

Impact of School Transition Stressors on Hispanic Adolescents' Symptoms of Social Anxiety and Depression: Repetitive Negative Thinking as a Potential Mediator*

Impacto de los estresores de la transición escolar en los síntomas de ansiedad social y depresión de los adolescentes hispanos: el pensamiento negativo repetitivo como un mediador potencial

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Abstract

Adolescents' lives undergo considerable reorganization during school transitions, which require establishing new peer relationships and participating in more demanding academic activities. Yet, little is known about how school-transition stressors affect adolescents' feelings of social anxiety (SA) and depression, especially among Hispanic youth who are at elevated risk for school dropout. We examined school-transition stressors as predictors of adolescents' SA and depressive symptoms and evaluated whether the tendency to engage in repetitive negative thinking (RNT) (e.g., worry and rumination) served as a transdiagnostic mediating pathway. Participants were 461 Hispanic adolescents ($M_{age} = 14.22$; 59% female) attending high school in a large metropolitan area of the U.S., who completed three surveys over the school year. At T1 (October), adolescents reported transition stressors related to school

* This research was supported by the Distinguished Professorship Funds from the University of Miami to the first author. We are grateful to Miami-Dade County Public Schools and the teachers, students, and administrators of the participating high school for their support of this project. Additionally, we would like to acknowledge BreAnne Danzi and Naomi Tarlow for their work in collecting and managing data, as well as the undergraduate research assistants who helped with the project.

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performance, peer pressure, teacher interactions, and school/leisure conflict, and current symptoms of SA and depression. At T2 (February), adolescents reported levels of RNT. At T3 (May), adolescents again reported symptoms of SA and depression. Structural equation modeling examined associations between transition stressors (T1) and symptoms of SA and depression at the end of the school year (T3) and whether RNT mediated these associations, controlling for gender and T1 symptoms. School performance stressors predicted increased SA and depressive symptoms at the end of the school year and RNT mediated these relationships. Furthermore, T1 peer pressure predicted T3 depressive symptoms. Overall, stressors during the high school transition affect Hispanic youth's functioning, and RNT may be an important transdiagnostic target for interventions to reduce adolescent SA and depression.

Keywords: school transitions, social anxiety, depression, repetitive negative thinking

Resumen

Las vidas de los adolescentes sufren una reorganización considerable durante las transiciones escolares, que requieren establecer nuevas relaciones con los compañeros y participar en actividades académicas más exigentes. Sin embargo, se sabe poco sobre cómo los factores estresantes de la transición escolar afectan a los sentimientos de ansiedad social (AS) y depresión de los adolescentes, especialmente entre los jóvenes hispanos que tienen un riesgo elevado de abandono escolar. Examinamos los factores estresantes de la transición escolar como predictores de la AS y los síntomas depresivos de los adolescentes y evaluamos si la tendencia a participar en el pensamiento negativo repetitivo (PNR) (por ejemplo, la preocupación y la rumiación) sirvió como una vía de mediación transdiagnóstica. Los participantes fueron 461 adolescentes hispanos ($M_{edad}=14,22$; 59% mujeres) que asistían a la escuela secundaria en una gran área metropolitana de los EE.UU., que completaron tres encuestas durante el año escolar. En T1 (octubre), los adolescentes informaron de los factores de estrés de transición relacionados con el rendimiento escolar, la presión de los compañeros, las interacciones con los profesores y los conflictos entre la escuela y el ocio, así como de los síntomas actuales de SA y depresión. En T2 (febrero), los adolescentes informaron de los niveles de PNR. En T3 (mayo), los adolescentes volvieron a informar de los síntomas de AS y depresión. El modelo de ecuaciones estructurales examinó las asociaciones entre los estresores de transición (T1) y los síntomas de AS y depresión al final del año escolar (T3) y si la PNR medió en estas asociaciones, controlando el género y los síntomas de T1. Los estresores del rendimiento escolar predijeron un aumento de los síntomas de SA y depresión al final del año escolar y la PNR medió en estas relaciones. Además, la presión de los compañeros de T1 predijo los síntomas depresivos de T3. En general, los factores de estrés durante la transición a la escuela secundaria afectan al funcionamiento de los jóvenes hispanos, y la PNR puede ser un importante objetivo transdiagnóstico para las intervenciones destinadas a reducir la AS y la depresión en los adolescentes.

