

Coping and Culture: The Protective Effects of Shift-&-Persist and Ethnic-Racial Identity on Depressive Symptoms in Latinx Youth

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Abstract:

Shift-&-persist is a coping strategy that has been shown to lead to positive health outcomes in low-SES youth but has not yet been examined with respect to psychological health. This study tests whether the shift-&-persist coping strategy works in tandem with ethnic-racial identity to protect against depressive symptoms in the face of two uncontrollable stressors: economic hardship and peer discrimination. In a sample of 175 Latinx youth (51.4% female; $M_{age} = 12.9$), shift-&-persist buffered the positive relation between economic hardship and depressive symptoms. In terms of peer discrimination, among youth who reported little use of shift and persist, discrimination was related to higher depressive symptoms, whereas youth who reported higher amounts of shift and persist (at and above the mean) were protected and did not evidence this association. However, among youth with high ethnic-racial identity, shift-&-persist failed to protect against the deleterious association between peer discrimination and depressive symptoms. These findings suggest that shift-&-persist is protective for Latinx youth, although the context in which it is protective changes based on the racialized/non-racialized nature of the stressor.

Keywords: Shift-&-persist | Ethnic-racial identity | Discrimination | Latinx youth

Article:

Introduction

Latinx youth living in the United States typically experience mental health disparities relative to other racial/ethnic groups, including greater numbers of depressive symptoms (Twenge and Nolen-Hoeksema 2002). At the same time, Latinx youth in immigrant families face a variety of

stressors (i.e., ethnic-racial discrimination; economic stress) that contribute to psychological risk (Stein et al. 2012). Given these disparities, it is essential to identify what factors can mitigate the negative effects of stressors in this growing population as 25% of the U.S. population will be Latinx by the year 2060 (Colby and Ortman 2014). A burgeoning literature highlights promotive and protective factors that limit the impact of these stressors on development and focuses primarily on ethnic-racial identity processes (Neblett et al. 2012). Health disparities research has led to the identification of a coping strategy, termed shift-&-persist, that mitigates the negative effects of low socioeconomic status (SES) on a variety of health outcomes (Chen and Miller 2012). It is posited that when low-SES youth *shift* (i.e., cognitively reappraise and accept uncontrollable life stressors) and *persist* (i.e., find meaning in life and hold positive beliefs about the future), these processes minimize the impact of uncontrollable life stressors such as poverty on health outcomes due to better regulation of the stress response system (Chen and Miller 2012).

Despite promising findings related to physical health, shift-&-persist processes have not yet been tested with psychological outcomes like depressive symptoms, and only one other study examined discrimination as the uncontrollable life stressor (Lam et al. 2018). Further, no past studies of shift-&-persist in minoritized populations considered how shift-&-persist processes intersect with ethnic-racial identity processes that are critical to positive psychosocial adjustment for minoritized adolescents. Adolescence is a pivotal period where ethnic-racial identity begins to solidify and where youth are able to employ increasingly complex coping strategies to combat life stressors (Rivas-Drake et al. 2014). Specifically, as youth transition into adolescence they increasingly eschew behavioral coping strategies such as physical escape and avoidance and become increasingly reliant on more complex cognitive coping strategies, using them as a first line of defense in attempting to deal with life stressors (Compas et al. 2017). It is therefore important to understand how cognitively-based coping strategies such as shift-&-persist and culturally protective factors such as ethnic-racial identity coalesce during this key developmental period to protect against stressors and facilitate positive psychosocial adjustment. To fill these gaps in the literature, this study tested how the shift-and-persist coping strategy interacts with ethnic-racial identity in predicting depressive symptoms in a sample of Latinx youth. This study examined whether the protective effects of shift-&-persist and ethnic-racial identity are evident in the face of two stressors: economic hardship, commonly examined in shift-&-persist work, and peer discrimination, a racialized stressor that which exerts harms over and above economic hardship (Stein et al. 2012).

Shift-&-persist in Response to Stressors

Shift-&-persist theory centers on the physiological and psychological benefits of secondary coping responses in the face of uncontrollable stressors that are enhanced in conjunction with an ability to find meaning and hope in aspects of life (Chen and Miller 2012). This set of responses is hypothesized to positively impact both acute and long-term biological and psychological reactivity to stress ultimately leading to positive health outcomes. Specifically, shifting, or cognitively reappraising stressful situations is posited to reduce inflammation, one of the human body's acute responses to stress, and cardiovascular responses to stress. This lower physiological reactivity that comes from shifting is theorized to, over time, decrease the likelihood of cardiovascular disease and its associated risk factors such as high blood pressure, cholesterol,

and triglycerides (Chen and Miller 2012). Additionally, maintaining optimism and endorsing a sense of meaning or purpose in life, also known as persisting, can help individuals appraise stressors as less threatening and find hope, stay strong, and adapt when faced with adversity, all of which may lead to more adaptive responses to stress and lower cardiovascular disease risk (Chen 2012).

Past work on shift-&-persist suggests that low SES youth, who often have minimal control over their life stressors, may benefit most from using shift-&-persist, whereas higher SES youth with more control over their life stressors may benefit more from active, primary coping strategies (Chen and Miller 2012). Supporting this notion, in a study of 121 youth diagnosed with asthma, shift-&-persist moderated the relation between SES and asthma outcomes such that low-SES youth who endorsed shift-&-persist strategies had less asthma inflammation at baseline as well as fewer missed school days and less rescue inhaler use at a 6-month follow-up relative to high-SES youth who did not benefit from shift-&-persist strategies (Chen et al. 2011). Another cross-sectional study of 122 adolescents and their parents found that shift-&-persist was associated with lower levels of chronic inflammation markers, C-reactive protein and Interleukin-6 (IL-6), for low-SES youth but not high SES youth (Chen et al. 2015). Finally, in a study of 1523 middle school children, low SES was associated with high BMI scores for those low in shift-&-persist, but there was no association between SES and BMI for those high in shift-&-persist, implying that shift-&-persist is protective against obesity for low-SES youth (Kallem et al. 2013). These findings support Chen's (2012) assertion that the combination of shifting and persisting leads to better physiological outcomes than either strategy in isolation because shift-&-persist is "postulated to represent a good fit with the environmental constraints that often affect those low in SES" (p. 191). This means that, theoretically, cognitively shifting attention away from uncontrollable stressors or reframing them, combined with maintaining optimism and hope for the future theoretically produces better health outcomes than would either shifting or persisting in isolation.

