- and problem-focused coping approaches in the relationship between perceived discrimination and youths' symptoms of depression and anxiety among a sample of Hispanic and Somali youth—two immigrant groups particularly impacted by discriminatory stressors. The political controversies surrounding immigration and fears that Hispanics and Somalis may have ties to criminal or terrorist organizations in their country of origin, have exacerbated the negative stereotypes about Hispanic and African immigrants [19].

The present study

Currently, Hispanics and Somalis comprise 9% and <1% respectively of the Minneapolis/St. Paul twin cities and are the fastest growing immigrant communities in the metro area [20]. Because most immigration research has been conducted in the "Big Six" major immigrant receiving states (California, Florida, Texas, New York, New Jersey, and Illinois), an important next step is to extend this work to regions of the country with smaller immigrant populations. The present study took place in a midwestern setting that offered a unique opportunity to explore the role of perceived discrimination in internalizing symptoms among youth from two immigrant groups and the relative effect of problem- and emotion-focused coping styles in those relationships. We hypothesized that higher perceived discrimination would be associated with elevated symptoms of past week (H1) depression and (H2) anxiety and that problem-focused coping, but not emotion-focused coping, would offset the harmful effects of perceived discrimination for past week symptoms of (H3) depression and (H4) anxiety.

Methods

Participants

Participants were 163 Hispanic and 186 Somali first- and second-generation youth between the ages of 12 and 19 living in the Twin Cities metro area of Minnesota (Table 1). The sample had a mean age of 15.90 years (standard deviation [SD] = 1.57), approximately two thirds (61%) of respondents were born in the U.S. (second generation), and first-generation youth had been living in the U.S. for an average of 4.21 (SD = 1.38) years. Nearly all youth (95%) chose to take the survey in English (offered in English, Spanish, or Somali).

Procedures

The study team partnered with a federally qualified community healthcare center primarily serving underinsured, uninsured, and those covered by Medicaid to recruit and enroll youth and their parents/caregivers. Community University Health Care Center (CUHCC) serves a diverse patient population, of whom 22% report Hispanic (primarily Mexican) and 27% report African heritage. One Spanish-speaking and one Somali-speaking recruiter coordinated with administrative personnel to identify potential participants with appointments each week. Recruiters also maintained a table in the lobby with study information (flyers, assent and consent forms) in Spanish, English, and Somali to communicate with potential participants in their preferred language in a private space (office or quiet corner) before or after their appointment. Surveys were offered in all three languages and Somali and Hispanic multilingual recruiters were available to answer any questions about the study or consent and assent procedures in person or via phone. Prior to participating, parental consent and youth assent were provided; all youth who participated received a $20 gift card. All procedures were approved by the Institutional Review Board at the University of Minnesota.

Table 1
Descriptive statistics

Variable	Whole sample	Hispanic	Somali
	M (SD)		
Age	15.95 (1.57)[a]	15.70 (1.53)	16.17 (1.57)
	F (%)		
Gender			
Female	151 (46.99%)[a]	75 (46.29)	76 (40.86)
Male	197 (53.01%)	87 (53.71)	110 (59.14)
Ethnicity			
Hispanic	163 (46.7%)		
Somali	186 (53.3%)		
U.S. born			
Yes	219 (61.25)[a]	109 (66.66)	110 (59.14)
No	130 (38.75)	54 (33.34)	76 (40.86)
Free lunch			
Yes	263 (75.42)[a]	98 (67.12)	138 (83.13)
	M (SD)		
Family functioning	29.39 (5.08)	30.20 (4.86)	28.67 (5.20)
Problem-focused coping (mean scores)	14.83 (4.04)	14.47 (3.53)	15.17 (4.36)
Emotion-focused coping (mean scores)	13.85 (3.89)	13.77 (3.35)	13.92 (4.16)
Perceived discrimination	17.83 (7.54)[a]	16.27 (5.41)	19.13 (6.91)
	M (SD)		
Depression	1.70 (.71)	1.75 (.66)	1.65 (.75)
Anxiety	1.59 (.92)	1.61 (.92)	1.58 (.92)

F = frequency; M = mean; SD = standard deviation.
[a] Significant differences across Hispanic and Somali youth.