Palabras clave: transiciones escolares, ansiedad social, depresión, pensamientos negativos repetitivos.

Key developmental changes occur during adolescence, especially during the transition to high school or secondary school (La Greca & Ranta, 2015). During such transitions, adolescents' lives undergo considerable reorganization, which includes establishing new relationships, participating in more demanding academic tasks, learning to interact with multiple authority figures (e.g., teachers), and trying to balance school and leisure activities (Cole & Cole, 2001; De Wit et al., 2011; Goodwin et al., 2012; Ratelle et al., 2005). In particular, school transitions often involve novel situations that adolescents must negotiate to develop more mature levels of academic and emotional functioning; however, the novelty can bring uncertainty, opportunities for failure, and distress. As such, the transition to high school represents a significant stressor, which could affect adolescents' psychological functioning (Grant et al., 2003) and contribute to feelings of social anxiety and depression (La Greca & Ranta, 2015). Yet, to our knowledge, no studies have examined the association between school transition stressors and adolescent symptoms of social anxiety and depression.

Both social anxiety and depression are common problems among adolescents. According to Horowitz and Graf (2019), 70% of U.S. adolescents (ages 13 to 17 years) view anxiety and depression as a major problem among their peers, and these mental health concerns cut across gender, racial, and socioeconomic lines. At a clinical level, both social anxiety disorder (SAD) and major depressive disorder (MDD) are among the most common mental health disorders in the U.S. (Kessler et al., 2005) and elsewhere (e.g., Auerbach et al., 2018). SAD typically emerges during adolescence (de Lijster et al., 2017), and the prevalence of MDD surges during adolescence and is comparable to the prevalence rate for adults (Auerbach et al., 2018; Kessler et al., 2005). Importantly, adolescents who develop significant symptoms of social anxiety or depression display impairment in a broad range of domains, including interpersonal relationships and academic functioning (La Greca & Harrison, 2005; Lewinsohn et al., 2003; Ranta et al., 2009b).

This study evaluated whether school-transition stressors experienced at the beginning of the school year predicted adolescents' increased symptoms of social anxiety and depression at the end of the school year, and whether repetitive negative thinking (RNT), or the tendency to engage in worry and rumination (Ehring & Watkins, 2008), mediated the association between initial school-transition stressors and adolescents' later symptoms of social anxiety and depression. Importantly, we focused on adolescents from Hispanic/Latinx backgrounds. In the U.S., Hispanic/Latinx adolescents are underrepresented in school transition research, despite evidence that they experience a significantly more difficult school transition than other youth (e.g., Benner & Graham, 2009).

Impact of School Transition Stressors

Multiple academic and interpersonal stressors are associated with the transition to high school. Key transition stressors are discussed below.

Academic stressors. Many adolescents experience *school performance stress*, as suggested by findings that youths' grade point average, attendance, school involvement, and feelings of school membership all decline during the transition to high school (Barber & Olson, 2004; Benner & Graham, 2009; Goodwin et al., 2012). The stress from exams also can be substantial and is associated with lower psychological well-being among Chinese adolescents (Xiang et al., 2019). School performance stress may be reflected in adolescents' difficulties with academic subjects and pressures to study.

Moreover, adolescents may experience *stress related to balancing schoolwork with extracurricular activities*. For example, the transition to high school is associated with an increased homework burden which can interfere with leisure activities (Brodar et al., 2020; Ratelle et al., 2005). Despite these academic stressors occurring at the beginning of high school, to our knowledge, no studies have examined associations between academic transition stressors and adolescents' symptoms of both social anxiety and depression, although some evidence suggests that academic stress, in general, is associated with depressive symptoms (e.g., Yan et al., 2018).

Peer/Interpersonal stressors. School transitions also bring about significant shifts in adolescents' social lives. Adolescents may lose relationships with prior friends, and new friendships may be difficult to initiate or maintain in an unfamiliar social environment (Barber & Olsen, 2004). This is particularly concerning, in that peers, and especially close friends, are a key focus of adolescents' lives and represent a primary source of social support (Furman et al., 2009; La Greca & Landoll, 2011).

