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Counting on the Family: Family Cohesion and its Relationship to PTG

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Counting on the Family: Family Cohesion and its Relationship with Post Traumatic Growth in Urban Hispanic Adolescents

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Biography

Edgar (Nano) Gandara was born in El Paso, Texas, February 10, 2001. He graduated from Coronado High School, in El Paso, Texas. He acquired his Bachelor of Arts degree in Psychology and minored in Business Administration from the University of Texas at Austin in 2022. After graduating with his undergraduate degree, Nano began the Master of Science in Research Psychology program at DePaul University in Chicago, Illinois.

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Abstract

The current study aimed to understand how an adolescent's perceived family cohesion predicts post-traumatic Growth (PTG). Although relatively new to Psychology, there is extensive literature on PTG and its relationship with social support. However, there is not as much research exploring family cohesion as it relates to PTG. A cohesion focus provides insight into the importance of emotional connectedness in social support and its impact on adolescent PTG. Moreover, we investigated the relationship family cohesion has with PTG across Hispanic and non-Hispanic adolescents to see if there was any significant variance given cultural differences in the role of family. Our recruitment sample (N = 414) focused on adolescents attending Chicago public schools who completed surveys assessing ethnic background, stressful life experiences, family relationships, and PTG. Results indicated a significant relationship (both cross-sectionally and longitudinally) between family cohesion and PTG, however, there were no significant differences between Hispanic and non-Hispanic adolescents. Additionally, results revealed a significant correlation between family cohesion and stressful life experiences. Similarly, these results were not significantly different between Hispanic and non-Hispanic adolescents. Importantly, though the expected differences between groups were not supported by our results, the study supported our hypothesis that emotional connectedness as it relates to social support may be an important catalyst for PTG in adolescents.

Keywords: Post-Traumatic Growth, Family Cohesion, Ethnicity, Adolescent, Hispanic

Introduction

Adolescence

Adolescence is an important developmental phase that is marked by the start of puberty and carries lasting psychological impacts as an individual approaches adulthood and beyond (Jaworska & MacQueen, 2015; National Research Council [NRC], 1999). This period between childhood and adulthood is a time of increased exposure to stressful life experiences, brain plasticity, physical maturation, and behavioral shifts (Sisk & Gee, 2022; NRC, 1999). Importantly, throughout all these changes, adolescents are highly sensitive to social contexts and experience heightened emotions (Fombouchet et al., 2023; Garber et al., 2002). With increased brain plasticity, emotions associated with stressful social experiences may become more salient and can permanently alter psychosocial development and future mental health outcomes (NRC, 1999; Fombouchet et al., 2023; Sisk & Gee, 2022). Increased exposure to stressful life experiences, brain plasticity, heightened emotion, and attunement toward social stimuli put individuals at this stage of development at more risk for risk-taking behavior and mental health issues (Garber et al., 2002; Sisk & Gee, 2022; NRC, 1999; Fombouchet et al., 2023). While all adolescents are subject to these changes, adolescents with more exposure to stressful social stimuli are then at even greater risk for negative mental health outcomes (Sisk & Gee, 2022; Fombouchet et al., 2023).

Hispanic Adolescents

Hispanic adolescents and other racial and ethnic minorities in the United States are disproportionally exposed to more stressors than non-Hispanic white adolescents (Cervantes et al., 2015). Unlike non-Hispanic white adolescents who typically face normative stressors of

adolescence (i.e., changing schools, academic demands, puberty), Hispanic adolescents often face both normative and culturally derived non-normative stressors (Cordova & Cervantes, 2010; Rice & Dolgin 2002; Lorenzo-Blanco et al., 2012). More specifically, Cervantes and colleagues (2015) associated stress related to family economics, discrimination, and immigration with depression in Hispanic adolescents. Essentially, these findings implicate the exposure to extra non-normative stressors in the higher rates of depressive symptoms in Hispanic adolescents, much like in other studies (Nock et al., 2013; Zayas et al., 2005). Moreover, there is substantial literature associating acculturation stressors with negative mental health outcomes in Hispanic adolescents (Fortuna et al., 2007; Rogler, 1994; Vega et al., 1993; Vega et al., 1998; Zayas et al., 2005). The findings discussed in this paragraph illustrate the disproportional exposure to non-normative stress for Hispanic adolescents when compared to their non-Hispanic white counterparts.

Post-Traumatic Growth (PTG)

Despite the negative effects of stress on mental health (Benjet et al., 2016), positive outcomes are also possible. A concept introduced by Tedeschi and Calhoun (1995) known as Post Traumatic Growth (PTG) has some interesting and positive implications for individuals who have experienced trauma or stress. Post Traumatic Growth is defined as "positive psychological changes experienced as a result of the struggle with trauma or highly challenging situations" (Tedeschi et al., 2018). While much of the research examining trauma and stress focuses on the negative manifestations of symptoms, PTG has provided a unique outlook that pays more attention to the positive outcomes related to trauma and stress. More specifically, PTG explores five domains where growth may occur following trauma/major stress; new possibilities, relating

to others, personal strength, spiritual change, and appreciation of life (Tedeschi & Calhoun, 1996; Laceulle et al., 2015).

Unlike resilience, which refers to adapting, coping, and or adjusting to stressful/traumatic experiences, PTG represents transformative changes following shattered beliefs or worldviews due to a stressful or traumatic event (Elam & Taku, 2022). As opposed to resilience, PTG does not necessarily translate to effective coping or adaptation to major life events (Meyerson et al., 2011). Additionally, individuals who display PTG may still report more negative symptoms and less emotional well-being than individuals who exhibit resilience (Tedeschi and Calhoun, 2006). Still, PTG is associated with positively valanced constructs like hope (Vaughn et al., 2009), positive affect (Currier et al., 2009), self-esteem (Phipps et al., 2007), and optimism (Currier et al., 2009; Milam et al., 2005; Phipps et al., 2007). As such, PTG remains an important strength-based concept worthy of further investigation especially as it relates to groups exposed to heightened rates of stress.

