Impact of trauma exposure and acculturative stress on internalizing symptoms for recently arrived migrant-origin youth: Results from a community-based partnership

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Abstract:

Migrant youth face cultural challenges upon initial adjustment into the United States. Although there is considerable empirical evidence that trauma impacts interpersonal relations, there is a dearth of research examining the association between adverse events and the initial social and cultural exchange experience, and whether this is associated with psychological adjustment. This study examined self-report data for 87 newly arrived migrant-origin students in Grades 5–10 from Latin American, Caribbean, Asian, and African backgrounds attending a public alternative school in the Southeastern United States. Data were collected as part of a community-based partnership. The relation between cumulative trauma exposure and internalizing symptoms was fully mediated by acculturative stress ($p < .05$), suggesting prior trauma exposure negatively affected these students' capacity to navigate a new cultural milieu, which in turn is directly associated with internalizing symptoms. Behavioral health care practitioners can use screening procedures early in the academic year to detect which migrant students may be experiencing difficult cultural transitions.

Keywords: immigrants | migrant youth | acculturative stress | cumulative trauma | community-based partnership

Article:

1 INTRODUCTION

Migrant youth entering the United States have varied perimigration experiences. How do these experiences affect social relations within a new culture during the first year in the United States for refugee and immigrant preadolescent and adolescent youth? Are previously-experienced adverse events associated with acculturative stress and psychological adjustment during initial

adjustment to a new culture? Does a strong sense of belonging to a school environment serve as a protective factor during early acculturation?

During the 1990s, the United States experienced a dramatic change in the patterns of immigration, with a tremendous effect on the communities receiving these newcomers (Singer, 2004). Resettlement patterns have resulted in emerging communities of migrant populations throughout the nation. Indeed, the Southeastern United States has experienced rapid growth of migrant populations in both rural and urban locations (Helms, Hengstebeck, Rodriguez, Mendez, & Crosby, 2015; Singer, 2004). Singer (2004) showed that by the year 2000, close to one third of U.S. immigrants resided outside of well-established settlement communities, and instead resided in emerging or pre-emerging communities.

More recently, there has been a significant increase in unaccompanied minors in the United States (Krogstad, Gonzalez-Barrera, Hugo Lopez, 2014). Between 2004 and 2008, nearly 43% of refugees admitted into the United States were children (American Psychological Association [APA], 2010). Studies repeatedly show that migrants often experience premigration, migration, and postmigration stressors (e.g., Lustig et al., 2004). The APA endorses migrant youth's access to mental health services (APA, 1998) as well as research that "examines the broad range of war, displacement, and resettlement stressors that can affect the mental and behavioral health of refugee children" (APA, 2010, p. 11). Few studies have examined the initial transition into the United States (i.e., first year postmigration).

This study seeks to better understand whether exposure to adverse experiences affects early acculturation, whether this in turn is associated with psychological adjustment, and whether a strong sense of connectedness to one's school might buffer the effect of adverse events and difficult acculturation experiences on mental health outcomes for preadolescent and adolescent migrant youth. To maintain confidentiality, participants in the current study were not asked about political status. As such, *migrant* is used as an all-encompassing term to refer to both refugees and immigrants.

1.1 Cumulative trauma is associated with both internalizing symptoms and acculturative stress

Exposure to multiple or prolonged lifetime traumatic experiences is associated with greater internalizing symptoms such as anxiety and depressive symptoms in migrant youth (Fazel, Reed, Panter-Brick, & Stein, 2012; Papageorgiou et al., 2000; Reed, Fazel, Jones, Panter-Brick, & Stein, 2011). In migrant populations, a single trauma is the exception (Kira, 2010). These populations tend to experience multiple forms of, and repeated exposure to, potentially traumatic experiences during their lives (Wiese, 2010). The relation between multiple traumatic experiences and greater internalizing symptoms may occur because exposure to adversity early on may increase the risk for internalizing symptoms, and cumulative trauma over time further enhances vulnerability to negative effects on mental health (Suliman et al., 2009). However, vulnerability varies because exposure to adversities may also cultivate resilience and provide opportunities to develop coping strategies (Wiese, 2010).