In particular, during school transitions, adolescents may experience *peer stressors*, such as pressures to "fit in" with peers (La Greca & Ranta, 2015) or feeling judged by peers and less supported by them (Newman et al., 2007). Although peer victimization is associated with social anxiety and depression (La Greca & Harrison, 2005; Ranta et al., 2009a), studies have not evaluated the relationship of less extreme peer stressors, such as peer pressure, and adolescents' psychological adjustment.

Moreover, school transitions also bring about interactions with many new adults, especially teachers (De Wit et al., 2011). Adolescent stressors related to teacher interactions might include feeling that teachers do not listen to or support them (Byrne et al., 2007).

In summary, high school transitions can be stressful as they substantially affect adolescents' academic and interpersonal lives; this could contribute to feelings of social anxiety or depression, although this has not been studied directly. In the current study, we expected that adolescents who reported higher levels of academic and interpersonal stressors occurring at the beginning of the transition to high school (T1) would report increased symptoms of social anxiety and depression at the end of the school year (T3).

Repetitive Negative Thinking (RNT) as a Mediator

RNT, or the tendency to engage in perseverative thought processes such as worry and rumination, represents an important transdiagnostic factor contributing to both anxiety and depression in children, adolescents, and adults (e.g., Ehring & Watkins, 2008; Rood et al., 2010). While rumination has traditionally been linked with depression and worry with anxiety, more recent work has identified RNT as a single factor that is related to symptoms of most affective disorders, including social anxiety and depression (Arditte et al., 2016; Drost et al., 2014).

Prior work demonstrated that specific forms of RNT mediate the effects of stressful life events on anxiety or depression in adolescents. Michl and colleagues' (2013) found that stressful events prospectively predicted rumination, which in turn was associated with increased symptoms of anxiety at follow-up. For example, an adolescent who is bullied may perseverate by dwelling on the events, and might worry more about upcoming social interactions, both of which would likely lead to an increase in their symptoms of depression and social anxiety.

Furthermore, because RNT cuts across emotional disorders transdiagnostically, understanding the effects of RNT may shed light on adolescents' shared cognitive vulnerability to both social anxiety and depression. In this study, we expected that transition stressors at the beginning of the school year (T1) would predict RNT at mid-year (T2), which in turn would mediate the effects of initial transition stressors on adolescents' symptoms of social anxiety and depression at the end of the school year (T3).

Hispanic Ethnicity

This study focused on adolescents from Hispanic/Latinx backgrounds. It is surprising that Hispanic/Latinx youth are under-represented in school transition research, given that they experience more difficult school transitions than other youth (e.g., Benner & Graham, 2009). Moreover, although there have been marked improvements in recent years, Hispanic/Latinx youth have higher rates of dropping out of high school (10%) than any other racial/ethnic group in the U.S. (Gramlich, 2017). Thus, Hispanic/Latinx youth in the U.S. represent a vulnerable population that merits further study and were the focus of the current investigation.

Gender

Finally, in evaluating our key study aim, we considered (and controlled for) gender. Adolescent girls report higher levels of social anxiety and depression than boys (e.g., Hankin et al., 2007; La Greca & Harrison, 2005), and report more stressors in general than boys,

particularly peer-related stressors (Byrne et al, 2007; Hankin et al., 2007). Finally, findings indicate that girls tend to engage in more RNT than boys (e.g., Hankin, 2008).

METHOD

Participants

At T1, participants included 461 Hispanic adolescents (59% girls; $M_{\text{age}}=14.22$ years, $SD=0.52$) who were entering a public high school (9th grade) in a large metropolitan area of South Florida, where 72.2% of school-aged youth identify as Hispanic (US News and World Report, 2022). Most adolescents identified as White (88.3%) and U.S.-born (74.2%) and reported Spanish as their first language (64.0%). All adolescents entering the 9th grade (ages 13-15 years) who were able to read and speak English were eligible. Exclusion criteria included enrollment in special education classes for reading/language difficulties or limited cognitive abilities. Because the vast majority of adolescents identified as Latinx/Hispanic (91.2%), analyses were limited to adolescents of Latinx/Hispanic ethnicity. At Time 1 (October), 474 participants consented and provided data. Of these, 461 (97%) also participated at Time 2 (February) and Time 3 (May). Adolescents who did not participate at all timepoints were excluded; there were no significant demographic differences between those who provided only Time 1 data compared to those who provided data at T2 or T3.