PTG and Hispanic Adolescents

Given that adolescence is a time of increased exposure to stressful life events, this period may also bring increased opportunity for growth and experiencing PTG, especially for Hispanic adolescents who are exposed to culturally specific stressors. In fact, though most studies on PTG have been done on adults, there is a growing body of literature supporting PTG occurring in adolescence (Meyerson et al., 2011) and a few studies have begun to examine the role of ethnicity as it relates to PTG among adolescents.

To this point, five studies have been conducted exploring the relationship between ethnicity and PTG in adolescents (Milam et al., 2005; Phipps et al., 2007; Currier et al., 2009;

Wolchik et al., 2009; Milam et al., 2004), with only one indicating ethnic/racial differences between African American and European American adolescents (Phipps et al., 2007). No studies to date have examined PTG specifically among Hispanic adolescents.

Social Support and PTG in Hispanic Adolescents

Although no studies have specifically examined PTG among Hispanic adolescents, there are reasons to believe this may be an especially relevant strength for this population. First, as described above, Hispanic youth are exposed to heightened rates of distressing life experiences, which according to Tedeschi and Calhoun (2004), is required for the occurrence of PTG. Furthermore, one of the most powerful predictors of PTG in the literature is social support (Prati & Pietrantoni, 2009), and social support, particularly family relationships, are especially important within Hispanic culture.

Social support, as described by Lin et al. (1979), refers to the perceived accessibility to tangible or intangible support from "social ties to other individuals, groups, and the larger community." In adult literature, social support is a well-established predictor of PTG. Prati and Pietrantoni (2009) concluded that received and perceived social support was positively associated with PTG in adults after conducting a meta-analysis of over 103 studies. Far fewer studies have investigated social support as a predictor of PTG in adolescents and none of these have been conducted specifically with Hispanic youth. Out of all studies on the subject, six studies found evidence of a positive relationship between social support and PTG in adolescents and only one type of social support (familial) was found to predict PTG in more than one study (Meyerson et al., 2011; Kazemi et al., 2023). As such, it may be important to investigate family as it relates to PTG.

There are additional theoretical and empirical reasons for a focus on family support for adolescents, in general, and Hispanic adolescents in particular. Because adolescents spend so much time at school with their peers, some may assume that their well-being and decision-making largely reflect these relationships. However, it has been found that family connection has a larger impact on adolescent well-being than individual social relationships (Jose et al., 2012). And the seeming consensus across Hispanic cultures regardless of national origin is that family deserves a strong commitment (Zambrana, 1995; Sabogal et al., 1987; Chang et al., 2014; Chen & Feeley, 2014; Pernice-Duca, 2010; Calzada et al., 2013). Even more importantly, According to Zambrana (1995), this concept of familism in Hispanic culture when preserved can attenuate delinquency and mental health issues in adolescents. Mexican American adolescents are also more likely to use family as resources for problem-solving and facilitate familistic reciprocity in their systems (Zambrana, 1995).

There is additional research suggesting that the importance of family makes family relationships an especially prominent protective and risk factor for Hispanic youth (Gil et al., 2000; Buchanan & Smokowski, 2011). For example, Gutman and colleagues (2005) found that deteriorating family relationships can exacerbate stressful life events in Hispanic adolescents. In contrast, family relationships can act as a protective factor against stress in strong family systems (Gil et al. 2000; Zambrana, 1995; German et al., 2011). As such, it is important to understand how differences in the cultural expectations of family can affect the impact of social support on PTG for Hispanic adolescents.

Family Cohesion and PTG in Hispanic Adolescence

Within the broader construct of family support, family cohesion may be an especially important construct for Hispanic youth. Family cohesion is defined as, “the emotional bonding

that family members have towards each other" (Olson et al., 1982). What differentiates cohesion from other forms of social support is the emotional component. Cohesion is the strong and sustained emotional connectedness and warmth shared among family members. In a developmental stage of heightened emotion, social support that is emotionally centered may provide better outcomes for adolescents (Ozbay et al., 2007; Tolen et al., 1997). Furthermore, Jose and colleagues (2012) found that the positive structure of more collective relationship types (which is a hallmark of Hispanic culture) significantly affects adolescent well-being over more individualistic relationships. Although parental figures, peer relationships, and other more individualized relationships may be important, these findings highlight the significance of intergroup dynamics such as family connectedness or family cohesion on adolescent behavioral outcomes, especially for Hispanic youth.

There is also robust literature supporting the positive effects of family cohesion on adolescent mental health. Adolescents in households with higher family cohesion have been shown to exhibit and report less internalizing and externalizing symptoms (Deng et al., 2006; Lucia & Breslau, 2006). In a study conducted in Costa Rica, researchers found that highly cohesive families provided a protective-stabilizing effect on adolescents; where, as exposure to risk increases, elevated levels of family cohesion predicted lower levels of problematic outcomes when compared with adolescents in families with lower levels of cohesion (Kliewer et al., 2006). Finally, higher reporting of subjective well-being and life meaning/importance are related to more cohesive families (Fosco et al., 2012; Lightsey & Sweeney, 2008). In the current study's perspective, we believe family cohesion (as the protective factor it is) will enhance Post-Traumatic Growth. Despite its promise as a predictor of PTG for Hispanic adolescents, family cohesion has not yet been examined as a predictor of PTG in this population. The closest

relevant study is by Cordero (2010) who found that familism was positively related to PTG in Hispanic adults. However, no studies to date have examined family cohesion in relation to PTG in Hispanic adolescents. Given the emphasis on family in Hispanic culture (Zambrana, 1995; Sabogal et al., 1987; Chang et al., 2014; Chen & Feeley, 2014; Pernice-Duca, 2010; Calzada et al., 2013), more research is needed to better understand the impact of family relationships on the immediate and future emotional development of adolescents in this population. The findings of the current study would address the gaps in literature assessing the role of social support, specifically from the family, on PTG in Hispanic adolescents. As such, results may carry significant implications for future intervention and research in this demographic.

Study Rationale and Hypotheses

Though there is evidence suggesting social support predicts PTG, there is little evidence identifying the specific manifestations of social support that predict PTG in adolescents. Family cohesion, an important and emotionally based aspect of social support, has been studied to predict positive mental health outcomes in adolescents. Since Hispanic adolescents are more likely to seek/receive social support from family, family cohesion and its emphasis on emotional connectedness may then accentuate PTG outcomes for this demographic. Representing the largest minority group in the United States (U.S. Census Bureau, 2017), research studying protective factors to the outcomes of stress on Hispanics as well as factors that promote growth following stressors is important to prevention and intervention in this population. As such, the present study is looking to fill the gaps in the literature regarding family cohesion (an emotionally based social support measure) and its relationship with PTG based on ethnicity.