Although shift-&-persist is associated with positive physical health outcomes such as lower inflammation (Chen et al. 2015), a steeper decline in diurnal cortisol (Chen et al. 2019), and a lower body mass index (Kallem et al. 2013) in low-SES youth, research has just begun to examine whether the shift-&-persist coping strategy works in response to other types of uncontrollable stressors, such as unfair treatment. In a sample of 308 youth diagnosed with asthma, shift-&-persist moderated the relationship between unfair treatment and asthma profiles (control, quality of life, and daily symptoms) such that shift-&-persist was associated with better asthma profiles for those who reported high levels of discrimination (Lam et al. 2018). These results mirror what has been found with low-SES youth, giving preliminary evidence that the shift-&-persist strategy may be protective in response to multiple types of uncontrollable stressors. More research is needed, however, to determine whether the mechanisms by which shift-&-persist is protective remain the same across stressors for a mental health outcome like depressive symptoms. Although Chen and Miller (2012) highlight research showing the psychological benefit of cognitive reappraisal and meaning in life in isolation and go on to propose that the shift-&-persist coping strategy is beneficial for youths' psychological and physical well-being, research has not yet tested whether shift-&-persist moderates the link between uncontrollable stressors and negative mental health outcomes. This need is compounded

by a large body of work showing strong relationships between uncontrollable stressors such as discrimination and depressive symptoms in minoritized youth (e.g., Benner et al. 2018).

Ethnic-racial Identity

Ethnic-racial identity is a multidimensional construct that refers to the beliefs, attitudes, and behaviors endorsed and engaged in by youth related to their ethnic-racial group membership (Umaña-Taylor et al. 2014). Two important aspects of ethnic-racial identity moderate the relation between discrimination and youths' psychosocial adjustment: centrality (the how important race is in one's self-concept), and private regard (the positive or negative feelings towards one's ethnic-racial group; Sellers et al. 2006). Because minoritized youth are overrepresented in low-SES communities and face additional uncontrollable stressors such as ethnic-racial discrimination (Pahl and Way 2006) in addition to economic stressors (Mroczkowski and Sánchez 2015), it is paramount to utilize samples of minoritized youth to better understand how cultural protective factors such as ethnic-racial identity may protect youth from negative psychosocial outcomes in the face of different types of stressors.

In trying to better understand the factors that foster resilience in minoritized youth, it is important to investigate how ethnic-racial identity may interact with coping strategies such as shift-&-persist. Ethnic-racial identity is, on its own, often conceptualized as a resource that enables minoritized youth to cope with culturally-based stressors (Neblett et al. 2012). It is argued that youth with stronger ethnic-racial identities develop more effective coping skills because they have taken more time to think about and process issues related to race and ethnicity such as ethnic-racial discrimination (Sellers and Shelton 2003). Past research provides preliminary support for this argument. For example, higher levels of ethnic-racial identity were positively correlated to secondary coping among a diverse sample of 5423 youth, including those of African-American (23%) and Latinx (19%) backgrounds (Roberts et al. 1999). Similarly, higher ethnic-racial identity scores were associated with secondary coping strategies (e.g., cognitive restructuring) among a sample of 67 African-American seventh grade students (Zaff et al. 2002). In a study of Latinx youth, Umaña-Taylor et al. (2008) found that aspects of ethnic-racial identity were associated with using more primary, proactive coping strategies, although these proactive coping strategies did not mediate the relation between identity and self-esteem across time. Conversely, Seaton et al. (2014) found that avoidant coping partially mediates the relation between discrimination and depressive symptoms in a sample of Black youth. This pathway from avoidant coping to depressive symptoms was moderated by identity status, where Black youth espousing an oppressed minoritized ideology reported the strongest relations between avoidant coping and depressive symptoms. Thus, ethnic-racial identity processes serve an important role in the relation between discrimination and depressive symptoms, warranting further investigation.

While there is not currently robust empirical support for relations between ethnic-racial identity, coping, and psychosocial outcomes, the claim that ethnic-racial identity interacts with coping in facilitating positive development in minoritized youth is supported by strong theoretical models such as Spencer et al. (1997) Phenomenological Variant of Ecological Systems Theory and Neblett et al.'s (2012) conceptual model of youth protective factors. Neblett et al.'s model specifically proposes bidirectional relations between identity and coping processes that then

disrupt the relation between ethnic-racial discrimination and negative youth adjustment. In this way, there is emerging theoretical evidence that coping may be enhanced by ethnic-racial identity, and vice versa, meaning that both are, therefore, crucial in fostering resilience in minoritized youth.

In addition to coping more broadly, meaning in life—a critical component of shift-&-persist—may also be enhanced by the protective effects of ethnic-racial identity. Meaning in life encompasses two distinct subcomponents that revolve around (1) viewing one's life as meaningful or filled with purpose (i.e., presence of meaning), and (2) actively seeking out and exploring meaning in life (i.e., search for meaning; Steger et al. 2006). Conceptualized as a developmental asset for youth (Burrow et al. 2010), higher levels of meaning in life have been linked to better psychological health (Brassai et al. 2011), greater life satisfaction (Ho et al. 2010), and greater positive affect (King et al. 2006). Minoritized youth, as a function of their membership in a marginalized group, may have even greater motivation or reason to develop a strong meaning or purpose in life (Sumner et al. 2018). This notion coincides with work finding that, for minoritized youth, the process of developing one's ethnic-racial identity (e.g., exploring one's ethnic/racial background; building ethnic/racial pride) fosters a sense of purpose or meaning in life (Kiang and Fuligni 2010). Indeed, findings from previous research suggest that a clear association exists between meaning in life and ethnic-racial identity. For instance, in a sample of diverse 12th graders (36% Latinx), meaning in life correlated with ethnic-racial identity such that adolescents with higher identity endorsement reported greater levels of meaning in life in addition to more positive daily well-being and fewer feelings of daily distress (Kiang and Fuligni 2010). These findings thus underscore the relevance of ethnic-racial identity in the context of shift-&-persist and suggest that they may be synergistically related to positive adaptation in the face of stress, especially for depressive symptoms.