Procedure

This project was part of a study of school transitions. The University Institutional Review Board and participating school district's research office reviewed and approved the study. Adolescents were recruited via flyers and in-person information distributed at all 9th grade History/Social Studies classes in a large suburban high school at the beginning of the school year. Active parental consent was required for adolescent participation; teachers distributed letters about the project and parental consent forms (in Spanish and English) to adolescents. Adolescents returned consent forms to the school and provided written assent prior to participation. The participation rate of eligible adolescents was 50%. This is likely an underestimate as it was not possible to determine how many adolescents who received the project letters distributed them to their parents.

This study used a three-wave, prospective study design. At each time point (October, February, May), adolescents completed questionnaires (45-60 minutes) via a secure online data collection method, using school computers. During testing, project staff (doctoral students and research assistants) answered questions. Teachers whose classrooms participated received a \$25 gift card for their assistance at each time point. No compensation was provided for adolescents.

Measures

Transition Stressors. At T1, four subscales of *The Adolescent Stress Questionnaire* (ASQ; Byrne et al., 2007) assessed transition stressors. The ASQ measures different stressors that adolescents experience; subscales demonstrate adequate concurrent validity, internal consistency ($\alpha=.62-.92$), and test-retest reliability ($r=.68-.88$). In this study, we selected and shortened four ASQ subscales relevant to the high school transition: school performance (*difficulty with some subjects in school*), school/leisure conflict (*not enough time for activities outside of school hours*), peer pressure (*being judged by your friends*), and teacher interactions (*not being listened to by teachers*). Each subscale contained three items rated on a 5-point scale (1=*not at all stressful or irrelevant* to 5=*very stressful*) that were summed to produce a total for each subscale. Confirmatory factor analysis found that the shortened ASQ maintained the intended subscales from the original ASQ and demonstrated good reliability and convergent and discriminant validity (Tarlow et al., 2018). In the current study, Cronbach's alphas were .76 (school performance), .75 (school/leisure conflict), .72 (peer pressure), and .76 (teacher interaction).

Repetitive Negative Thinking (RNT). At T2, RNT was assessed by eight items with high factor loadings ($>.70$) from the *Perseverative Thinking Questionnaire–Child Version* (PTQ-C; Bijttebier et al., 2015) (e.g., *the same thoughts keep going through my mind again and again; thoughts come into my mind without me wanting them to*). This scale has demonstrated concurrent and criterion validity (e.g., significant associations with other measures of RNT and with youths' symptoms of depression and anxiety) (Bijttebier et al., 2015). A one-factor solution best fits the scale (Bijttebier et al., 2015; McEvoy et al., 2018). Items were rated from 0=*Never* to 4=*Almost Always* and summed for a total score (Cronbach's $\alpha=.95$).

Social Anxiety. At T1 and T3, adolescents completed the *Social Anxiety Scale for Adolescents* (SAS-A; La Greca & Lopez, 1998), which includes 18 items (e.g., *I worry about being teased*), and 4 fillers (e.g., *I like to read*). The 18 items are rated on a 5-point scale (1=*Not at all*, 5=*All the time*) and summed for a total score. The SAS-A has strong support for its measurement model, validity, and reliability with ethnically diverse adolescents (La Greca et al., 2015; La Greca & Lopez, 1998). In this study, Cronbach's α was .92 (T1) and .93 (T3).

Depressive Symptoms. At T1 and T3, adolescents completed the *Center for Epidemiological Studies Depression Scale* (CES-D; Radloff, 1977). This widely used well-validated measure contains 20 items rated from 0 (*Rarely*) to 3 (*Most or All of the Time*) and summed. Total scores of 16 or more indicate mild depressive symptoms (Rushton et al., 2002). In this study, Cronbach's α was .76 (T1) and .81 (T3).