Additionally, trauma may disrupt one's ability to effectively navigate social contexts and maintain interpersonal relationships within new cultural environments. Problems trusting others, a distorted understanding of social interactions, less well-developed social skills, anticipation of harm from others (see D'Andrea, Ford, Stolbach, Spinazzola, and van der Kolk, 2012), and a loss of social resources (Betancourt et al., 2015) sometimes result from trauma in childhood. Some trauma-exposed immigrant youth tend to show social difficulties in the transition to their new social milieu, including social isolation (Li, 2015) and weakened family attachments (Milner & Khawaja, 2010). It has been suggested (Wiese, 2010) and demonstrated (Beckerman & Corbett, 2008; Ellis, MacDonald, Lincoln, & Cabral, 2008) that individuals with more trauma exposure have the tendency to endorse higher levels of acculturative stress, or stress associated with navigating contact with members of a new culture (Berry, 2006). This is especially true for recently arrived migrants (Jamil, Nassar-McMillan, & Lambert, 2007). Given the mutually influential relation between stress, troubled relationships, and depression (Jaremka, Lindgren, & Kiecolt-Glase, 2013), it is no surprise that trauma exposure is often associated with interpersonal problems (Huh, Kim, Yu, & Chae, 2014), which may be especially problematic during initial adjustment to a new country.

1.2 Acculturative stress is associated with internalizing symptoms

Acculturative stressors associated with navigating an unfamiliar culture and learning a new language are related to internalizing symptoms (Knipscheer & Kleber, 2006; Nicholson, 1997). Beiser (2009) proposed that risk for poor mental health outcomes in refugees is determined partly by stressors. Acculturative stress is typically associated with anxiety and depressive symptoms (Berry, 2006) among individuals from a variety of cultural and ethnic backgrounds. For example, for youth living in the United States, more acculturative stress is associated with greater anxiety and depressive symptoms for Somali adolescent refuges (Ellis et al., 2008), depressive symptoms for Korean adolescents (Park, 2009), and anxiety for Hispanic adolescents (Suarez-Morales & Lopez, 2009). This is not an age-specific phenomenon: acculturative stress is associated with internalizing symptoms for migrant adults living in the United States, including Chinese (Wei et al., 2007) and Taiwanese (Ying & Han, 2006) graduate students, Latino immigrants (Hovey, 2000; Kiang, Grzywacz, Marín, Arcury, & Quandt, 2010), and Mexican farm workers (Hovey & Magaña, 2002).

1.3 The potential protective effect of school belonging

Educational institutions oftentimes play a crucial role for migrant youth, who tend to view school as an important and influential factor in their new lives (see Vedder & Horenczyk, 2006). Schools serve as safe havens (Fazel et al., 2012) and provide educational experiences that help students learn about their new culture by means of academic instruction. Schools also function as a primary context for developing relationships, thereby fulfilling a fundamental need for social relatedness (Cemalcilar, 2010). This context is especially salient for migrant youth adjusting to nuances of culture-specific practices and values (Schwartz, Unger, Zamboanga, & Szapocznik, 2010).

The extent to which the school experience is protective may depend on one's sense of school belonging while at school. Sense of school belonging refers to a student's feeling of connectedness and acceptance by members of a school (Goodenow, 1993). One study found that a stronger sense of school belonging was associated with fewer symptoms of depression and posttraumatic stress for Somali adolescents who had resided in the United States for about 6½ years (Kia-Keating & Ellis, 2007). When migrant youth transition to a new country, schools may provide the first and strongest context for social connectedness and acculturation opportunities, and a positive school experience may attenuate psychological adjustment difficulties.

1.4 Current study

It has been suggested that the cumulative effects of trauma and acculturative stress affect risk for negative mental health outcomes (Beckerman & Corbett, 2008). Acculturation involves social and cultural exchange processes (Bhatia & Ram, 2001). Greater trauma exposure may impede a youth's relational capacity to effectively navigate a new social and cultural milieu (manifested as greater acculturative stress), which in turn may be associated with increased internalizing symptoms during initial adjustment into the United States. This may be especially relevant within a multicultural setting; that is, given the potentially deleterious effect of trauma exposure on one's ability to respond to novel social and cultural demands, perhaps acculturative stress will mediate the relation between trauma exposure and internalizing symptoms for recently arrived migrant youth.