Taken together, although both coping and meaning in life are associated with ethnic-racial identity, no work has focused on how their role as part of a shift-&-persist coping strategy intersects with identity processes and different types of uncontrollable stressors. Shift-&-persist processes may operate similarly in Latinx samples in the face of universal stressors like economic hardship, but shift-&-persist may fail to confer the same benefits when youth face culturally-based, uncontrollable stressors such as discrimination. For these types of stressors, ethnic or racially-based processes may be an important additional resource to mitigate the impact these stressors have on depressive symptoms (Neblett et al. 2012). Supporting this notion, the relation between economic stress and depressive symptoms has been moderated by a negative attributional style in a sample of Latinx youth whereby negative attributional style was associated with greater depressive symptoms in the context of high economic stress. This relation, however, did not hold for culturally-based stressors (Stein et al. 2012). Taken together, these findings suggest that culturally-protective processes like ethnic-racial identity and effective coping processes such as shift-&-persist may both be needed to produce optimal psychological well-being in minoritized youth. However, the precise independent and potentially interactive effects of these variables have yet to be determined.

Current Study

The current study was derived from a larger project broadly examining factors impacting the psychosocial wellbeing of Latinx mother-child dyads in an emerging immigrant community in rural North Carolina. The current study extends the literature on both the shift-&-persist construct and resilience in Latinx youth in three ways. First, by testing whether shift-&-persist processes protect against a primary psychological outcome relevant for adolescents (i.e., depressive symptoms). Second, by examining two uncontrollable stressors (i.e., economic stress and peer discrimination). Third, by testing whether shift-&-persist and ethnic-racial identity processes work differentially based on type of stressor (i.e., economic vs. culturally-based) in a predominantly low-income sample of primarily U.S-born Latinx youth in immigrant families.

Economic stress has the potential to negatively affect all youth regardless of ethnic or racial background. Thus, it was hypothesized that shift-&-persist would protect against depressive symptoms in the face of high economic hardship, whereas the three-way interaction between shift-&-persist, ethnic-racial identity, and economic stress would not be significant (Hypothesis 1). Because cultural protective factors are likely more important when youth are faced with culturally-based stressors such as ethnic-racial discrimination (Neblett et al. 2012), it was hypothesized that the three-way interaction between shift-&-persist, ethnic-racial identity, and discrimination would be significant such that high shift-&-persist and identity would be associated with the fewest depressive symptoms in the face of high levels of discrimination (Hypothesis 2). Because shift-&-persist and ethnic-racial identity were hypothesized to work in tandem (e.g., high identity and high shift-&-persist are together associated with the best outcomes in the context of ethnic-racial discrimination), significant two-way interactions between ethnic identity and economic hardship or discrimination were not expected.

Method

Participants

Participants were 175 Latinx adolescents (51.4% female; 48.6% male) recruited from two middle schools in a rural emerging immigrant community in North Carolina. These adolescents were 12.9 years of age on average (range = 10–15 years), and 86% reported being born in the U.S. For those not born in the U.S., the average age of immigration was 4.25 years old (range = 0–12 years). The median annual household income for this sample was \$24,999.50, with 80.8% of households earning \$30,000 or less. Participants were recruited in the summers of 2013, 2014, and 2015.

Procedure

After receiving IRB approval, participants were recruited using call lists of 7th and 8th grade students at two rural middle schools in an emerging immigrant community in North Carolina. Trained research assistants visited the homes of eligible families, obtained consent from parents, assent from the adolescents, and used computers supplied by the research team to administer questionnaires in English or Spanish depending on the adolescent's language preferences (only 2 completed in Spanish). Assessment took approximately 2 h to complete and adolescents received a \$10 gift card for their participation (see Author cite, 2018 for detailed methods).

Measures

Shift-&-persist. Based on past theoretical work suggesting that shift and persist have the greatest impact when working in tandem and as done in previous research (Lam et al. 2018), items from two different measures were combined to create a measure of shift-&-persist. Eight items from the positive reinterpretation and growth and the acceptance subscales of the COPE inventory (Carver et al. 1989) and five items from the presence subscale of the Meaning in Life questionnaire (Steger et al. 2006) were used to capture the shift-&-persist construct. Sample items from the COPE include “I look for something good in what is happening” and “I learn to live with it” while sample items from the Meaning in Life questionnaire include “My life has a clear sense of purpose” and “I have a good sense of what makes my life meaningful.” To further validate this measure, a principal components analysis with an oblique rotation requesting two components, one for shift and one for persist, was conducted (see Supplemental materials for more information). This measure of shift-&-persist closely mirrored the most current measure of shift-&-persist created by Lam et al. (2018), which included sample items such as “I feel useful in life” and “when something doesn’t turn out the way I want, I think about what good things could come from the situation.” Similar to past work, summary scores of shift and persist, which were significantly positively correlated with each other ($r = 0.28, p < 0.001$) were standardized and averaged together so that higher scores indicated more use of the shift-&-persist coping strategy (Mello et al. 2019). This scale demonstrated good internal consistency ($\alpha = 0.80$).