Data Analytic Plan

We examined data for outliers, normality, and linear relationships between variables using SPSS Version 27. No violations of statistical assumptions were found. Data were

found to be missing completely at random (MCAR), according to Little's MCAR test (Little, 1998). In cases where partial missingness of data was observed, multiple imputation via full information maximum likelihood estimation was used to account for missing data and maximize the use of the full data set. Means and standard deviations were computed for all study variables and correlations among the variables were computed. Gender differences in study variables were also examined and controlled for in the analyses.

Structural equation modelling (SEM) evaluated the key study aim using Mplus Version 8.6. Good model fit was determined by a non-significant chi-squared test and by CFI/TLI > .95, RMSEA < .06, and SRMR < .08 (Hu & Bentler, 1999). We examined the prospective association between initial school-transition stressors and adolescents' symptoms of social anxiety and depression at the end of the school year, and whether RNT potentially mediated this association.

RESULTS

Preliminary Analyses

Means and correlations between study variables are in Table 1. Adolescents rated transition stressors pertaining to academic functioning (i.e., school performance stress, school/leisure conflict) higher than those pertaining to interpersonal functioning (i.e., peer pressure, teacher interactions; all p 's < .001). In addition, at T1, 26% of adolescents exceeded clinical cut-offs for social anxiety (*SAS-A* score ≥ 50), 38% exceeded cut-offs for mild depression (*CES-D* score ≥ 16), and 15% were elevated on both social anxiety and depression.

Table 1:
Means (SDs) and Correlations Among Study Variables (N=461).

	<i>Mean (SD)</i>	1	2	3	4	5	6	7	8
1. School performance	9.54 (3.30)	1.00							
2. Peer pressure	6.43 (3.12)	0.37	1.00						
3. Teacher interaction	6.98 (3.35)	0.56	0.42	1.00					
4. School/leisure	9.94 (3.44)	0.68	0.34	0.50	1.00				
5. T2 RNT	12.90 (8.79)	0.33	0.40	0.23	0.28	1.00			
6. T1 Social Anxiety	41.34 (15.56)	0.32	0.65	0.26	0.31	0.42	1.00		
7. T1 Depression	15.75 (10.35)	0.37	0.52	0.33	0.38	0.52	0.60	1.00	
8. T3 Social Anxiety	38.88 (15.47)	0.24	0.49	0.19	0.21	0.43	0.69	0.47	1.00
9. T3 Depression	15.70 (11.37)	0.24	0.41	0.26	0.23	0.48	0.39	0.58	0.64

Note: All correlations are significant, $p < .001$, two-tailed test

All school-transition stressors were significantly related to RNT (r 's from .23 to .40), as well as to adolescents' concurrent symptoms of social anxiety (r 's from .26 to .65) and depression (r 's from .33 to .52) and their T3 symptoms of social anxiety (r 's from .19 to .49) and depression (r 's from .23 to .41) (all p 's<.001). RNT also was significantly associated with T3 symptoms of social anxiety (r =.43) and depression (r =.48) (p 's<.001). Finally, adolescents' symptoms of social anxiety and depression were moderately intercorrelated (r 's=.60 for T1 and .64 for T3; p 's<.001).

As expected, multivariate ANOVAs found that, aside from teacher interaction stress (p =.61), girls reported higher levels of transition stressors (p 's<.02), higher levels of RNT (p <.001), more symptoms of social anxiety (at T1 and T3; p 's<.01) and depression (at T1; p <.001). Thus, gender was controlled in SEM analyses.

Transition Stressors Predicting Increased Symptoms of Social Anxiety and Depression

To examine whether school transition stressors predicted increased symptoms of social anxiety and depression over the school year, the SEM model (see Table 2) included the direct effects of school-transition stressors (T1) on symptoms of social anxiety and depression (T3), along with the indirect effects of stressors via RNT; both gender and T1 symptoms were controlled. The model fit the data well, χ^2 =0.99, RMSEA [90% CI]=0.00[0.00, 0.08], CFI=1.00, TLI=1.00, SRMR=0.01.