Following what would be expected from the literature, we hypothesize that Hispanic adolescents will experience more stressful life experiences than other youth. Additionally, due to

the emphasis of social support from family in Hispanic culture, we predict that Hispanic adolescents will report more PTG than other adolescents. We also predict that adolescents with more stressful life experiences will report more PTG. The role of emotional connectedness and warmth in social support has been overlooked in studies of PTG and is known to be associated with positive mental health outcomes for adolescents. As such, we hypothesize that family cohesion will predict PTG in adolescence. The literature also notes the heightened importance of family in Hispanic culture and the impact it can have on adolescents. Because Hispanic adolescents are more likely to be influenced by their familial relationships due to the cultural importance of family, perceived familial cohesion could be a particularly important predictor of their post-traumatic outcomes. Therefore, our fifth and final hypothesis predicts that the relationship between family cohesion and PTG is strengthened in Hispanic-identifying adolescents.

Summary of Hypotheses

1. **H1.** Hispanic adolescents will experience more stressful life experiences than other youth.
2. **H2.** Hispanic adolescents will report more PTG than other youth.
3. **H3.** Exposure to stressful life experiences will predict PTG over time.
4. **H4.** Family cohesion will predict PTG over time.
5. **H5.** Ethnicity will moderate the relationship between family cohesion and PTG such that the relationship will be accentuated for Hispanic adolescents over time.

Methods

Participants

The present study is part of a larger study that examined the effects of stressful life experiences on adolescents. The larger study included 414 participants with 47% male participants and 53% female participants. All participants were in grades six through 12 and were recruited from three urban schools. Thirty-four-point seven percent of participants identified as African American/Black, 10.8% identified as Asian, 1.1% identified as American Indian/Alaskan Native, .5% identified as Native Hawaiian or Other Pacific Islander, 36.6% identified as White/Caucasian, and 16.4% identified as Bi-Racial/Multi-Racial. Regarding Hispanic status, 61.8% identified as non-Hispanic or Latino, and 38.2% identified as Hispanic or Latino. Participants in the current study were required to have answered the survey question about Hispanic status as well as the survey measures for Family Cohesion at Time 1 (T1), Stressful Life Experiences at T1, and PTG at T1 and T2. Based on this criterion, the sample for the current study at T1 included 115 Hispanic or Latino-identifying participants and 190 non-Hispanic or Latino-identifying participants for a total of 305 participants at T1. The sample for the current study including PTG at T2 involved 133 total participants, 49 of whom identified as Hispanic or Latino, while the other 84 did not identify as Hispanic or Latino.

Procedure

All protocols and measures included in this study were approved by the Institutional Review Board at DePaul University and Northwestern University. In the fall of 2012, the participants visited the schools for one day of data collection. Data collections were held for five consecutive Saturdays where consent and assent forms were filled out and completed by all

participants. Breakfast, lunch, dinner, breaks, snacks, short movies, and college tours/information sessions were provided for all who attended. The order for taking the surveys was assigned at random and overall survey completion was incentivized at the end of the day through $50 gift cards to Target, Best Buy, or Old Navy. $20 of additional gift cards were provided to those whose parents completed the parent rating forms with $10 going to the caregiver and $10 going to the student. Measures of the current study are described below.

Measures

Ethnicity. Ethnicity was measured through a demographic survey, which asked the student for their basic information (such as name, school, age, etc.). Participants were instructed to indicate if they identify as Hispanic or if they do not. Ethnicity was scored under a binary system where 1 indicates identifying as Hispanic and 0 indicates identifying as non-Hispanic. Since we are using a binary system to measure ethnicity as it relates to being Hispanic, there is no need to test reliability.

Family Cohesion. The Family Cohesion Scale is a subscale of the Family Relationship Scale (FRS) developed by Tolan et al. (1997) and is used to measure the perceived cohesion adolescents view their family to have. The FCS measures cohesion through 6-statement items, rated on a 4-point Likert scale (See Appendix A). Participants were instructed to indicate to what degree the statements about their family are true by marking a circle corresponding to an answer. If the first option was selected for a given statement, this indicates they do not agree at all, the second option indicates they feel it to hardly ever be true, the third option indicates it is true a lot and the fourth option indicates it is almost always if not always true. Higher scores on the FCS indicate higher family cohesion. Reliability in the present sample was good ($\alpha = .852$).

Stressful Life Experiences. Stressful life experiences were measured using the Major Events Measure (MEM; Grant et al., 2020). The MEM measures an individual's exposure to major life events in seven domains; losing people, rejection/betrayal, direct victimization or witnessing victimization, disappointments, accidents and disasters, illness and disability, and changes (Grant et al., 2020). Each question prompts the respondent to indicate if they have been exposed to an event in that area. If the respondent says yes, questions related to that topic will be asked and answers will usually be given on a 5-point Likert-scale, however, some items require write-in responses or multiple selections based on instruction (See Appendix C). Higher scores indicate higher exposure to major events.

Post-Traumatic Growth. The PTG scale measures positive psychological changes following trauma through five domains (Kilmer et al. 2009). It is an 11-item scale, with 10 items being rated on a four-point Likert scale (See Appendix B). The first item prompts the participant to reflect on a bad or traumatic experience. The subsequent 10 items measure change across the five domains where 0 indicates no change, 1 indicates a little change, 2 indicates some change, and 3 a lot of change. Higher scores in this scale are associated with more Post Traumatic Growth. The 5 domains measured as subscales were: New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Life. Each subscale includes two items and the present sample demonstrated good internal consistency: (a) New Possibilities ($\alpha = .81$), (b) Relating to Others ($\alpha = .81$), (c) Appreciation of Life ($\alpha = .80$), (d) Personal Strength ($\alpha = .82$), and (e) Spiritual Change ($\alpha = .92$).