Ethnic-racial identity. Ethnic-racial identity was assessed using the centrality and private regard subscales of a modified version of the Multidimensional Inventory of Black Identity (MIBI: Sellers et al. 1998). Items in this measure, which has been previously adapted for use in Latinx populations (Kiang et al. 2006), were changed from being specific to the Black experience (e.g., “I have a strong sense of belonging to Black people”) to items applicable across ethnic groups within the Latinx community (e.g., “I have a strong sense of belonging to my ethnic group). These 8 items were rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating stronger levels of identity. Consistent with past work by Kiang and Witkow (2018), and due to a strong positive correlation ($r = 0.82, p < 0.001$), the centrality and private regard subscales were averaged to create a composite variable measuring ethnic-racial identity. The composite showed good internal consistency ($\alpha = 0.92$).

Economic hardship. Perceived economic hardship was assessed using the Not Enough Money for Necessities subscale of the Psychological Sense of Economic Hardship scale (Barrera et al. 2001). Youth responded to this 7-item subscale on a scale from 1 (*strongly agree*) to 5 (*strongly disagree*), with higher numbers representing greater economic hardship. Sample items include “my family had enough money to afford leisure and recreational activities,” and “we had enough money to afford the kind of food we should have.” This subscale displayed good internal consistency ($\alpha = 0.92$).

Peer school-based discrimination. Peer discrimination was assessed using a 7-item adapted version of the school-based discrimination peer subscale (Way 1997). On this measure, youth rate how often they have experienced different types of mistreatment due to their ethnicity/race (e.g., being treated with less respect; being insulted or called names) on a scale from 1 (*never*) to 5 (*all the time*). This scale showed good internal consistency ($\alpha = 0.87$).

Youth depressive symptoms. Youth depressive symptoms were assessed using the Mood and Feelings Questionnaire (MFQ; Angold et al. 1995). Youth responded to this 33-item scale by indicating how often certain statements applied to them recently on a scale from 0 (*not true*) to 2 (*mostly true*). Scores were added to form a summary score, with higher numbers indicating a greater number of endorsed depressive symptoms. Sample items include “I felt lonely” and “I felt miserable or unhappy.” This scale showed good internal consistency ($\alpha = 0.94$).

Results

Data Analytic Plan and Descriptives

Primary study hypotheses were tested using two separate regression models within the structural equation modeling framework. The first model included economic hardship, shift-&-persist, and ethnic-racial identity as exogenous variables. The second set of analyses included peer discrimination, shift-&-persist, and ethnic-racial identity as exogenous variables. These models were run separately due to proposed differences in how identity interacts with economic hardship, a general stressor, and discrimination, a culturally-based stressor. This approach is consistent with past work testing the impact of culturally-based and non-culturally-based stressors (Stein et al. 2012). The shift-&-persist model included main effects and a two-way interaction between a stressor (economic hardship or discrimination) and the moderator (shift-&-persist). The shift-&-persist + identity model included the main effects, all the two-way interactions, and the 3-way interaction between the stressor, shift-&-persist, and ethnic-racial identity.¹ We also tested these models with age, gender, and parental income as covariates, but the inclusion of these variables did not significantly alter the results nor the interpretations and thus were removed for greater parsimony. All data were analyzed using Mplus version 8.1, which does not use stepwise or hierarchical regression procedures but rather enters predictor variables and interactions into a model simultaneously. Missing data in our predictors and our outcome (2.7% total data missing) were addressed using a version of Full Information Maximum Likelihood (FIML) that produces standard errors robust to non-normality (MLR: Muthén 2011). All predictors were mean-centered before creating interaction terms and inferential statistics. Means, standard deviations, and correlations for all study variables are reported in Table 1. Overall, the sample endorsed a fairly low number of depressive symptoms ($M = 11.04$, $SD = 11$, Range = 0–53). Economic hardship ($r = 0.33$, $p < 0.01$) and peer discrimination ($r = 0.49$, $p < 0.01$) were moderately and positively associated with depressive symptoms, while shift-&-persist was negatively associated with depressive symptoms ($r = -0.16$, $p < 0.05$). Ethnic-racial identity was not associated with depressive symptoms.

Primary Analyses

Economic hardship. Unstandardized regression coefficients, robust standard errors, and p -values for the shift-&-persist and shift-&-persist + identity models can be found in Table 2. Results from the shift-&-persist model suggest that economic hardship was associated with more

¹ A person-centered approach was first attempted using shift-&-persist, centrality, and private regard as predictors in a latent profile analysis but model indices indicated that, partly due to a small number of indicators and limited variability with respect to ethnic-racial identity, multiple, distinct profiles did not exist within the data.

depressive symptoms ($b = 4.43$, $SE = 1.11$, $p < 0.001$) alongside a significant interaction between shift-&-persist and economic hardship ($b = -3.91$, $SE = 1.67$, $p = 0.02$). Fig. 1 shows the simple slopes plotted at one standard deviation above and below the mean of economic hardship. Consistent with our hypotheses, the positive relation between economic hardship and depressive symptoms was attenuated for youth high in shift-&-persist ($b = 1.91$, $SE = .87$, $p = 0.03$) and accentuated for youth low in shift-&-persist ($b = 6.95$, $SE = 2.01$, $p = 0.001$). When ethnic-racial identity was added into the shift-&-persist + identity model, the interaction between economic hardship and shift-&-persist remained significant, but ethnic-racial identity was not directly associated with depressive symptoms ($b = -0.58$, $SE = 1.16$, $p = 0.62$) and there was not a three-way interaction between economic hardship, shift-&-persist, and identity ($b = 2.93$, $SE = 2.70$, $p = 0.28$).