Measures

Perceived discrimination was measured using the Everyday Discrimination Scale [21]. Each of the 10 items was preceded with "Sometimes people feel they are treated differently because of their ethnic or cultural background. How do people treat you?" Participants were asked to rate items such as "You are treated with less respect than other people" and "You or your family members are called names or insulted." Response options ranged from "often" (1) to "never" (4). Items were reverse coded, rescaled, and summed, with higher scores representing higher perceived discrimination (Combined sample α = .95; Somali α = .94; Hispanic α = .96).

Coping styles were assessed using the Coping Response Inventory [22]. The Coping Response Inventory instrument is used to assess which cognitive and behavioral coping strategies (problem- and emotion-focused coping) youth use most often. Each item is preceded by "The best way for you to deal with a problem is…" Sample items of *problem-focused* coping (24 items) include "I try to step back from the problem and think about it," "I ask a friend to help solve the problem," and "I try at least two different ways to solve the problem." Sample items of *emotion-focused* coping (24 items) include "I try not to think about the problem," "I get involved in new activities," and "I take a chance and do something risky." Response options ranged from "not at all" (0) to "Yes, fairly often" (4). Mean scores of problem-focused tactics (range 0–24, Combined sample α = .89; Somali α = .88; Hispanic α= .91) and emotion-focused tactics (range 0–24, Combined sample α = 91; Somali α = .88; Hispanic α = .93) were calculated.

Past week *anxiety* was measured using the Brief Symptom Inventory [23]. The questions asked youth how much symptoms such as "nervousness or shaking inside" and "feeling tense or keyed up" bothered them in the last week. Each item had a response option that ranged from "not at all" (1) to "extremely" (5). To allow for some responses to be missing, we calculated adjusted mean scores (range 1–5) as long as the participant responded to at least 7 of the 10 items (Combined sample α = .95; Somali α = .93 youth; Hispanic α = .96).

Depressive symptoms were measured using the Center for Epidemiologic Studies Depression Scale. This 20-item measure asks about the number of days in the past week that a person experienced depressive symptoms including feeling like "their life had been a failure" or they "could not get going," all positive items reverse coded. Response options range from "less than 1 day or never" (1) to "5–7 days" (4) [24]. To allow for some responses to be missing, we calculated adjusted mean scores (range 1–4) as long as the participant responded to at least 14 of the 20 items (Combined sample α = .91; Somali α = .90; Hispanic α = .95).

Covariates. Age was calculated in years from date of birth and *ethnicity* was assessed by asking youth to select all

that apply—Hispanic or Hispanic-American, Somali, and Somali-American. Socioeconomic status was measured using the proxy item, *free lunch*, "Do you receive a free or reduced-price lunch at school?" Because family processes can confound the relationship among stressors, coping, and mental health outcomes among youth, we controlled for youth's perception of *family functioning*, measured with the McMaster Family Assessment Device [25] that includes items such as "We are able to make decisions about how to solve problems" and "Planning family activities is difficult because we misunderstand each other."

Analyses

Our analyses proceeded in several steps. First, given that few studies have examined the relationship between perceived discrimination and internalizing symptoms across two distinct heritage groups, we examined the extent to which the confirmatory factor analysis (CFA) models for perceived discrimination, coping, depression, and anxiety fit the data equivalently using standard invariance testing procedures. We tested configural (overall model fit), metric (equal factor loadings), and scalar (equal item intercepts) invariance. The constrained and unconstrained models were compared by examining the differences in the comparative fit index (CFI) and root mean square error of approximation (RMSEA) between models [26,27]. Evidence for invariance across ethnicity was regarded as ΔCFI $< .01$ [26,28] and ΔRMSEA $< .015$ [26]. Additionally, some indices [e.g., Tucker Lewis Index (TLI) and RMSEA] incorporate a penalty for parsimony so that the more parsimonious model can fit the data better than can a less parsimonious model (i.e., the gain in parsimony is greater than the loss in fit). As such, we also considered a TLI (<.01) or RMSEA (<.015) which was as good as or better than that for the more complex model as support for the more parsimonious model.