Analytical Plan

Descriptive and Correlational Analyses

Descriptive and correlational analyses were conducted to report the means and standard deviations of each variable by ethnicity. This data illustrated immediate differences in individual variables across ethnicity. Additionally, a correlation matrix based on correlational analyses was used to assess bivariate associations among variables.

Primary Analyses

1. **H1.** Hispanic adolescents will report more stressful life experiences than other youth.

For our first hypothesis (**H1)** we ran a two-sample t-test to test for differences in T1 stress levels as a function of ethnicity.

2. **H2.** Hispanic adolescents will report more PTG than other youth.

Similarly, we ran a two-sample t-test for our second hypothesis (H2) to test for differences in PTG at T1 and T2 as a function of ethnicity.

3. **H3.** Exposure to stressful life experiences will predict PTG over time.

For our third hypothesis (H3), a linear multiple regression was used to test the main effect of the predictor variable (T1 Stressful Life Experiences) on the criterion variable (T2 PTG) controlling for it T1 PTG.

4. **H4.** Family cohesion will predict PTG over time.

Our primary analysis for our fourth hypothesis **(H4)** consisted of a linear multiple regression where we are looking to confirm the relationship between perceived Familial Cohesion and PTG. We looked at the main effect of the predictor variable (perceived Family Cohesion) on the criterion variable (T2 PTG) controlling for T1 PTG.

5. **H5.** Ethnicity will moderate the relationship between family cohesion and PTG such that the relationship will be accentuated for Hispanic adolescents over time.

Additionally, for our fifth hypothesis (**H5),** we ran a moderated regression to investigate the interaction effect of our predictor variable (family cohesion) by our moderator (ethnicity) on T2 PTG controlling for T1 PTG.

Results

Descriptive and Correlational Analyses

Frequencies were generated on main study variables including MEM, FCS and PTG by Ethnicity (See Table 1). Results indicated a significant difference between the mean of PTG at T1 and PTG at T2 for Hispanic ($M = 16.87$ (T1), $M = 1.60$ (T2), $p < .001$) and non-Hispanic youth alike ($M = 16.92$ (T1), $M = 1.54$ (T2), $p < .001$). Additionally, results indicated a significant difference between PTG at T1 and PTG at T2 for both groups combined ($M = 16.91$ (T1), $M = 1.51$ (T2), $p < .001$). Bivariate correlation analyses were conducted to assess associations among study variables (See Table 2). Results indicated a significant negative relationship between FCS and MEM ($r(3266) = -.25$, $p < .01$) and a significant positive relationship between FCS and PTG at T1 ($r(307) = .32$, $p < .01$) as well as at PTG T2 ($r(149) = .26$, $p < .001$). In contrast to prior research, there was no significant relationship between ethnicity and MEM ($r(370) = -.07$, $p = .18$).

Table 1

Descriptive Statistics of Study Variables

Variable	non-Hispanic			Hispanic		
	n	*M*	*SD*	*n*	*M*	*SD*
MEM	230	15.76	8.47	142	17.01	9.23
FCS	229	2.02	0.67	139	1.94	0.64
PTG T1	192	16.92***	8.96	118	16.87***	9.05
PTG T2	98	1.54***	1.03	54	1.60***	0.92

MEM: Major Events Measure; FCS: Family Cohesion Scale; PTG T1: Post Traumatic Growth Time 1; PTG T2: Post Traumatic Growth T2

PTG at T1 and PTG at T2 were compared within both groups to identify any significant differences

***. Mean differences are significant at the 0.001 level (2-tailed).

Table 2

Bivariate Correlations Among Study Variables

Variable	1	2	3	4	5
1. Ethnicity	1				
2. MEM	-0.07	1			
3. FCS	0.06	-0.25**	1		
4. PTG T1	0.003	-0.05	0.32**	1	
5. PTG T2	-0.03	0.11	0.26**	0.44**	1

MEM: Major Events Measure; FCS: Family Cohesion Scale; PTG T1: Post Traumatic Growth Time 1; PTG T2: Post Traumatic Growth Time 2

**. Correlation is significant at the 0.001 level (2-tailed).

Primary Analyses

H1. Hispanic adolescents will report more stressful life experiences than other youth.

A two-sample t-test was used to test for differences in T1 stress levels as a function of ethnicity. Results indicated no significant difference (p = .96) in stressful life experiences between Hispanic adolescents (*M* = 17.01, SD = 9.23) and non-Hispanic adolescents (M = 17.76, SD = 8.47). Therefore, the null hypothesis is not rejected.

H2. Hispanic adolescents will report more PTG than other youth.

A two-sample t-test was used to test for differences in PTG at T1 and T2 as a function of ethnicity. Results revealed no significant difference (p = .48) in PTG at T1 between Hispanic adolescents (*M* = 16.89, SD = 9.05) and non-Hispanic adolescents (*M* = 16.92, SD = 8.96). Similarly, results did not indicate any significant difference (p = .36) in PTG at T2 between Hispanic adolescents (M = 1.60, SD = .92) and non-Hispanic adolescents (M = 1.54, SD = 1.03). Therefore, the null hypothesis is not rejected.

H3. Exposure to stressful life experiences will predict PTG over time.

A linear multiple regression was conducted to test the main effect of the predictor variable (T1 Stressful Life Experiences) on the criterion variable (T2 PTG) controlling for T1 PTG. After controlling for T1 PTG, our results revealed that exposure to stressful life experiences did not significantly predict T2 PTG ($\beta = .11$, $p = .17$). Results indicate that the null hypothesis was not rejected.

H4. FCS will predict PTG over time.

The fourth hypothesis was tested through another linear multiple regression that investigated the main effect of the predictor variable (FCS) on the criterion variable (T2 PTG) controlling for T1 PTG. Importantly, after controlling for PTG T1, our results revealed a significant positive association between FCS and PTG at T2 ($\beta = .18$, $p = .03$). These findings indicate that the null hypothesis is rejected.

H5. Ethnicity will moderate the relationship between FCS and PTG such that the relationship will be accentuated for Hispanic adolescents over time.

The fifth hypothesis was tested through a moderated regression that investigated the interaction effect of our predictor variable (FCS) by our moderator (ethnicity) on T2 PTG controlling for T1 PTG. After controlling for T1 PTG, there was no significant interaction effect between FCS and ethnicity on the criterion variable (T2 PTG) ($\beta = .55$, $p = .19$). Since the interaction effect was not significant, no simple slope analyses were run. Based on these results, the null hypothesis will not be rejected.