Table 2:
Path Coefficients from Structural Equation Model

	Unstandardized coefficient	Standardized coefficient	SE	<i>t</i>
Direct Effects				
<i>T2 Repetitive Negative Thinking on</i>				
Gender	0.89	0.05	0.72	1.24
T1 Social Anxiety Symptoms	0.05	0.09	0.03	1.64
T1 Depression Symptoms	0.31***	0.36	0.04	7.06
School Performance Stress	0.38**	0.14	0.15	2.50
Peer Pressure Stress	0.33*	0.12	0.16	2.14
Teacher-related Stress	-0.11	-0.04	0.13	-0.80
School/Leisure Conflict Stress	-0.02	-0.01	0.14	-0.14

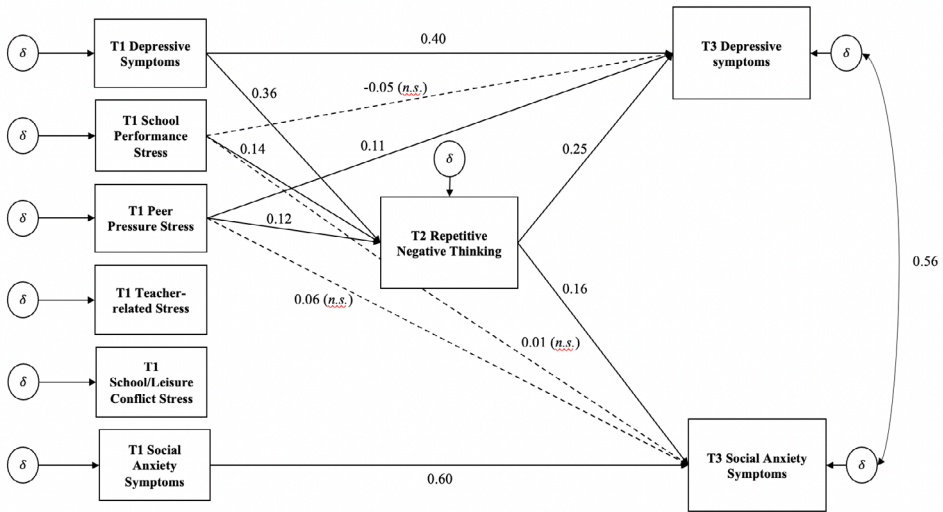
	Unstandardized coefficient	Standardized coefficient	SE	<i>t</i>
<i>T3 Social Anxiety on</i>				
T1 Social Anxiety	0.59***	0.60	0.04	15.53
Gender	-0.71	-0.02	1.10	-0.65
T2 Repetitive Negative Thinking	0.28***	0.16	0.07	4.10
School Performance Stress	0.03	0.01	0.23	0.12
Peer Pressure Stress	0.27	0.06	0.23	1.21
Teacher-related Stress	-0.12	-0.02	0.20	-0.58
School/Leisure Conflict Stress	-0.10	-0.02	0.21	-0.45
<i>T3 Depression on</i>				
T1 Depression	0.44***	0.40	0.04	9.83
Gender	-1.16	-0.05	0.88	-1.32
T2 Repetitive Negative Thinking	0.32***	0.25	0.06	5.65
School Performance Stress	-0.13	-0.04	0.19	-0.68
Peer Pressure Stress	0.40*	0.11	0.17	2.43
Teacher-related Stress	0.18	0.05	0.16	1.13
School/Leisure Conflict Stress	-0.09	-0.03	0.17	-0.51
<i>T3 Social Anxiety with</i>				
T3 Depression	55.33***	0.56	5.25	10.54
Indirect Effects				
<i>On Social Anxiety, via RNT</i>				
School Performance Stress	0.11*	0.02	0.05	2.14
Peer Pressure Stress	0.09†	0.02	0.05	1.90
Teacher-related Stress	-0.03	-0.01	0.04	-0.79
School/Leisure Conflict Stress	-0.01	-0.001	0.04	-0.14
<i>On Depression, via RNT</i>				
School Performance Stress	0.12*	0.04	0.05	2.28
Peer Pressure Stress	0.11*	0.03	0.05	2.00
Teacher-related Stress	-0.03	-0.01	0.04	-0.79
School/Leisure Conflict Stress	-0.01	-0.002	0.04	-0.14

Note: Significant findings are in bold text. †*p*<.10, **p*<.05, ***p*<.01, ****p*<.001

There was a significant direct effect of peer pressure stressors, such that higher peer pressure stressors predicted significantly increased symptoms of depression ($\beta=0.11$), but not social anxiety ($p=.23$), at T3 (see Figure 1). No other transition stressors (p 's>.26) emerged as predictors of symptoms at T3, nor did gender (p 's>.19).