Table 1. Means, standard deviations, and correlations for all study variables ($N = 175$)

Variable	Mean (SD)	(1)	(2)	(3)	(4)	(5)
(1) Depressive symptoms	11.04 (11.00)	1				
(2) Economic hardship	2.22 (0.79)	0.33**	1			
(3) Peer discrimination	1.67 (0.64)	0.49**	0.13	1		
(4) Shift-&-persist	3.14 (0.64)	-0.16*	-0.23**	-0.12	1	
(5) Ethnic-racial Identity	4.23 (0.70)	-0.09	-0.15	-0.04	0.27**	1

* $p < .05$, ** $p < .01$

Table 2. Multiple regression with economic hardship predicting youth-reported depressive symptoms

	<i>b</i>	<i>SE</i>	<i>p</i>
Shift-&-persist model ($R^2 = 0.16$, $p = 0.09$, $N = 174$)			
Economic hardship	4.43	1.11	<0.001
S&P	-0.99	1.29	0.44
Economic hardship \times S&P	-3.91	1.67	0.02
Shift-&-persist + identity model ($R^2 = 0.17$, $p = 0.08$, $N = 175$)			
Economic hardship	3.73	1.12	0.001
S&P	-0.75	1.27	0.55
ERI	-0.58	1.16	0.62
Economic hardship \times S&P	-4.87	1.73	0.005
Economic hardship \times ERI	1.36	2.07	0.51
S&P \times ERI	-0.18	2.63	0.94
Economic hardship \times S&P \times ERI	2.93	2.70	0.28

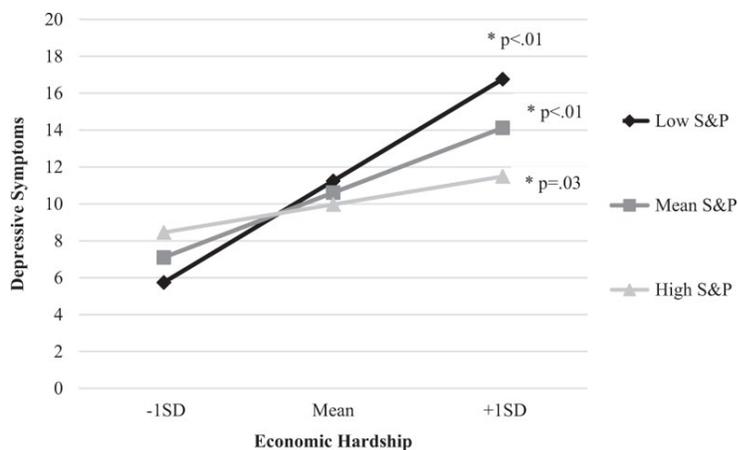


Fig. 1. Simple slopes for economic hardship moderated by shift-&-persist

Table 3. Multiple regression with peer discrimination predicting youth-reported depressive symptoms

	<i>b</i>	<i>SE</i>	<i>p</i>
Shift-&-persist model ($R^2 = 0.26, p < 0.001, N = 175$)			
Peer discrimination	7.95	1.47	<0.001
S&P	-1.71	1.35	0.21
S&P \times Peer discrimination	-2.12	2.67	0.43
Shift-&-persist + identity model ($R^2 = 0.29, p < 0.001, N = 175$)			
Peer discrimination	6.76	1.31	<0.001
S&P	-1.94	1.32	0.14
ERI	0.013	1.11	0.99
Peer discrimination \times S&P	-3.37	2.36	0.15
Peer discrimination \times ERI	4.07	2.33	0.08
S&P \times ERI	3.06	1.98	0.12
Peer discrimination \times S&P \times ERI	7.98	3.63	0.03

Peer discrimination. In the shift-&-persist model (Table 3), in which youth depressive symptoms were regressed on peer discrimination and shift-&-persist, higher peer discrimination was associated with more depressive symptoms ($b = 7.95, SE = 1.47, p < 0.001$), but the interaction between shift-&-persist and discrimination was not significant ($b = -2.12, SE = 2.67, p = 0.43$). When we introduced identity into the shift-&-persist + identity model, the main effect of peer discrimination remained significant ($b = 6.76, SE = 1.31, p < 0.001$) and, consistent with our hypothesis, the three-way interaction between discrimination, shift-&-persist, and identity was significant as well ($b = 7.98, SE = 3.63, p = 0.03$). However, the nature of the interaction was not as hypothesized. Contrary to our hypothesis, there was a positive association between peer discrimination and depressive symptoms for those high in ethnic-racial identity whether youth had low ($b = 8.18, SE = 1.77, p = 0.00$) or high shift-&-persist ($b = 11.00, SE = 3.78, p = 0.004$). For youth low in ethnic-racial identity, however, the relation between peer discrimination and depressive symptoms was non-significant when shift-&-persist was high ($b = -7.59, SE = 6.19, p = 0.22$), implying that high shift-&-persist protected against depressive symptoms in the face of discrimination only when youth have low ethnic-racial identity endorsement. Additionally, when ethnic-racial identity was low, the relation between discrimination and depressive symptoms was also non-significant when shift-&-persist was at the mean ($b = -1.84, SE = 4.05, p = 0.65$), but was significant at low levels of shift-&-persist ($b = 9.68, SE = 1.84, p < 0.001$). Together, these findings suggest that average to high levels of shift-&-persist are protective against discrimination when ethnic-racial identity is low. Fig. 2 illustrates the simple slopes plotted at one standard deviation above and below the mean of economic hardship when ethnic-racial identity is one standard deviation below the mean.

Sensitivity analyses. Some research has reported that positive ethnic-racial affect (private regard) can buffer the effect of discrimination on psychosocial outcomes Rivas-Drake et al. (2014). Thus, a sensitivity analysis was conducted wherein we replaced our measure of ethnic-racial identity (a combination of private regard and centrality) with private regard alone. If positive ethnic-racial affect was driving the 3-way interaction between shift-&-persist, ethnic-racial identity, and discrimination, then this 3-way interaction would be expected to remain significant after eliminating centrality from the measure of ethnic-racial identity. There was no main effect of private regard ($b = -0.07, p = 0.944$), no significant 2-way interactions, and a

marginal but non-significant 3-way interaction ($b = 5.16, p = 0.064$) between shift-&-persist, private regard, and peer discrimination. This implies that, in this sample, centrality and private regard both seem to play a role in influencing the relationship between discrimination and depressive symptoms.