Discussion

This study's purpose was to understand more about how differences in social support, specifically FCS, relate to PTG in adolescents. There were five questions that this study aimed to answer: 1. Is there a difference in major stress events experienced between Hispanic, and Non-Hispanic adolescents. 2. Do Hispanic adolescents experience more PTG than Non-Hispanic Adolescents? 3. Do stressful life experiences predict PTG? 4. Does FCS predict PTG? 5. If there is a relationship between FCS and PTG, does ethnicity moderate it? Our analyses involved descriptive and correlational matrix models, t-tests, multiple linear regression models, and finally a moderated regression model. In total, two models indicated significant relationships.

Ethnicity and Stress (H1)

Results indicated that there was not a significant difference in stressful life events reported between Hispanic and non-Hispanic adolescents. Interestingly, this finding does not align with previous research on stressful life experiences and adolescence. More specifically, this contrasts many studies indicating that ethnic minority adolescents are disproportionately exposed to stressful life experiences relative to non-Hispanic White adolescents (Cervantes et al., 2015; Cordova & Cervantes, 2010; Rice & Dolgin 2002; Lorenzo-Blanco et al., 2012). Though different than what would be expected by the literature, there is something in our analysis that could explain this discrepancy. In our analysis, participants were not filtered by race, meaning that any participant indicating they were not Hispanic was reported as a non-Hispanic participant. For example, a Black participant who is not Hispanic would be grouped with a White participant who is not Hispanic. A major problem this causes is that it groups other minorized youth who may also experience heightened rates of stress exposure with White youth who may not. This to say, perhaps the mean scores of stressful life experiences for non-Hispanic participants are

similar to Hispanic youth due to the inclusion of other minoritized identities in the non-Hispanic group. More specifically, since other minoritized groups have also been found to be exposed to higher stressful life experiences in adolescence (Cervantes et al., 2015), grouping them all together may conceal differences between White adolescents and adolescents who belong to other marginalized identities. Future studies should aim to investigate stressful life experiences of adolescents within the same race, comparing differences between the participants of that race who are Hispanic and non-Hispanic to see if there are ethnic differences specific to Hispanic adolescents even within similar racial groups. Moreover, each group should be compared to their White adolescent counterparts to expose differences among minoritized racial and ethnic identities.

Ethnicity and PTG (H2)

Our second hypothesis posited that Hispanic Adolescents would report more PTG than non-Hispanic adolescents. Based on our results, this hypothesis was not supported. Though no literature to this point has indicated Hispanic adolescents display more PTG than other adolescents, this hypothesis was inspired by literature finding Black adolescents reported more PTG than White adolescents (Phipps et al., 2007). Though our results did not support our initial assumptions, there may be some explanations as to why. Firstly, as stated in the previous paragraph, without filtering by race, Hispanic Adolescents are being compared to other youth who may have minoritized racial and ethnic backgrounds as well. Secondly, Hispanic adolescents are not the only demographic that places a strong emphasis on family or collectivist values. As such, familial social support that would elicit PTG could be comparable between groups, and therefore would limit the variability of PTG experienced between the Hispanic and non-Hispanic adolescents. Furthermore, while family relationships can be a significant protective

factor for Hispanic adolescents, deteriorating family relationships have been found to especially exacerbate the negative effects of stressful life events in Hispanic adolescents (Gutman et al., 2005). As such, the increased PTG expected as a function of FCS in Hispanic adolescents may have been negated by detrimental effects of deteriorating family relationships in some of the other Hispanic adolescent participants. Future studies should look to find differences in PTG among Hispanic and non-Hispanic adolescents filtered by race, as well as comparing how these groups perceive their family support and subsequently how it impacts mental health outcomes.

Stress and PTG (H3)

Regarding the third hypothesis, our results did not support what we predicted. In contrast to literature that implicates stressful life experiences and trauma in the occurrence of PTG (Tedeschi & Calhoun, 1995; Laceulle et al., 2015; Tedeschi et al., 2018), our results indicated that stressful life experiences did not predict more PTG. Moreover, in our bivariate analyses, our results indicated that there was a significant negative relationship between FCS and stressful life events such that higher FCS predicted less stressful life events and vice versa. However, if PTG is improved by social support (like FCS), these bivariate findings would contradict what we expected in the relationship between stress and PTG. Here, based on our bivariate analysis, more stress would predict less PTG since more stress is associated with less FCS. However, current, and prior literature still supports the idea that major stressors are necessary for an individual to experience PTG (Tedeschi and Calhoun, 2006; Calhoun et al., 2010; Platt, 2021). Importantly, in a previous study by Platt (2021), bereavement (a shorter subscale of the loss domain in the MEM scale) was found to predict PTG in adolescents. As such, the contradiction in our findings may be better explained by the specific type of stress that adolescents face. Whereas the MEM in the current study is looking at major events wholistically, the discrepancy may lay in which of the

major event domains most contribute to their MEM score. It could be important to consider that while significant stress is necessary for PTG, perhaps specific stressors are more likely to predict the development of PTG in adolescents when accompanied by social support. Or better yet, perhaps specific stressors engender more social support, and subsequently, more PTG, and vice versa.

This paradoxical finding is important for running future analyses on protective factors, stress, and PTG. More specifically, without controlling for these factors, the results of this analysis do not tell the whole story. Compared to findings implicating stress in the development of PTG (Tedeschi & Calhoun, 1995; Laceulle et al., 2015; Tedeschi et al., 2018), our results indicating that higher FCS predicts less stressful life experiences shows how important context is for the development of PTG. Future studies should look to control for factors found to mitigate stress as well as understand how specific stressors impact the development of PTG in adolescents.