Although the association between lifetime trauma exposure and posttraumatic stress has been well documented in migrant populations (e.g., Ai, Peterson, & Ubelhor, 2002; Kolassa et al., 2010; Marshall, Schell, Elliott, Berthold, & Chun, 2005; Wiese, 2010), the relation between cumulative trauma and acculturative stress, sense of school belonging, and internalizing difficulties is understudied in youth samples, especially among those who have lived in the United States for only a brief time (i.e., less than one year). The current study seeks to clarify these relations, first, by examining the nature and frequency of prior traumatic events experienced by a culturally diverse group of newly arrived migrant youth, and then by investigating both mediation and moderated mediation models. We hypothesized that the relation between cumulative trauma exposure and internalizing symptoms will be partially mediated by acculturative stress (Figure 1). Additionally, the relation between acculturative stress and internalizing symptoms in this mediation model will be moderated by sense of school belonging such that school belongingness will buffer the effect of acculturative stress on internalizing symptoms (Figure 2).
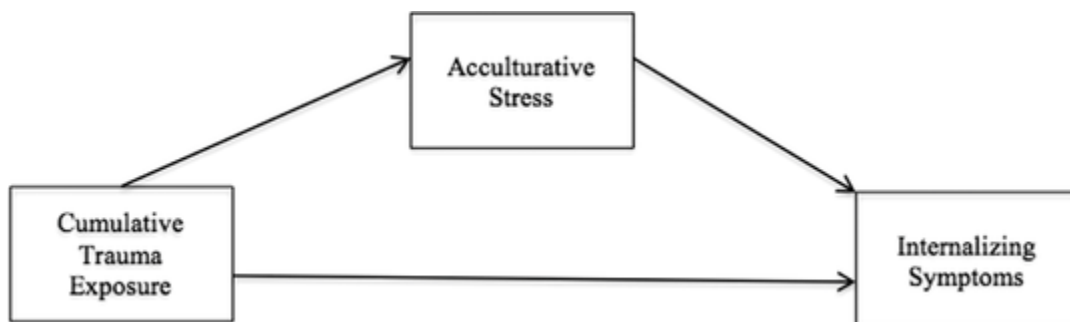
Figure 1. Partial mediation conceptual model
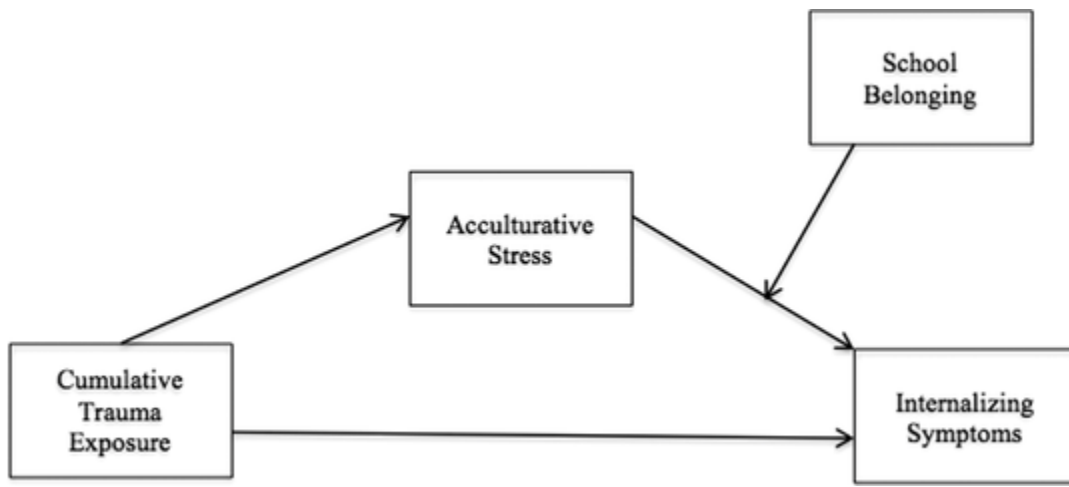
Figure 2. Moderated mediation conceptual model

2 METHOD

2.1 Participants

Youth participants (n = 87) attended an alternative public school established exclusively for newly arrived refugee and immigrant students in a resettlement community located within the Southeastern United States. Participants represented Grades 5 (8%), 6 (12%), 7 (17%), 8 (19%), 9 (32%), and 10 (12%), and about half (52%) were male. Participants originated from 20 different countries (see Table 1) made up of three continental regions, including Latin America and Caribbean (47%), Asia (43%), and Africa (10%). Table 1 follows the United Nations' Country and Area Codes for Statistical Use (United Nations, 2013). Information about migrant status (United Nations High Commissioner for Refugees, 2009) and birth date were not collected from participants, to protect confidentiality. All participants had resided in the United States for less than one year.