Second, path analysis using the structural equation modeling framework examined the association among perceived discrimination, coping, and anxiety and depression, accounting for the covariance between dependent variables. Estimation for all models was performed using full information maximum likelihood to account for missing data. Four models were run sequentially. The first model assessed main effects, without moderation, among discrimination, problem- and emotion-focused coping, and past week symptoms of anxiety and depression adjusted for covariates. Model 2 assessed the two-way interaction between coping constructs (emotion coping $\times$ problem coping). Model 3 included all lower order interactions and Model 4 assessed the three-way interaction between discrimination and both coping constructs (discrimination $\times$ emotion coping $\times$ problem coping). Results are presented as standardized coefficients with standard errors (SEs) with an alpha $= .05$ used to determine statistical significance.

To graphically depict the role of coping strategies in the association between perceived discrimination and internalizing symptoms (p's <.05 to <.001), we calculated and described internalizing symptoms across the range of perceived discrimination scores at combinations of low (1 SD below the mean) and high (1 SD above the mean) levels of emotion- and problem-focused coping. Margins plots depict the average depression and anxiety symptoms across perceived discrimination scores at combinations of coping strategies (high emotion-low problem; high emotion-high problem; high emotion-low problem; high emotion-high problem). All analyses were performed in STATA version 15.

Results

Approximately half of the sample identified as male (53%), 39% were first generation, and 75% qualified for free lunch. As seen in Table 1, mean levels of problem-focused strategies (Somali 15.17; Hispanic 14.47), emotion-focused strategies (Somali 13.92; Hispanic 13.77), depression (Somali 1.75; Hispanic 1.65), and anxiety (Somali 1.58; Hispanic 1.61) did not vary by ethnicity or generation (p's $> .05$), although Somali youth reported higher levels of perceived discrimination than Hispanic youth ($p < .01$). Zero-order correlations of variables included in analyses are presented in Table 2.

Invariance testing for perceived discrimination, depression, and anxiety

Table 3 summarizes model fit indices for configural, metric, and scaler invariance by ethnicity. Configural, metric, and scalar invariance was supported for the perceived discrimination, coping, and depression constructs, while configural and metric invariance was supported for anxiety. A single factor structure for perceived discrimination, depression, and anxiety fits the data well across ethnicity. Following initial CFA modeling, modification indices suggested modeling the error variances of item "I felt lonely" and item "People were unfriendly" for the depression measure, item "People act as if you're not smart" and item "You receive poorer services than other people at restaurants" of the discrimination measure, and symptom "faintness, dizziness, or weakness" and 4 "nervousness or shakiness inside" for the anxiety measure. Using the cutoffs of ΔCFI $< .01$, ΔTLI $< .01$, and ΔRMSEA $< .015$, we found general support for scalar invariance by ethnicity for the depression and perceived discrimination constructs; however, the result for depression should be interpreted with caution. The ΔRMSEA $= .023$ for the scalar invariance test was a little high although ΔCFI $= .001$ and ΔTLI $= .003$ were acceptable. Similarly, the ΔRMSEA was large for anxiety although the ΔCFI $= .001$ and ΔTLI $= .004$ were within acceptable range when assessing metric invariance. A two-factor structure for coping had acceptable fit across ethnicity. Following initial CFA modeling, modification indices suggested modeling the error variances of item "Did you begin to spend more time in fun activities like sports, parties, and going shopping?" and item "Did you try to tell yourself things will be better?" and item "Did you try to deny how serious the problem really is?" and item "Did you lose hope that things will ever be the same?" Using the cutoffs of ΔCFI $< .01$, ΔTLI $< .01$, and ΔRMSEA $< .015$, we found support for scalar invariance by ethnicity for the two-factor coping solution.

Perceived discrimination, problem- and emotion-focused coping, and past week anxiety and depression

Path analysis using the structural equation modeling framework examined the association between perceived discrimination and anxiety and depression (Table 4). As hypothesized, perceived discrimination scores were positively and significantly associated with self-reported past week depression ($\beta = .37$, SE $=$ .06) and anxiety ($\beta = .16$, SE $= .06$). In the model assessing main effects (Model 1), emotion- and problem-focused strategies were not statistically associated with depression; however, higher