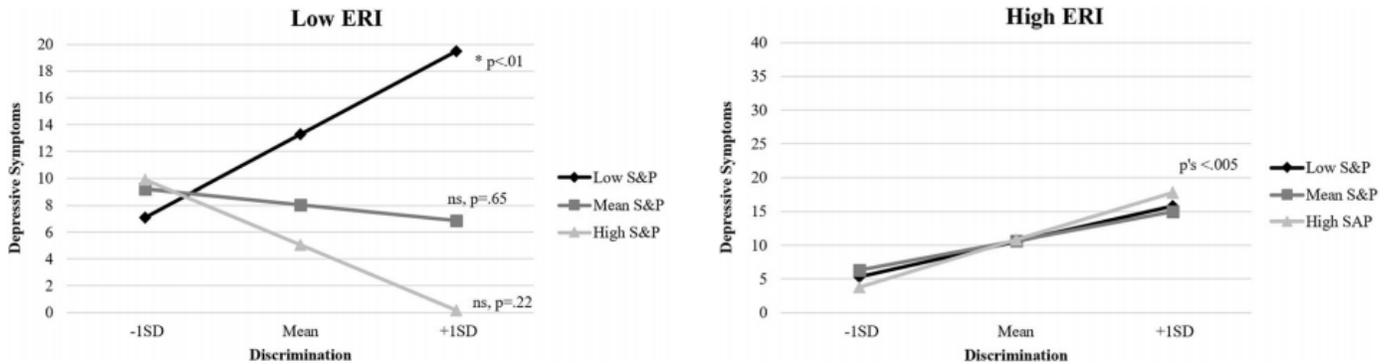


Fig. 2. Simple slopes for peer discrimination moderated by shift-&-persist at different levels of ethnic-racial identity

Discussion

Shift-&-persist is a secondary coping strategy involving cognitive reappraisal, positive future orientation, and meaning in life that has been shown to protect against negative health outcomes such as inflammation (Chen et al. 2015), obesity (Kallem et al. 2013), and asthma symptoms (Chen et al. 2011) in low-SES youth. While this coping strategy theoretically operates similarly with respect to mental health outcomes, this claim is as of yet empirically untested. Furthermore, minoritized youth, who are often overrepresented in low-SES communities, are subjected to additional, harmful uncontrollable stressors like ethnic-racial discrimination. Although cultural protective factors like ethnic-racial identity have been identified as assets that may protect against depressive symptoms in the face of discrimination (Neblett et al. 2012), no past work has examined how shift-&-persist may operate in tandem with ethnic-racial identity to protect against negative psychosocial outcomes in low-SES minoritized youth. Because early adolescence is a crucial period where youth increase their use of cognitive coping strategies (Compas et al. 2017) and begin to more intentionally explore and come to terms with what their ethnic-racial identity means to them Rivas-Drake et al. (2014), it is important to understand how shift-&-persist and ethnic-racial identity work to foster positive youth adjustment in the face of uncontrollable stressors like economic hardship and discrimination.

To address these gaps in the literature, the current study tested whether the shift-&-persist coping strategy was effective in protecting against depressive symptoms by examining how shift-&-persist operated as a moderator in response to both cultural and non-cultural stressors, and by examining how ethnic-racial identity interacted with shift-&-persist and stressors to predict depressive symptoms in a sample of low-income Latinx youth (80.8% of households earning less than \$30,000). Overall, Chen and Miller's (2012) assertion that shift-&-persist is associated with positive psychological functioning for low-SES youth was supported, although the beneficial effect depended on the type of stressor. Consistent with past work, shift-&-persist was protective for youth experiencing high levels of economic hardship, but the protective effect of shift-&-

persist for peer discrimination depended on Latinx youths' level of ethnic-racial identity. Contrary to what was hypothesized, the protective effect of shift-&-persist in the face of peer discrimination only emerged for youth at average and lower, but not greater, levels of ethnic-racial identity (i.e., private regard and ethnic-racial centrality).

Consistent with the first hypothesis proposing shift-&-persist as a moderator of the association between economic hardship and discrimination, results indicated that youth high on shift-&-persist were protected from the association between economic hardship and depression. This is consistent with past work suggesting that shift-&-persist is associated with positive physical health outcomes for low-SES youth (Kallem et al. 2013), and supports Chen and Miller's (2012) claim that the shift-&-persist framework extends to psychological outcomes. Also consistent with this hypothesis, there was no significant interaction between economic hardship, shift-&-persist, and ethnic-racial identity. Because economic hardship is a pervasive social stressor that is not explicitly culturally-based, ethnic-racial identity did not seem to confer additional protection against depressive symptoms.

Building upon more recent empirical work by Lam et al. (2018) examining shift-&-persist in the context of unfair treatment, this study aimed to determine whether shift-&-persist protected against peer discrimination. When factoring in ethnic-racial identity, results indicated that average and high levels of shift-&-persist were protective against peer discrimination, but only at low levels of ethnic-racial identity. That is, when youth felt less positively about their Latinx heritage and their heritage was less central to their identity, mean to high levels of shift-&-persist were associated with fewer depressive symptoms for Latinx youth exposed to high levels of discrimination. Although the results did not find that high shift-&-persist and high ethnic-racial identity work together and mitigate the impact of depressive symptoms as proposed in Hypothesis 2, the results instead suggested that shift-&-persist is most protective in response to peer discrimination when youth lack a strong, traditionally-protective identity. This finding, therefore, supports the notion that shift-&-persist, while adaptive for an uncontrollable stressor such as peer discrimination, does not complement identity, but instead acts as a supplement, providing protection against depression in the absence of a strong identity. Finally, this finding suggests that there are different mechanisms by which culturally and non-culturally-based uncontrollable stressors are associated with depressive symptoms in youth. In trying to better understand the factors that protect youth against negative psychological adjustment, it is important to further examine the complex interplay between shift-&-persist and ethnic-racial identity that may explain this finding.