Table 1. Number of students (and percentage of sample) by continent, region, and country of origin

Location of origin and language proficiency	Continent	Region	Country
Africa	9 (10)		
Middle Africa		5 (6)	
Central African Republic (French)			2 (2)
Democratic Republic of the Congo (French)			3 (3)

Western Africa		4 (5)	
Ivory Coast (French)			1 (1)
Niger (French)			1 (1)
Togo (French)			2 (2)
Asia	37 (43)		
Eastern Asia		1 (1)	
Korea (English)			1 (1)
Southern Asia		18 (21)	
Nepal (Nepali)			9 (10)
Pakistan (Urdu)			9 (10)
South Eastern Asia		18 (21)	
Cambodia (English)			1 (1)
Myanmar (Burmese, Chin, and Karen)			10 (12)
Thailand (English)			7 (8)
Latin America and Caribbean	41 (47)		
Caribbean		16 (18)	
Cuba (Spanish)			2 (2)
Dominican Republic (Spanish)			3 (3)
Haiti (French)			6 (7)
Puerto Rico (Spanish)			5 (6)
Central America		22 (25)	
El Salvador (Spanish)			8 (9)
Guatemala (Spanish)			2 (2)
Mexico (Spanish)			12 (14)
South America		3 (3)	
Colombia (Spanish)			1 (1)
Peru (Spanish)			2 (2)

| Total sample size | 87 | 87 | 87 | |

Note. Percentages are rounded to the nearest whole number.

2.2 Procedures

The local institutional review board approved this study according to National Institutes of Health regulations relating to research involving human subjects, and we followed appropriate ethical guidelines for human participants. Youth participated in a screening assessment and research study during the 2011–2012 academic school year. Because migrants arrive into the United States throughout the year, this school follows a rolling admission model. As such, this study collected data from students once during the Fall semester (for students enrolled from August 2011 through October 2011) and once during the Spring semester (for students enrolled from November 2011 through May 2012).

In-house interpreters translated consent and assent documents from English into five languages for parents: Burmese, French, Nepali, and Spanish. English documents were also provided. Consents in primary home languages were sent home with students for caregivers to sign, and language interpreters made phone contact with caregivers to explain the nature of the study and consenting guidelines. The school social worker explained assenting procedures to student participants.

Students completed electronic self-report questionnaires in a computer lab in their school building. Students who spoke a common language (see Table 1) were pulled from class at the same time and completed questionnaires with an English-speaking staff member and language interpreter, if needed, both of whom had been proactively trained on the content and items of each questionnaire. Language interpreters were provided for students proficient in Burmese, Chin, French, Karen, Nepali, Spanish, and Urdu. No interpreter was provided if students were proficient in English. Electronic questionnaires appeared in English, with language interpreters orally translating each item. Staff members read directions aloud and monitored progress. Because of the sensitive nature of the questionnaires, staff members were trained to recognize and respond to student distress. Students were thanked for their time and chose a small incentive (e.g., puzzle, yo-yo) before returning to class. Overall, care was taken to engage in culturally competent communication and data collection, including the use of interpreters, checks for understanding, practice items, and clear and simple English (Rowe & Peterson, 2010). Similar methods have been employed in studies with migrant youth (e.g., Sonderegger & Barrett, 2004).

2.3 Measures

Questionnaires were selected based on demonstration of reliability, validity, and cultural appropriateness with migrant youth populations. Self-report procedures ensured questionnaires were accessible to students with diverse cultural backgrounds and a range of experience with technology. Students competed brief practice items for each questionnaire to become familiar with response requirements and address misunderstandings.

2.3.1 Trauma exposure

The Cumulative Trauma Scale-short form (CTS) screens for occurrence and frequency of a broad range of potentially traumatic experiences across one's life (Kira et al., 2008, 2011). Psychometrics of this questionnaire have been examined with a group of youth and adult Iraqi refugees, because Iraqi refugees are one of the most traumatized groups (Kira et al., 2008), and with Muslim youth originating from a variety of geographical locations (Kira et al., 2011). Adequate psychometric properties have been demonstrated, including convergent, divergent, and predictive validity (Kira et al., 2008, 2011). Subsequent studies have used this questionnaire with children and adolescent ethnic minority and migrant-origin participants (e.g., Kira et al., 2014). The current study employed only the objective checklist, which comprised 26 items rather than an additional subjective effect of stress scale.

Respondents used retrospective reporting to indicate whether and how frequently (never, once, two times, three times, four or more times) they experienced a given event (e.g., "I have been involved in or witnessed a war or combat"). Items related to marriage and sex were removed because they were inappropriate for data collection held at a school with school-aged youth. While the omission of trauma-related sexual activity could have resulted in an underestimate of cumulative trauma for some individuals, students were able to endorse additional trauma exposure on the last item by indicating whether they experienced "another scary or disturbing event not already listed," which could have captured this other trauma type. To enhance accessibility of the checklist to participants from diverse backgrounds, written responses were matched with a picture of a hand displaying zero, one, two, three, or four fingers to match the 0–4 numerical rating scale.