Table 2
Zero-order correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Perceived discrimination	1.000								
(2) Age	.211[a]	1.000							
(3) Gender	.074	.084	1.000						
(4) Ethnicity	.192[a]	.147[a]	−.128[a]	1.000					
(5) U.S. born	−.082	−.190[a]	.108[a]	−.078	1.000				
(6) Free lunch	.051	.029	.047	.186[a]	−.058	1.000			
(7) Family functioning	−.388[a]	−.093	.071	−.150[a]	.143[a]	−.000	1.000		
(8) Problem-focused coping	−.097	.010	.080	.085	.011	−.034	.301[a]	1.000	
(9) Emotion-focused coping	.047	.015	.066	.020	−.042	−.033	.019	.832[a]	1.000

[a] Shows significance at the .05 level.

emotion-focused coping was associated with elevated symptoms of anxiety ($\beta = .22$, SE = .10). The second model assessing whether problem- and emotion-focused strategies interact and are associated with internalizing symptoms included an interaction term (problem × emotion-focused strategies). Results suggest that patterns, or combinations of problem- and emotion-focused strategies, were statistically associated with depression ($p = .007$) and anxiety ($p < .003$).

Finally, a model investigating the potential protective effects of varying combinations of problem- and emotion-focused strategies in the perceived discrimination-internalizing symptoms relationships included all lower order interactions and a three-way interaction term (perceived discrimination × problem-focused coping × emotion-focused coping). Results indicate a synergistic relationship between perceived discrimination and coping styles for depression ($\beta = -1.97$, SE = .88) and anxiety ($\beta = -1.94$, SE = .92). As seen in Figure 1, at high levels of perceived discrimination, youth whose coping patterns were comprised of high emotion-focused strategies, whether paired with high problem-focused or low problem-focused coping, reported more past week symptoms of depression and anxiety than youth who preferred low problem + low emotion or high problem + low emotion-focused coping.

Discussion

This study had two aims; first, to examine the association between subjective perceptions of discrimination and past week symptoms of depression and anxiety and second, to assess whether coping strategies moderate these associations among Hispanic and Somali adolescents. That perceived discrimination was reported by the majority of the sample aligns with a large body of literature demonstrating that immigrant and immigrant descendant youth must manage the feelings elicited by the discriminatory acts of others as they navigate the normative developmental and social challenges of adolescence. Theoretical arguments and empirical evidence suggest that the mechanisms underlying the association between subjective experiences of discrimination and internalizing symptoms among ethnic minority and immigrant youth are the negative effects of discriminatory stressors on identity formation and coherence [29] social status, and ethnic identity, developmental processes that promote positive outcomes and healthy adaptation [30,31].

Despite the high proportion of youth from immigrant families who report discrimination, many do not develop significant internalizing and externalizing problems. Our findings provide compelling preliminary evidence that youths' coping strategies may be a key factor in achieving positive outcomes in the face of discriminatory stressors. Youth who reported high levels of perceived discrimination and preferred emotion-focused strategies relative to problem-focused strategies, or high levels of emotion- and problem-focused strategies, experienced more symptoms of depression and anxiety than youth who had other combinations of coping styles. These results mirror Noh and Kaspar's [32] that emotion-focused coping can exacerbate the relationship between perceived discrimination and depression, Kort-Butler's [33] results using nationally representative data,

Table 3
Summary of fit indices for models testing measurement invariance by ethnicity

	χ^2 (df)	$\Delta\chi^2$ (Δdf)	CFI	ΔCFI	TLI	ΔTLI	RMSEA	90% CI	SRMR
CES-D									
Configural	3.002 (2)	–	.998	–	.999	–	.056	.000–.176	.004
Metric	6.492 (5)	3.490 (3)	.999	.001	.998	.001	.043	.000–.124	.010
Scaler	6.822 (8)	.390 (3)	1.000	.001	1.001	.003	.020	.000–.008	.010
PD									
Configural	8.584 (2)	–	.994	–	.963	–	.141	.054–.245	.011
Metric	16.017 (5)	7.433 (3)	.990	.004	.975	.012	.116	.055–.182	.021
Scaler	23.212 (8)	7.195 (3)	.986	.004	.979	.004	.108	.058–.160	.021
Anxiety									
Configural	1.319 (2)	–	1.000	–	1.001	–	.000	.000–.137	.001
Metric	7.385 (5)	6.066 (3)	.999	.001	.997	.004	.054	.000–.130	.041
Scaler	29.679 (8)	22.294 (3)	.989	.010	.983	.014	.128	.081–.179	.041
Coping									
Configural	98.585 (34)	–	.932	–	.898	–	.109	.085–.135	.065
Metric	107.252 (40)	8.667 (6)	.929	.009	.901	.003	.103	.080–.127	.076
Scaler	118.393 (46)	11.141 (6)	.924	.005	.907	.006	.100	.078–.122	.076