Family Cohesion and PTG (H4)

The fourth hypothesis investigating the relationship between FCS and PTG did yield some interesting results. Our regression revealed that FCS predicted PTG over time, such that higher FCS was associated with more PTG over time. This finding is important because it supplements previous literature implicating social support in higher PTG (Prati & Pietrantoni, 2009; Meyerson et al., 2011; Tedeschi & Calhoun, 2004; Cordero 2010). More specifically, however, it is the first study to find that emotionally based social support predicts PTG in adolescence. Although this finding is the first of its kind in relation to PTG, it is consistent with previous literature implicating emotionally centered social support in better mental health outcomes for adolescents (Ozbay et al., 2007; Tolen et al., 1997). Moreover, this finding is important because it measures change over time. By controlling for T1 we can fully understand

the degree and direction of the relationship. Additionally, our initial bivariate analyses confirmed this positive relationship between FCS and PTG at both T1 and T2. This robust finding suggests emotionally centered social support may be a strong predictor of PTG in adolescence.

It is also important to note that a previous study has found that stressors can compromise family relationships (Grant et al., 2003). Considering the previous study, it could better explain why FCS is such a powerful predictor of PTG in the current study. FCS could be seen as a proxy for positive family relationships and may be necessary to promote PTG. As mentioned, the specific type of social support that predicts PTG is not consistent across studies. Therefore, these inconsistencies may be the result of stressors deteriorating social relationships that do not have strong emotional support. As such, it may be important to begin looking at measures of emotionally based social support to identify how consistently they predict PTG. Future studies should look to replicate these findings and compare different types of social support with emotionally based social supports and their impact on PTG.

Ethnicity, Family Cohesion, and PTG (H5)

The moderated regression for the fifth hypothesis yielded no significant results. That is, the interaction between ethnicity and FCS did not predict a stronger relationship between FCS and PTG for Hispanic Adolescents. Though past studies have implicated FCS in better health outcomes for Hispanic Adolescents in particular (Deng et al., 2006; Lucia & Breslau, 2006; Kliewer et al., 2006; Fosco et al., 2012; Lightsey & Sweeney, 2008), our findings did not yield any significant difference in PTG between Hispanic and non-Hispanic adolescents. Once again, these findings may be better understood in light of future studies in which race is filtered before comparing differences between Hispanic and non-Hispanic adolescents. This is because Hispanic adolescents are not a monolithic race but rather an ethnicity that can also include other

minoritized racial groups. Additionally, Hispanic adolescents are not the only minoritized group that faces disproportionate stress relative to White adolescents; As such, comparing data based on ethnicity alone limits the meaning of our results and can mask differences between White and non-White groups. Overall, results examining racial and ethnic differences in PTG may give a clearer picture on which racial and ethnic groups experience PTG at elevated rates since it would isolate differences in stressful events and social support experienced among White and minoritized demographic groups.

Limitations and Future Directions

Evidently, one of the biggest limitations was that the data was analyzed without filtering racial groups prior to establishing ethnicity. As such, comparisons between the Hispanic and non-Hispanic adolescents compared information between minority identities. The results imply the importance of isolating race prior to comparing differences among ethnicity since the context behind these identities directly relates to experienced stress. Therefore, because we did not filter for race, differences in PTG expected due to the increased stress minoritized youth face may have been less evident in this study. Though more research needs to be done between the interaction of ethnicity and race on family relationships and PTG, these preliminary findings are important as they support literature implicating social support as a predictor for PTG in adolescence. As such, future studies should investigate how ethnicity interacts with race regarding experiences of stress and perceptions of social support and their impact on PTG.

Another limitation of the study was the attrition between T1 PTG T1 and T2 PTG. From T1 PTG the numbers went from 118 Hispanic participants and 192 non-Hispanic participants to 54 and 98 participants, respectively. Because of the limited sample size at T2, results based on the data of PTG T2 should be considered with that caveat in mind. Additionally, all measures of

the data were self-reported meaning they represent only one perspective and may reflect common method variance. Future research should consider incorporating other individuals involved with the participant in assessing PTG.

One important result that needs to be discussed is the discrepancy between PTG at T1 and PTG at T2. Across all groups, PTG at T1 for Hispanic and non-Hispanics decreased significantly. To some degree, attrition must have impacted these mean differences, however, it may be important to investigate why participants that remained in the study had such low PTG scores. While the relationship with FCS was consistent at both times points for PTG (which speaks to how robust the result of this relationship is), the lower scores of participants who did not attrit at T2 could have important implications in how the data is interpreted (i.e., what role may incentives of the study play). As such, future studies could look to see if other measures could explain the low scores at T2 PTG.

Implications

Our findings have important implications for work on social support and PTG in adolescence. These findings identify an emotionally based social support as a predictor of PTG. While prior studies have found that social support is associated with PTG in adolescents (Meyerson et al., 2011), the specific processes required for PTG (i.e., parent communication, family organization, teacher support) have not been consistent across studies. The importance of the finding that FCS predicts PTG in adolescence is that it adds to previous research indicating family relationships predict the development of PTG in adolescents (Meyerson et al., 2011; Kazemi et al., 2023). The family relationship variables in the other studies implicating social support in PTG for adolescents were a family support scale established by Kimhi and colleagues (2009), a subscale of the Children's Coping Strategies Checklist measuring support from their

parent or guardian (Ayers et al., 1996; Program for Prevention Research, 1999), and a subscale from the Multidimensional Scale of Perceived Social Support (MSPSS) measuring support from family (Kazemi et al., 2023). Importantly, this study is the first to indicate an emotionally centered social support specifically as a strong predictor of PTG in adolescents. In the context of a clinical setting, these results indicate that it may be important to consider how social support catering to an adolescent's emotional needs can supplement therapeutic care.

Another important implication stems from our finding that FCS was negatively associated with MEM. There are many different implications this finding may have. Firstly, this finding may support previous research indicating that social support can significantly mitigate the effects of stressful life experiences (Cohen & Wills, 1985; Camara, Bacigalupe, & Padilla, 2017). Additionally, these findings could also imply that stressors compromise social support as discussed by Grant and colleagues (2003). Interestingly, this could also indicate the existence of a reciprocal relationship such that, depending on the specific manifestation of social support and major life events, PTG can either be enhanced or diminished.

All in all, regardless of ethnicity, our results indicate that adolescents stand to benefit from strong family relationships, and in the case of this study, family relationships that nurture emotional needs.