One possible explanation for the surprising relation between identity and shift-&-persist in predicting youth depressive symptoms may be due to the "double-edged nature" (Yip 2018) of ethnic-racial identity. Although ethnic-racial identity is frequently thought to be protective against culturally-based stressors such as discrimination (Umaña-Taylor et al. 2014), other studies have found that the negative impacts of discrimination are worse among those with high levels of identity endorsement, particularly centrality (Burrow and Ong 2010). Although Yip (2018) concludes that there is not yet a consensus on how ethnic-racial identity provides protection and/or risk in the face of discrimination, these findings support the aforementioned theory that higher identity endorsement is associated with negative outcomes in the face of

discrimination, as discrimination was positively associated with depression regardless of shift-&-persist levels.

In the current study this study's measure of ethnic-racial identity was limited to two content-based components: centrality and private regard, which capture the degree to which identity is important to youths' self-concept (centrality) and the degree to which group membership is viewed positively by youth (private regard). Other process-based components of ethnic-racial identity such as exploration (the process of learning and making meaning of ethnic-racial heritage) and commitment (the sense of belonging to a specific ethnic-racial group) have also been found to moderate the relations between discrimination and depressive symptoms (Torres and Ong 2010). Because of the many challenges of operationalizing and measuring identity, future empirical work should examine the relations between shift-&-persist and different aspects of ethnic-racial identity in order to further clarify when and how the two interact to influence youths' psychological well-being.

Another explanation for these findings may lie in the relative utility of utilizing proactive, primary coping strategies rather than secondary coping strategies, such as shift-&-persist, in youth with strong ethnic-racial identities. This would be consistent with the finding by Seaton et al. (2014) whereby avoidant coping and strong ethnic-racial identity predicted worse depressive symptoms. To combat the deleterious effects of peer discrimination, youth may need to be armed not just with strong and central ethnic-racial identity, but also equipped with more active, primary coping resources that help youth feel that they are impacting the larger societal structure. For example, work by Hope and Spencer (2017) finds that civic engagement may be an adaptive coping response to discrimination, especially for youth with stronger ethnic-racial identities. Longitudinal work has shown identity resolution to be predictive of proactive coping over time in the face of discrimination among Latinx adolescents (Umaña-Taylor et al. 2008). Furthermore, in a study with Latinx college students, French and Chavez (2010) found that strong ethnic-racial identity alone was insufficient to overcome stereotype discrimination, further supporting arguments emphasizing the necessity of proactive coping in addition to ethnic-racial identity to buffer the negative impacts of discriminatory experiences (Sellers and Shelton 2003).

On the other hand, longitudinal examinations of the impacts of political activism among Black and Latinx college students have found that microaggressions were related to more stress and anxiety for Black students who were highly politically active but were related to less stress and fewer depressive symptoms for politically active Latinx college students (Hope et al. 2018). These findings imply that primary coping strategies may be associated with positive psychological adjustment only under certain conditions and, potentially, for certain ethnic-racial groups. At the same time, secondary coping strategies could be beneficial under certain circumstances, and perhaps even more important than primary coping strategies. Ultimately, this study offers evidence that in the face of high levels of discrimination, average to high levels of shift-&-persist, a secondary coping strategy, are important in protecting against depressive symptoms when ethnic-racial identity is lower. However, because the adoption of secondary coping strategies such as shift-&-persist does not protect against depressive symptoms in the face of discrimination when ethnic-racial is high, future work is needed to compare the utility of proactive, primary coping strategies with more passive secondary coping strategies like shift-&-persist in guarding against depressive symptoms at different levels of identity endorsement.

Furthermore, because many other psychological health outcomes beyond depression can manifest in response to these stressors, future work should continue to examine whether different coping strategies like shift-&-persist protect against the effects of various types of uncontrollable stressors on other psychological outcomes such as anxiety, self-esteem, and externalizing behaviors.

Further, the persist aspect of shift-&-persist may still prove to be beneficial to protect against discrimination especially if youth are able to continue to find meaning (e.g., potentially through civic engagement) and see a positive path to the future for themselves. Interestingly, there was a significant positive correlation between shift-&-persist and ethnic-racial identity in this sample of Latinx youth ($r = 0.27, p < 0.01$). Although not hypothesized, this significant correlation underscores the claim that these traditionally protective factors covary and together have downstream implications for psychological well-being in minoritized youth. This positive correlation is most likely due to the links between ethnic-racial identity and meaning in life. The presence of meaning in life has been shown to serve as a partial mediator of the relationship between identity and psychological adjustment in a diverse sample of 12th grade students (Kiang and Fuligni 2010). Significant positive correlations between ethnic-racial identity and meaning in life have also been found in a sample of African American adults (Ajibade et al. 2016). Ultimately, more work is needed to understand the relationship between these two interrelated constructs and the implications of this relationship for positive psychological well-being among minoritized youth and its role in protecting against discrimination.

This study is novel as it contributes to the field's understanding of shift-&-persist and resilience; however, it is not without limitations. The first limitation is the cross-sectional nature of our data. Although theories would suggest that utilizing the shift-&-persist coping strategy works across time to prevent the development of depressive symptoms when faced with economic hardship or discrimination, it is not possible to determine causality nor directionality from these cross-sectional analyses. Future work should take a more developmental approach in examining how high levels of shift-&-persist can protect against the development of depressive symptoms over time and examine the potential mediating role of shift-&-persist when youth with different levels of identity endorsement are exposed to uncontrollable stressors. Future longitudinal work should also consider how these relations are impacted by parental relationship quality and how the shift-&-persist strategy may be modeled by parents and transmitted over time from parent to child as suggested in Miller et al. (2014) work examining the impact of the Strong African American Families program.

Second, this project was not specifically designed to study shift-&-persist. Although the chosen variables mirror those used in Lam et al.'s (2018) shift-&-persist measure, the measure used in this study may not wholly capture the shift-&-persist construct. Although this measure effectively reflects the acceptance and cognitive reappraisal aspects of shift, for persist it focuses only on meaning in life and does not capture the sense of optimism or positive future orientation that has been theorized to be present in those that shift and persist. These facets of shift-&-persist may be particularly important to measure when examining depressive symptoms. Future work should attempt to incorporate items measuring positive future orientation and optimism into existing measures of shift-&-persist to increase the construct and predictive validity of our measures. Future work should also test the theoretical assertion that shift-&-persist leads to the

best outcomes for youth faced with uncontrollable stressors by examining shift-&-persist both separately and together, as was done in the current study.