CES-D = Center for Epidemiological Studies-Depression; df = degrees of freedom; CI = confidence interval; PD = perceived discrimination; SRMR = standardized root mean square.

Table 4
Standardized results of path analysis main effects (Model 1), two-way interaction of coping constructs (Model 2), lower order two-way interactions (Model 3), and three-way interaction (Model 4)

Outcome			Model 1			Model 2			Model 3			Model 4		
			B	SE	*p* value	B	SE	*p* value	B	SE	*p* value	B	SE	*p* value
Depression	←	Perceived discrimination	.37	.06	**<.001**									
	←	Emotion-focused coping	.10	.10	.32									
	←	Problem-focused coping	.03	.11	.78									
	←	Age	.01	.05	.89									
	←	Female	.15	.05	**.003**									
	←	Ethnicity	−.11	.06	.06									
	←	Free lunch	−.09	.05	.08									
	←	U.S. born	.07	.05	.17									
	←	Family functioning	.07	.06	.28									
	←	Problem × emotion coping	–	–	–	−.77	.28	**.007**	−.46	.29	.11			
	←	Discrimination × emotion coping	–	–	–	–	–	–	1.22	.45	**.007**			
	←	Discrimination × problem coping	–	–	–	–	–	–	−.28	.42	.50			
	←	Disc × problem × emotion coping	–	–	–	–	–	–	–	–	–	−1.93	.88	**.028**
Anxiety	←	Perceived discrimination	.16	.06	**.006**									
	←	Emotion-focused coping	.22	.10	**.028**									
	←	Problem-focused coping	−.14	.11	.20									
	←	Age	−.02	.05	.68									
	←	Female	.12	.05	**.015**									
	←	Ethnicity	−.07	.05	.18									
	←	Free lunch	−.05	.05	.38									
	←	U.S. born	−.01	.05	.82									
	←	Family functioning	−.33	.06	**<.001**									
	←	Problem × emotion coping	–	–	–	−.81	.27	**.003**	−.44	.28	.11			
	←	Discrimination × emotion coping	–	–	–	–	–	–	1.71	.43	**<.001**			
	←	Discrimination × problem coping	–	–	–	–	–	–	−.61	.40	.12			
	←	Disc × problem × emotion coping	–	–	–	–	–	–	–	–	–	−1.94	.92	**.035**

Estimates computed using full information maximum likelihood. Significant *p*-values in bold text.
SE = standard error.

and Edwards and Romero's [15] finding that problem-focused coping mitigated the negative effect of perceived discrimination on self-esteem.

Coping research suggests that the strategies people tend to use can vary by the type of stressor and domain of impact and that the most commonly used approaches may not necessarily be the most effective. For example, individuals who feel unable to directly address a situation/stressor or face a stressor that is beyond their ability to control (i.e., changing discriminatory attitudes or acts) tend to utilize emotion-focused strategies to manage emotional distress yet emotion-focused coping can increase risk for maladaptive behaviors such as substance use [34] and jeopardize mental health [35]. Among this sample, using predominantly emotion-focused strategies or even high levels of emotion-focused approaches in combination with problem-focused tactics, intensified the relationship between perceived discrimination and internalizing symptoms. A plausible explanation for this finding is that the frustration resulting from