Conclusion

Despite the limitations, the present study adds to the current literature on social support, stress, PTG and adolescence meaningfully. While prior studies have focused on social support and its relationship with PTG in adolescence, there is less literature on the specific manifestations of social support that predict PTG. To address this gap in the literature, our study

looked at an emotionally centered version of social support (FCS) and its relationship with PTG in adolescence. While there were no ethnic differences in our results, we found important relationships between FCS and MEM, and FCS and PTG.

Though MEM was not associated with PTG, our results indicated that FCS was a significant predictor of MEM. Importantly, the many implications behind this finding could indicate the existence of a reciprocal relationship between social support and stress in the development of PTG. More specifically, because social support has been found to mitigate stress (Cohen & Wills, 1985; Camara, Bacigalupe, & Padilla, 2017) and stress has been found to compromise social support (Grant et al., 2003), they may interact differently depending on specific manifestation of each regarding the development of PTG in adolescents.

Finally, and most importantly, the current study found that FCS significantly predicted PTG among adolescents both cross-sectionally and longitudinally. Importantly, this builds on prior literature indicating social support predicts PTG in adolescence and supports our hypothesis that emotionally centered social support may be especially important for adolescents. Although more should be done to isolate race prior to assessing ethnic differences for these variables in future studies, the overall results of this study implicate the importance of social support, more specifically family cohesion, in the experience of PTG in adolescence. Regardless of ethnicity status, these results indicate that counting on the family can in fact help adolescents experience PTG

References

Achenbach, T. M., & Dumenci, L. (2001). Advances in empirically based assessment: Revised cross-informant syndromes and new DSM-oriented scales for the CBCL, YSR, and TRF: Comment on lengua, Sadowski, Friedrich, and Fisher (2001). *Journal of Consulting and Clinical Psychology*, *69*(4), 699–702.

Alegria, M., Shrout, P. E., Woo, M., Guarnaccia, P., Sribney, W., Vila, D., Polo, A., Cao, Z., Mulvaney-Day, N., Torres, M., & Canino, G. (2007). Understanding differences in past year psychiatric disorders for Latinos living in the US. *Social Science & Medicine*, *65*(2), 214–230.

Alisic, E., van der Schoot, T. A., van Ginkle, J. R., & Kleber, R. J. (2008). Looking beyond posttraumatic stress disorder in children. *The Journal of Clinical Psychiatry*, *69*(9), 1455–1461.

Allison, K. W., Burton, L., Marshall, S., Perez-Febles, A., Yarrington, J., Kirsh, L. B., & Merriwether-DeVries, C. (1999). Life experiences among urban adolescents: Examining the role of context. *Child Development*, *70*(4), 1017–1029.

Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality, 64*, 923-958

Barakat, L. P., Alderfer, M. A., & Kazak, A. E. (2005). Posttraumatic growth in adolescent survivors of cancer and their mothers and fathers. *Journal of Pediatric Psychology*, *31*(4), 413–419.

Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., Ruscio, A. M., Shahly, V., Stein, D. J., Petukhova, M., Hill, E., Alonso, J., Atwoli, L., Bunting, B., Bruffaerts, R., Caldas-de-Almeida, J. M., de Girolamo, G., Florescu, S., Gureje, O., Huang, Y., … Koenen, K. C. (2015). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *Psychological Medicine, 46*(2), 327–343.

Buchanan, R. L., & Smokowski, P. R. (2011). Pathways from acculturation stress to negative friend associations among Latino adolescents. *Child and Adolescent Social Work Journal*, *28*(5), 375–391.

Calhoun, L. G., & Tedeschi, R. G. (2006). The foundations of posttraumatic growth: an expanded framework. In L. G. Calhoun & R. G. Tedeschi (Eds.), *Handbook of posttraumatic growth: research & practice* (p. 3–23). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Calhoun, L. G., Tedeschi, R. G., Cann, A., & Hanks, E. A. (2010). Positive outcomes following bereavement: Paths to posttraumatic growth. *Psychologica Belgica, 50(1-2),* 1–2.

Calzada, E. J., Tamis-LeMonda, C. S., & Yoshikawa, H. (2012). *familismo* in Mexican and Dominican families from low-income,urban communities. *Journal of Family Issues*, *34*(12), 1696–1724.

Camara, M., Bacigalupe, G., & Padilla, P. (2017). The role of social support in adolescents: are you helping me or stressing me out?. *International Journal of Adolescence and Youth, 22(2),* 123–136.

Cervantes, R. C., Cardoso, J. B., & Goldbach, J. T. (2015). Examining differences in culturally based stress among clinical and nonclinical Hispanic adolescents. *Cultural Diversity and Ethnic Minority Psychology*, *21*(3), 458–467.

Chang, J., Chen, C.-N., & Alegría, M. (2014). Contextualizing social support: Pathways to help seeking in Latinos, Asian Americans, and whites. *Journal of Social and Clinical Psychology*, *33*(1), 1–24.

Chen, Y., & Feeley, T. H. (2013). Social Support, social strain, loneliness, and well-being among older adults. *Journal of Social and Personal Relationships*, *31*(2), 141–161.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98(2),* 310.

Cryder, C. H., Kilmer, R. P., Tedeschi, R. G., & Calhoun, L. G. (2006). An exploratory study of posttraumatic growth in children following a natural disaster. *American Journal of Orthopsychiatry*, *76*(1), 65–69.

Currier, J. M., Hermes, S., & Phipps, S. (2009). Brief report: Children's response to serious illness: Perceptions of benefit and burden in a pediatric cancer population. *Journal of Pediatric Psychology*, *34*(10), 1129–1134.

Deng, S., Lopez, V., Roosa, M. W., Ryu, E., Burrell, G. L., Tein, J.-Y., & Crowder, S. (2006). Family processes mediating the relationship of neighborhood disadvantage to early adolescent internalizing problems. *The Journal of Early Adolescence*, *26*(2), 206–231.

Elam, T., & Taku, K. (2022). Differences between posttraumatic growth and resiliency: Their distinctive relationships with empathy and emotion recognition ability. *Frontiers in Psychology, 13*.

Fortuna, L. R., Perez, D. J., Canino, G., Sribney, W., & Alegria, M. (2007). Prevalence and correlates of lifetime suicidal ideation and suicide attempts among Latino subgroups in the United States. *The Journal of Clinical Psychiatry*, *68*(04), 572–581.