2.3.2 Acculturative stress

The 12-item Acculturative Stress Inventory for Children (ASIC; Suarez-Morales, Dillon, & Szapocznik, 2007) assesses current cultural stress (e.g., "I don't feel at home here in the United States") on a 5-point Likert scale. The validation study demonstrated a Cronbach's alpha of .82, and a 2-week test-retest reliability estimate of .84. Convergent and discriminant validity were also established. For the present study, Cronbach's alpha was .71. All original response options measured frequency of acculturative stress (i.e., *doesn't bother me, almost never bothers me, sometimes bothers me, often bothers me*) except the last item, *bothers me a lot*, which could be perceived by the participant as a measure of either frequency or intensity; therefore, this last item was changed to maintain consistency with other response items as measures of frequency. Also, each item was phrased as a question instead of statements in order to elicit a response from participants.

2.3.3 School belonging

The Psychological Sense of School Membership Scale (Goodenow, 1993) contains 18 items (e.g., "I feel like a real part of (name of school)" and "The teachers here respect me") that assess the extent to which students demonstrate sense of school membership. Participants rated the items on a Likert scale ranging from 1 (*not at all true*) to 5 (*completely true*). This measure has demonstrated adequate psychometric properties, including internal consistency reliability and

construct validity (Goodenow, 1993). Reverse-scored items were changed to typically scored items for this study to reduce confusion when statements that were phrased as double negatives were translated aloud, consistent with the notion of culturally competent communication (Rowe & Peterson, 2010). For the present study, Cronbach's alpha was .87.

2.3.4 Internalizing symptoms

The Youth Self Report (YSR; Achenbach & Rescorla, 2001) contains 30 items measuring current internalizing symptoms. Confirmatory factory analyses revealed that the YSR model fit the data well with adolescents from 23 societies (Ivanova et al., 2007), underscoring the utility of this measure in a diverse population. In the present study, Cronbach's alpha for the YSR was .81. Because self-, parent-, and teacher-report versions are available, this measure is often used in clinical and school contexts, thus making this particularly useful as both a screening and research tool. For the current study, one question about suicidality was removed because the principal investigators did not have the capacity to respond clinically to a large group of students endorsing acute suicidality during data collection, if this would have occurred. Instead, the school social worker and school counselor were available in case a student reported clinically elevated levels of internalizing symptoms. No student reported internalizing symptoms that required immediate intervention.

2.4 Data analyses

Statistical analyses for the mediation (Figure 1) and moderated mediation (Figure 2) models were performed using the Preacher and Hayes PROCESS macro version 2.15 for SPSS (version 20). A bias-corrected bootstrap sample of 5,000 was used. Bootstrapping is a nonparametric resampling procedure that is recommended for testing indirect effects with small to moderate samples; normality of the sampling distribution is not assumed, and it provides more power than the Sobel test (Preacher & Hayes, 2008; Shrout & Bolger, 2002). For the trauma variable, the total number of self-reported trauma exposures was summed. Mean scores were used for acculturative stress and school belonging. Standard scores were used for the YSR using the ASEBA Assessment Data Manager multicultural supplement (Achenbach & Rescorla, 2007), which adjusts standard scores based on a norm-referenced sample of youth by gender and country of origin.

According to independent samples t-tests, there were no significant mean differences between the Fall and Spring collection time points for any variable. An exact likelihood ratio chi-square test demonstrated that students from each continent of origin were similarly represented in each collection time point. Also, variables from each time point were normally distributed according to Kolmogorov-Smirnov tests. As such, data from the Fall and Spring collection time points were examined together.

2.4.1 Missing data

Minimal missing data occurred. On the CTS, there were a total of eight unanswered items from five participants. Because of the checklist nature of this questionnaire, these were counted as "0"

traumatic experiences. Within-item means were used to address three unanswered items from one participant on the ASIC.

3 RESULTS

3.1 Trauma exposure

As expected, substantial trauma was reported by the sample. Overall, 81 participants (93% of the sample) reported experiencing at least two or more different types of traumatic events. As hypothesized, there was substantial endorsement of cumulative traumatic events. With respect to specific trauma types, over half of the sample encountered one or more natural disasters (67% of the sample); sudden death of a parent, close friend, or loved one (61%); and frequent failures in school (54%; see Table 2). Other types of traumatic events were endorsed, although with less frequency. Less than 10% of the sample reported at least one family member involved in war, combat, or torture (9%); being treated poorly by nonfamily because of sex/gender (8%); and being treated poorly by family because of sex/gender (3%).