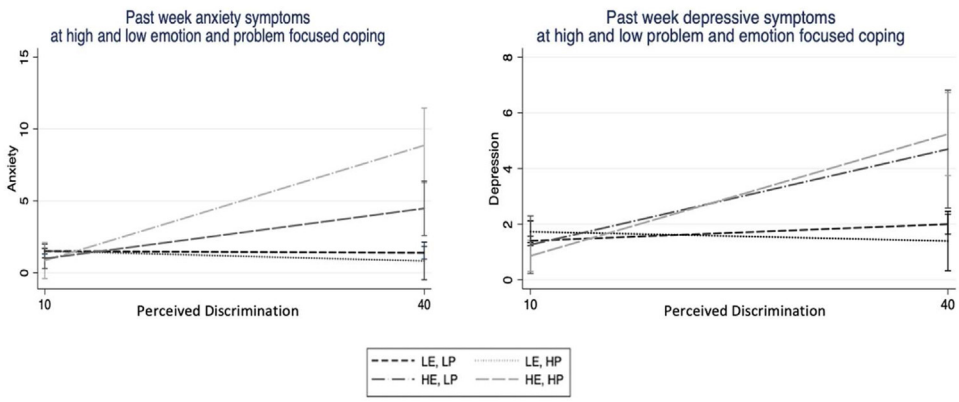

Figure 1. Perceived discrimination, coping, and past week internalizing symptoms.

coping efforts that do not produce better outcomes or alleviate symptoms aggravates psychological distress, perpetuates rumination, and contributes to the chronicity of mental and behavioral health issues.

That the application of problem-focused coping strategies ameliorated internalizing symptoms, while emotion-focused coping approaches amplified the association between perceived discrimination and anxiety and negative affect, complements research that suggests problem-focused coping alleviates emotional distress if a stressor seems manageable [36,37]. Moreover, our findings, in conjunction with evidence that problem-focused tactics such as actively seeking support can diminish the negative physiological and psychological impact of stressors [38], point toward the possibility that this approach is advantageous even when dealing with challenges beyond one's immediate control. Although our results highlight the benefits of teaching and encouraging youth to utilize problem-focused approaches even when contending with stressors that may be beyond their direct control, far more research is needed to understand the protective effects of specific coping strategies given that these can vary across setting and outcome.

Thus far, evaluation data from coping interventions developed for youth indicate that programs designed to improve the adoption of effective coping strategies can help youth control chronic disease and prevent the escalation of problem behaviors [39,40]. From a prevention perspective, our findings and those of the studies described, highlight the need to further study how coping patterns can minimize the far reaching and lasting consequences of discriminatory stressors and to what extent personal and environmental resources can be leveraged in support programs. Despite the need to further assess coping approaches across diverse immigrant groups, helping youth to effectively cope with negative stereotypes and the discriminatory attitudes of others could be a promising component of school- and community-based support services.

Limitations

Our findings should be considered in the context of the following limitations. First, this is a community-based convenience sample of adolescents with limited generalizability outside of this urban midwestern setting. Second, the cross-sectional nature of these data do not allow for causal conclusions or the investigation of change in coping approaches over multiple time points. Third, although we found modest support for measurement invariance of the brief symptom inventory for anxiety, there was strong evidence of measurement invariance for survey items assessing perceived discrimination, coping strategies, and depression across Hispanics and Somalis. Fourth, although the study was sufficiently powered to yield statistically valid results, we were not powered to assess the role of additional sociocultural stressors or subdimensions of problem and emotion-focused coping in these health outcomes. Finally, there may be unmeasured religious or cultural values, beliefs, and attitudes that influence what type of coping strategies youth adopt.

Despite these limitations, the inclusion of youth from two distinct heritage groups living in the same metropolitan area allowed us to assess the strength and direction of the relationships under study in an ethnically diverse sample. Second, these findings advance our understanding of adolescent coping processes in the face of discriminatory stress and provide useful information for public health researchers and practitioners.

In sum, our results contribute to the limited research exploring whether coping competencies can reduce the impact of discriminatory stressors among immigrant and immigrant descendant youth. More importantly, we provide persuasive evidence that school- and community-based prevention efforts that foster adaptive coping competencies could be instrumental in bolstering ethnic minority youths' ability to manage sociocultural challenges and achieve positive outcomes. Concurrent with these individual-level interventions, public health efforts that increase cultural tolerance and facilitate inclusive attitudes should be the cornerstones of initiatives designed to advance health equity. An important area of resilience research that needs greater attention is determining what cultural and environmental assets can offset the negative impact of discriminatory stressors and how they can be emphasized in prevention efforts during critical periods of development.

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