Figure 1:

Path diagram for the structural equation model. Solid lines represent significant direct effects. Dashed lines represent non-significant direct effects from T1 school performance and peer pressure stressors to T3 symptoms when including RNT as a mediator.



We next examined whether RNT mediated the relationship between T1 school-transition stressors and T3 symptoms by testing the indirect effects of T1 transition stressors on T3 symptoms of social anxiety and depression via RNT. School performance stressors ($\beta=0.14$), peer pressure stressors ($\beta=0.12$), and T1 symptoms of depression ($\beta=0.36$) predicted RNT at T2. In turn, RNT predicted significantly increased symptoms of social anxiety ($\beta=0.16$) and depression ($\beta=0.25$) at T3, over and above the significant effects of T1 symptoms (social anxiety $\beta=0.60$; depression $\beta=0.40$). In addition, indirect effects indicated that RNT significantly mediated the relationship between school performance stressors and social anxiety at T3 ($b = 0.11$, 95% CI [0.03, 0.19], $\beta=0.02$, $SE = 0.05$, $t = 2.14$, $p = .03$) and between school performance stressors and depression at T3 ($b = 0.12$ 95% CI [0.03, 0.21], $\beta=0.04$, $SE = .05$, $t = 2.28$, $p = .02$).

Additionally, RNT significantly mediated the relationship between peer pressure stressors and T3 depression ($b = 0.11$ 95% CI [0.02, 0.19], $\beta=0.03$, $SE = .05$, $t = 2.00$, $p = .046$). The indirect effect of peer pressure stressors and social anxiety at T3 via RNT was marginally significant ($b = 0.09$ 95% CI [0.02, 0.17], $\beta=0.03$, $SE = .05$, $t = 1.90$, $p = .06$). No other indirect effects emerged as significant ($p's > .43$).

DISCUSSION

In a sample of Hispanic/Latinx adolescents entering high school, we examined the prospective effects of academic and interpersonal school-transition stressors on increased symptoms of social anxiety and depression over the school year, and whether repetitive negative thinking mediated the association between initial stressors and later symptomatology. Key findings indicated that transition stressors pertaining to school performance were prospectively associated with increased symptoms of social anxiety and depression, and this association was mediated by repetitive negative thinking. Also, transition stressors related to peer pressure predicted increased depressive symptoms and tended to predict increased social anxiety over the school year.

School transitions are common and potentially disruptive to adolescents' lives, although little attention has been given to transition stress and its impact on adolescents' symptoms of social anxiety and depression (La Greca & Ranta, 2015). Yet, both social anxiety disorder and depression are associated with high rates of school dropout among adolescents (Chalita et al., 2012; Stein & Kean, 2000), and adolescents with moderate to high mental health concerns are nearly twice as likely to drop out of high school than other teens, especially during the first year of a school transition (Andersen et al., 2021).

Impact of School Transition

In the present study, adolescents' social anxiety and depressive symptoms at the beginning of the school year were somewhat elevated compared to norms for community populations (e.g., La Greca et al., 2015). Specifically, more than a quarter of the youth reported subclinical levels of social anxiety and nearly 40% reported subclinical depression; such adolescents are already at risk for poor educational and occupational outcomes (Fergusson & Woodward, 2002; Stein & Kean, 2000). Moreover, school performance stressors contributed to further increases in social anxiety and depression across the school year, potentially exacerbating adolescents' vulnerability to poor educational and life outcomes.