Table 2. Percentage of sample endorsing lifetime exposure to one or more potentially traumatic experiences

N (%)	Potentially traumatic event
58 (67)	Natural disasters
53 (61)	Sudden death of parent, close friend, or loved one
47 (54)	Frequent failures in school
43 (48)	Poor family with hardships
38 (44)	Life-threatening accidents such as motor vehicle accident
38 (44)	Forced to move
35 (40)	Father abandoned or left
33 (38)	Witnessed severe assault of acquaintance or stranger
31 (36)	Experienced another scary or disturbing event not listed
30 (34)	Loved one experienced life-threatening illness or permanently disabling event
28 (32)	Parental divorce and/or separation
24 (28)	Personal experience of life-threatening illness or permanently disabling event
24 (28)	Mother abandoned or left
22 (25)	Treated poorly because of ethnicity, race, culture, religion, or national origin
22 (25)	Serious rejection or failure in relationships
20 (23)	Nervous breakdown
17 (19)	Robbery involving a weapon
13 (15)	Belief that one's race has a history of oppression, discrimination, or genocide
13 (15)	Physically attacked
13 (15)	Threatened to be killed or seriously harmed
12 (14)	Involvement in or witness to war or combat
11 (13)	Witnessed or heard caregiver abuse or threatened abuse
9 (10)	Jailed and/or tortured
8 (9)	Family member involved in war, combat, or torture
7 (8)	Treated poorly by non-family members because of sex/gender

| 3 (3) | Treated poorly by family members because of my sex/gender |

Note. N = 87. Percentages are rounded to the nearest whole number.

3.2 Bivariate correlations

Descriptive statistics and linear relations are presented in Table 3. Consistent with expectations, a positive correlation was demonstrated between cumulative trauma and acculturative stress, between cumulative trauma and internalizing symptoms, and between acculturative stress and internalizing symptoms. Cumulative trauma was inversely related to school belonging. Also, students in more advanced grade levels tended to report a greater number of lifetime traumatic events.

Table 3. Descriptive statistics and Pearson correlations

	M (SD)	1	2	3	4	5	6
1. Gender	–		–.06	–.02	.02	–.05	.01
2. Grade level	–			.31**	.13	.19	–.13
3. Cumulative trauma	13.31 (10.10)				.24*	.39***	–.44***
4. Internalizing	58.82 (8.29)					.40***	–.04
5. Acculturative stress	2.24 (.60)						.03
6. School belonging	4.30 (.47)						–

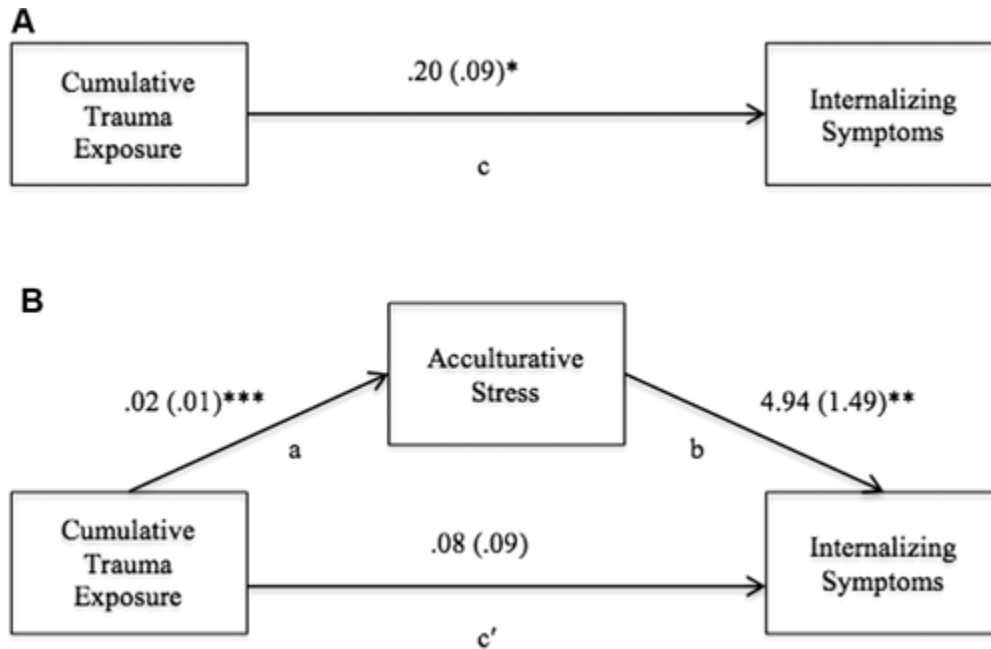*Note.* M = mean; SD = standard deviation. ***p < .001. **p < .01. *p < .05.