Finally, this study solely assessed dispositional, individually-based assets that may help foster resilience in minoritized youth. Similar to how parenting may help instill the shift-&-persist coping strategy in youth (Miller et al. 2014), ethnic-racial socialization messages delivered by parents, which have been associated with resilience in minoritized populations (Brown and Tylka 2011), may also interact with shift-&-persist to foster resilience in the face of discrimination. Future work should examine the interplay of internal assets such as ethnic-racial identity and shift-&-persist with external assets such as positive parenting and socialization messages in contributing to psychosocial resilience in this population.

Conclusion

Although the shift-&-persist coping strategy has been theorized to confer upon marginalized youth psychological protection in the face of uncontrollable stressors (Chen and Miller 2012), this claim has not been empirically tested. This study tested whether shift-&-persist worked in tandem with ethnic-racial identity to protect low-SES Latinx youth against depressive symptoms in the face of uncontrollable stressors (i.e., economic hardship and discrimination). This was accomplished by testing two and three-way interactions to determine whether shift-&-persist and ethnic-racial identity moderated the relationship between the uncontrollable stressor and depressive symptoms. Results indicated that shift-&-persist was associated with fewer depressive symptoms for those facing high levels of economic hardship and for those high in peer discrimination but low in ethnic-racial identity. These novel findings provide support for the notion that the shift-&-persist coping strategy, which has been associated with positive physical health for low-SES youth, may be protective in the face of economic and cultural stressors for Latinx youth. These findings also provide support for the notion that ethnic-racial identity may act as a “double-edged sword” (Yip 2018), as endorsing a strong identity in the face of high discrimination was associated with the greatest number of depressive symptoms for our sample of Latinx youth, even when taking shift-&-persist into account. Finally, these findings contribute to the understanding of identity and positive youth development by illustrating that the use of the shift-&-persist coping strategy may lessen the impact of discrimination on depressive symptoms for adolescents who are still undertaking the developmental task of forming a strong, central identity. Future work should begin to examine how the shift-and-persist coping strategy may be associated with additional mental health outcomes in minoritized youth whilst also considering the influence of important cultural factors such as ethnic-racial identity.

Authors' Contributions. All authors contributed significantly intellectually to the current manuscript. K.C. helped conceive the current study from an existing data set, conducted the statistical analyses, and drafted the majority of the manuscript; G.L.S. helped conceive the current study from an existing data set, helped plan the statistical analyses, and edited the manuscript; M.Y.M.R. and M.C. conducted portions of the literature review and manuscript preparation; M.J. contributed to the analytic interpretation and manuscript preparation; L.M.G. and L.K. helped conceive and design the original study, secured funding, contributed to data collection, and helped draft the manuscript. All authors read and approved the final manuscript.

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Data Sharing and Declaration. The datasets generated and/or analyzed during the current study are not publicly available.

Conflict of Interest. The authors declare that they have no conflict of interest.

Ethical Approval. The La Familia Study was granted ethical approval by the Institutional Review Board (Protocol # 13-087) of the University of North Carolina at Greensboro.

Ethical Statements. All authors have complied with the American Psychology Association’s ethical standards in the treatment of our sample.

Informed Consent. Per IRB requirements, all study participants provide informed consent to be in the study.

Appendix

To justify measuring shift and persist as one construct, a principle components analysis with an oblique rotation (direct oblimin) was conducted in SPSS version 25. Sampling adequacy was acceptable (KMO = 0.79). Two components, a shift and a persist component, were requested, both producing eigenvalue’s over Kaiser’s criterion of 1. Together, these two components explained 46.49% of the variance in the 13 items. An oblique rotation, which allows the two factors to be correlated with each other (Field 2013), was conducted due to the proposed significant correlation between shift and persist. The rotated factor loadings, the post-rotation eigenvalues, the percentage of the variance explained by each factor, and the reliability of each factor are shown in the Table 4. Overall, the items that load onto each factor suggest that factor 1 represents shift, while factor 2 represents persist. When treated as subscales of the one construct shift-&-persist, these subscales were significantly positively correlated ($r = 0.279, p < 0.001$). Based on these findings, in conjunction with theoretical work asserting that shift and persist are most effective when operating in tandem (Chen and Miller 2012) and past empirical work measuring shift-&-persist as one construct (Lam et al. 2018), subsequent analyses were conducted using the 13-item measure of shift-&-persist.

Table 4. Principal components analysis for the shift-&-persist measure

Item	Original measure	Rotated factor loadings	
		Shift	Persist
I try to grow as a person as a result of the experience.	COPE-1	0.06	-0.42
I get used to the idea that it happened.	COPE-13	0.49	-0.14
I accept that this has happened and that it can’t be changed.	COPE-21	0.45	-0.21
I try to see it in a different light, to make it seem more positive.	COPE-29	0.73	0.20
I look for something good in what is happening.	COPE-38	0.70	0.03
I accept the reality of the fact that it happened.	COPE-44	0.62	-0.11
I learn to live with it.	COPE-54	0.68	-0.10

Item	Original measure	Rotated factor loadings	
		Shift	Persist
I learn something from the experience.	COPE-59	0.71	0.01
I understand my life's meaning.	MIL-1	0.06	-0.81
My life has a clear sense of purpose.	MIL-4	-0.07	-0.89
I have a good sense of what makes my life meaningful.	MIL-5	0.04	-0.82
I have discovered a satisfying life purpose.	MIL-6	-0.08	-0.77
My life has no clear purpose.	MIL-9*	0.40	0.10
Eigenvalues After Eotation	–	3.14	3.19
Percentage of Variance	–	28.59	17.90
α	–	0.75	0.85

Factor loadings over 0.4 appear in bold. *indicates reverse-scored item. (COPE: Carver et al. 1989) (MIL: Steger et al. 2006)

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