All four school-transition stressors were concurrently related to adolescents' social anxiety and depression, although adolescents perceived academic stressors (school performance, school/leisure conflict) as more stressful than peer/interpersonal stressors. Furthermore, over the course of the school year, school performance stressors uniquely contributed to increased social anxiety and depression. Items from the school performance subscale reflect issues such as "having to study things you don't understand," and "having difficulty with some subjects." These academic demands contributed to adolescent worry and rumination (i.e., RNT), which in turn predicted increased social anxiety and depression. Thus, both school performance pressures and RNT may play a role in adolescents' symptoms of social

anxiety and depression during school transitions. Adolescents who ruminate or worry about stressors in their lives are especially at risk for poor mental health outcomes.

Importantly, our findings suggest that school performance stress can affect adolescents' symptoms of social anxiety – independent of the transition's impact on depressive symptoms. This is a novel finding that extends the limited research on school transitions, which has focused on symptoms of depression (Newman et al., 2007). As adolescents make the transition to high school, they often encounter a very different school environment than previously, including substantially larger schools and different social networks (Evans et al., 2018), as well as greater emphasis on performance-based educational goals (Madjar et al., 2018). Performance-based goals might lead to negative experiences, such as social humiliation (if performance is below expected) or observational threats (e.g., seeing others being told off or humiliated when performing below expectations) (Evans et al., 2018), which could heighten feelings of social anxiety.

Finally, we found that peer pressure contributed to adolescents' increased symptoms of depression over time, but not increased social anxiety. However, it is important to note that peer pressure was strongly related to social anxiety at the beginning of the school year ($r=.65$), and that symptoms of social anxiety were very stable over time ($r=.69$). Thus, peer pressure may have had an *immediate* impact on adolescents' symptoms of social anxiety, which did not change further over time. These findings regarding peer pressure suggest that interventions to improve peer functioning during school transitions could be very valuable for reducing symptoms of both depression and social anxiety.

Clinical and Educational Implications

Our findings imply that preventive interventions to smooth the transition to high school might improve adolescents' academic functioning and mental health. Universal strategies such as teaching time-management skills and offering periodic counseling sessions to all youth (e.g., Bonnesen et al., 2020) might be beneficial. Furthermore, stress-management interventions (e.g., Kallianta et al., 2021) could target adolescents who report high levels of stress for more intensive instruction.

Moreover, because RNT may play a role in perpetuating stress and increasing adolescents' internalizing symptoms, cognitive-behavioral strategies that address worry and rumination may be beneficial. For example, Hilt and Swords (2021) found that a brief mindfulness mobile app intervention was engaging and useful in reducing adolescents' repetitive negative thinking and internalizing symptoms. Finally, to specifically address peer pressures occurring during the school transition, interventions that target improved peer functioning, such as those based on interpersonal models (e.g., La Greca et al., 2016; Young et al., 2012), could be especially valuable.

Limitations and Future Directions

Several study limitations should be noted. First, we relied on adolescent-reported data and used questionnaires to assess symptoms of social anxiety and depression. A diagnostic interview, and multiple informants, would provide a fuller picture of adolescents' symptomatology and impairment. Second, the study focused on transition stressors, but did not evaluate other stressors that might affect adolescents' mental health, such as deficits in peer or family support. Third, the participation rate appeared comparable to but a bit lower than other community-based studies (Blom-Hoffman et al., 2009). It is possible that some adolescents who are socially anxious or depressed may not have participated due to higher school absences among such youth. In future studies, providing monetary compensation or other incentives for youth participation may help. Fourth, although the focus on a Hispanic/Latinx sample was a strength, findings may not generalize to youth from other ethnic backgrounds. Finally, Hispanic/Latinx individuals are a majority population in South Florida; thus, such youths' adjustment to high school may differ in locations where they are ethnic or racial minorities (Benner & Graham, 2009). As such, future research might examine diversity issues more extensively, such as by evaluating how acculturation stressors (e.g., learning a new language, discrimination) impact youths' functioning during school transitions.

CONCLUSION

Overall, our findings are consistent with previous work demonstrating that school transitions are associated with poor mental health outcomes (De Wit et al., 2011), and that RNT is a potential pathway linking stressors with social anxiety and depression (Michl et al., 2013). Finally, this study represents an important extension of prior findings by examining Hispanic/Latinx youth in the U.S., a vulnerable population for poor educational outcomes.

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Recepción: 28 mayo de 2022

Aceptación: 08 julio de 2022