3.3 Mediation analysis

It was predicted that the relation between cumulative trauma and internalizing symptoms would be partially mediated by acculturative stress. The direct path from cumulative trauma to acculturative stress was significant (path a; B = .02, $p < .001$; 95% confidence interval [CI] [.0116, .0353]), as were the direct paths from acculturative stress to internalizing symptoms (path b; B = 4.94, $p < .01$; 95% CI [1.9783, 7.9037]) and cumulative trauma to internalizing symptoms (total effect, path c; B = .20, $p < .05$; 95% CI [.0251, .3686]). When all three variables were entered simultaneously into the model, the path from cumulative trauma to internalizing symptoms was not significant (path c'; B = .08, $p = .36$; 95% CI [−.0957, .2577]), suggesting full mediation. This model accounted for approximately 17% of the variance in internalizing symptoms ($R^2 = .17$, $p < .001$). There was a statistically significant indirect effect of cumulative trauma on internalizing symptoms through acculturative stress (unstandardized indirect effect = .12, standard error = .05; 95% CI [.0445, .2312]). The mediator (i.e., acculturative stress) accounted for approximately 59% of the total effect, ab/c = .59 (95% CI [.2298, 1.9441]).

Exposure to more potentially traumatic events was related to greater culture-related stressors, which in turn was associated with increased internalizing symptoms (see Figure 3). In other words, two cases that differed by one traumatic event were estimated to differ by .12 units of

internalizing symptoms. Youth with more prior trauma exposure tend to endorse greater acculturative stress, which in turn is directly associated with internalizing symptoms. Ultimately, part of the variance in internalizing symptoms for this sample could be accounted for by the effect of trauma exposure on acculturative stress and the subsequent effect of acculturative stress on internalizing symptoms. This effect is further corroborated by results from the normal theory Sobel test ($Z = 2.49$, $p < .05$; Hayes, 2013).

Figure 3. A single -mediator model. (A) The direct effect of cumulative trauma exposure on internalizing symptoms. (B) The relation between cumulative trauma exposure and internalizing symptoms is mediated by acculturative stress. Unstandardized coefficients are shown, with standard errors in parentheses

*$p < .05$, **$p < .01$, ***$p < .001$

Note. N = 87.

3.4 Moderated mediation analysis

In addition to the prediction that the relation between cumulative trauma and internalizing symptoms would be mediated by acculturative stress, we next tested whether the relation between acculturation stress and internalizing symptoms would be moderated by sense of school belonging such that a stronger sense of school belonging would buffer this association. The interaction between acculturative stress and school belonging was not statistically significant: The effect of acculturative stress on internalizing symptoms did not vary across levels of school belonging. That is, school belonging did not moderate the relation between acculturative stress and internalizing symptoms in the moderated mediation model. Of note, the mean level of school belonging was remarkably high, and the standard deviation suggests strong belongingness across the entire sample (see Table 3).

4 DISCUSSION

The present study of newly arriving youth demonstrated that acculturative stress fully mediated the relation between prior trauma and current internalizing symptoms. In this study, we found that a greater number of prior traumatic events were associated with more acculturative stress, which in turn was related to greater current internalizing symptoms. Although a partial mediation model was hypothesized, results demonstrated full mediation. Our findings indicate that during the initial transition (i.e., within the first year) into the United States for this multicultural sample of migrant youth, it appears that prior trauma exposure affects how one navigates a novel culture, which in turn is associated with levels of anxious and depressive symptoms.

As hypothesized, trauma exposure may disrupt one's ability to effectively navigate a new multicultural milieu. This may be due to interpersonal difficulties such as difficulty trusting others, a distorted understanding of social interactions, poor social skills, anticipation of harm from others (see D'Andrea et al., 2012), or loss of social resources (Betancourt et al., 2015). These mediation results are corroborated by the inverse linear relation between traumatic events and sense of school belonging (see Table 3). Students with greater trauma exposure reported difficulty both navigating the general milieu in the United States and relating to the school environment. This sheds light on the documented association between trauma exposure and acculturative stress (e.g., Ellis et al., 2008; see Beckerman and Corbett [2008] for a brief discussion of family perimigration acculturation experiences associated with migrant trauma), suggesting that exposure to traumatic events affects social and cultural relations.

Contrary to expectations, school belonging did not moderate the relation between acculturative stress and internalizing symptoms. However, most students endorsed high levels of school belonging irrespective of trauma exposure and level of acculturation difficulties: one standard deviation below and above the mean falls within the *moderate* to *strong* sense of school belonging range (see Table 3). Although participants with more trauma exposure reported relatively weaker school belongingness, sense of school belonging at one standard deviation below the mean fell substantially above the *somewhat true* response item, making this a distinctive sample. In fact, the mean level of school belonging in this sample was relatively stronger than that found in literature using the same measure with migrant samples (e.g., Chun & Dickson, 2011; Kia-Keating & Ellis, 2007; Sánchez, Colón, & Esparza, 2005; Trickett & Birman, 2005). These data suggest this particular school, which hosts only newly arrived migrant students, is notably effective at supporting students, even those who endorse mental health problems and robust trauma histories.

4.1 Limitations and future directions

Given the absence of variables examining the effect of interpersonal difficulties on acculturation experiences, as well as the cross-sectional nature of these data, no causal conclusions can be made. Ideally, a longitudinal design would test (a) the mechanism by which trauma impedes one's ability to interface with a new culture, and (b) whether the relation between prior trauma and current psychopathology is mediated by acculturation difficulties assessed at different time points during resettlement. It is likely that research obtaining greater variability in sense of

school belonging, inclusive of students who report weak belongingness, may be more conducive to detecting moderation effects. As such, future studies ought to work with more schools to increase variability to better investigate whether strong school belongingness attenuates the link between acculturative stress and internalizing symptoms.

The majority of students reported exposure to at least two or more different types of traumatic events, consistent with the notion that migrant-origin individuals tend to experience repeated exposure to, and multiple forms of, adverse events (Kira, 2010; Wiese, 2010). This study is novel in that data were gathered within the first year in the United States. Assessment precision of traumatic experiences can be enhanced by investigating (a) subjective appraisal of traumatic stress rather than sheer number of potentially traumatic events, and (b) whether events occurred before migration, during migration, or after arrival into the United States.

Follow-up studies should examine whether acculturative stress for students attending this particularly supportive school for newcomers changes as students leave the school and enter traditional public schools, or perhaps whether acculturative stress varies by age. The finding that students in more advanced grade levels tended to report a greater number of lifetime traumatic events may be due to actual exposure to more adversities as they age, but it could also represent a better memory for events to which they were exposed. Future studies ought to examine whether factors such as memory of trauma exposure or cognitive appraisal of traumatic stress vary by age and subsequently affect acculturation difficulties.

4.2 Implications for community partnership and engagement

The APA's Presidential Task Force on Immigration recognizes the need for "Programs that support newcomer students by creating a community of peers experiencing the same dramatic transitions" (Suarez-Orozco et al., 2012, p. 8). Additionally, "school should provide ongoing professional development to all faculty and staff on how to work with immigrant-origin children" (Suarez-Orozco et al., 2012, p. 8). Schools in the United States can certainly offer in-house support such as school counselors, social workers, and staff-wide trainings on culturally relevant pedagogy. Additionally, the school itself exists within a context that influences, and is influenced by, other systemic components such as family, neighborhood, mental health service agencies and civic institutions (Bronfenbrenner, 1986). Given the robust trauma histories demonstrated in this study and the subsequent effect on cultural and psychological adjustment, migrant youth may benefit from a continuum of services (Yoshikawa, Suárez-Orozco, & Gonzales, 2017) reflected in a community partnership approach that integrates educational, social, and health factors (Yoshikawa, 2006), with the goal of enhancing cohesiveness between systems to bolster psychological well-being (Casas, 2010).

Indeed, the school from which this study's sample was drawn has a history of augmenting student support through collaborative engagement with resettlement organizations, outpatient mental health clinics, a clinical psychology doctoral program at a local public university, and local service agencies (Kaczorowski et al., 2011), which, in combination with in-house initiatives, may partially account for strong sense of school belonging endorsed by this sample. For example, with student assent and parental consent, data gathered in this study were provided

to, and interpreted for, the school social worker who then accessed relevant community agencies. Some identified students were provided in-house psychological services through partnership with a clinical doctoral program. Additionally, following data analysis, aggregate data were presented during a staff meeting, which provided background information about the student body and a forum for addressing student needs. The questionnaires, then, functioned as both an investigative and screening mechanism for this study's sample.

4.3 Conclusion

Given the utility of this data from both research and clinical angles, school psychologists, counselors, or clinicians should screen for potentially traumatic experiences and acculturative stress among recently arrived migrant youth. That is, screenings could identify students who would most benefit from services. Given the association between prior trauma exposure, acculturative stress, and internalizing symptoms, psychotherapeutic intervention programs that target cultural adjustment (e.g., Kaczorowski et al., 2011) are one potentially effective method for enhancing psychological well-being of recently arrived migrant-origin youth. These programs are becoming increasingly vital as the number of youth who are displaced globally continues to grow (UNHCR, 2015).

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