Fombouchet, Y., Lannegrand, L., & Lucenet, J. (2023). The contextualized Emotion Regulation Survey for Adolescents (CERSA): How does emotion regulation vary according to context? *British Journal of Developmental Psychology*, *41*(3), 306–323.

Fosco, G. M., Caruthers, A. S., & Dishion, T. J. (2012). A six-year predictive test of adolescent family relationship quality and effortful control pathways to emerging adult social and emotional health. *Journal of Family Psychology, 26,* 565–575.

Garber J., Keiley M. K., Martin C. (2002). Developmental trajectories of adolescents' depressive symptoms: Predictors of change. J*ournal of Consulting and Clinical Psychology, 70,* 79–95.

German, M., Gonzales, N. A., & Dumka, L. (2009). Familism Values as a Protective Factor for Mexican-origin Adolescents Exposed to Deviant Peers. *The Journal of early adolescence, 29(1),* 16-42.

Gil, A. G., Wagner, E. F., & Vega, W. A. (2000). Acculturation, familism, and alcohol use among Latino adolescent males: Longitudinal relations. *Journal of Community Psychology*, *28,* 443–458.

Grant, K. E., O'koon, J. H., Davis, T. H., Roache, N. A., Poindexter, L. M., Armstrong, M. L., ... & McIntosh, J. M. (2000). Protective factors affecting low-income urban African American youth exposed to stress. *The Journal of Early Adolescence, 20(4),* 388-417.

Grant, K. E., Compas, B. E., Stuhlmacher, A. F., Thurm, A. E., McMahon, S. D., & Halpert, J. A. (2003). Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. *Psychological Bulletin, 129(3),* 447–466.

Morrison Gutman, L., McLoyd, V. C., & Tokoyawa, T. (2005). Financial strain, neighborhood stress, parenting behaviors, and adolescent adjustment in urban African American families. *Journal of Research on Adolescence, 15(4),* 425-449.

Hafstad, G. S., Gil-Rivas, V., Kilmer, R. P., & Raeder, S. (2010). Parental adjustment, family functioning, and posttraumatic growth among Norwegian children and adolescents following a natural disaster. *American Journal of Orthopsychiatry, 80(2),* 248.

Jaworska, N., & MacQueen, G. (2015). Adolescence as a unique developmental period. Journal of psychiatry & neuroscience: *JPN, 40(5),* 291.

Jose, P. E., Ryan, N., & Pryor, J. (2012). Does social connectedness promote a greater sense of well-being in adolescence over time? *Journal of Research on Adolescence*, *22*(2), 235–251.

Kimhi, S., Eshel, Y., Zysberg, L., & Hantman, S. (2009). Getting a life: Gender differences in postwar recovery. *Sex Roles, 61,* 554-565.

Kliewer, W., Murrelle, L., Prom, E., Ramirez, M., Obando, P., Sandi, L., & del Carmen Karenkeris, M. (2006). Violence Exposure and Drug Use in Central American Youth:

Family Cohesion and Parental Monitoring as Protective Factors. *Journal of Research on Adolescence, 16(3),* 455–478.

Laceulle, O. M., Kleber, R. J., & Alisic, E. (2015). Children's Experience of Posttraumatic Growth: Distinguishing General from Domain-Specific Correlates. *PloS one, 10(12), e0145736.*

Laufer, A., & Solomon, Z. (2006). Posttraumatic symptoms and posttraumatic growth among Israeli youth exposed to terror incidents. *Journal of Social and Clinical Psychology, 25(4),* 429-447.

Laufer, A., Raz-Hamama, Y., Levine, S. Z., & Solomon, Z. (2009). Posttraumatic growth in adolescence: The role of religiosity, distress, and forgiveness. *Journal of Social and Clinical Psychology, 28(7),* 862-880.

Lightsey, O. R., & Sweeney, J. (2008). Meaning in life, emotion-oriented coping, generalized self-efficacy, and family cohesion as predictors of family satisfaction among mothers of children with disabilities. *The Family Journal, 16,* 212–221

Lin, N., Ensel, W. M., Simeone, R. S., & Kuo, W. (1979). Social support, stressful life events, and illness: A model and an empirical test. *Journal of health and Social Behavior,* 108-119.

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress, 17,* 11 – 21

Lorenzo-Blanco, E. I., & Unger, J. B. (2015). Ethnic discrimination, acculturative stress, and family conflict as predictors of depressive symptoms and cigarette smoking among

Latina/o youth: The mediating role of perceived stress. *Journal of youth and adolescence, 44*, 1984-1997.

Lucia, V. C., & Breslau, N. (2006). Family cohesion and children's behavior problems: A longitudinal investigation. *Psychiatry Research, 141,* 141–149.

McKee, S. L., Liu, X., Truong, D. M., Meinert, A. C., Daire, A. P., & Mire, S. S. (2020). The family adjustment measure: Identifying stress in parents of youth with autism. *Journal of Child and Family Studies*, **29**(2), 592–604.

Meyerson, D. A., Grant, K. E., Carter, J. S., & Kilmer, R. P. (2011). Posttraumatic growth among children and adolescents: A systematic review. *Clinical psychology review, 31(6),* 949-964.

Milam, J., Ritt-Olson, A., Tan, S., Unger, J., & Nezami, E. (2005). The September 11th 2001 terrorist attacks and reports of posttraumatic growth among a multi-ethnic sample of adolescents. *Traumatology, 11(4),* 233-246.

Milam, J. E., Ritt-Olson, A., & Unger, J. B. (2004). Posttraumatic growth among adolescents. *Journal of Adolescent Research, 19(2),* 192-204.

Mindel, C. H. (1980). Extended familism among urban Mexican Americans, Anglos, and Blacks. *Hispanic Journal of Behavioral Sciences*, *2*(1), 21–34.

Mulvaney-Day, N. E., Alegria, M., & Sribney, W. (2007). Social cohesion, social support, and health among Latinos in the United States. *Social science & medicine, 64(2),* 477-495.

National Research Council. (1999). Risks and opportunities: Synthesis of studies on adolescence.

Ning, J., Tang, X., Shi, H., Yao, D., Zhao, Z., & Li, J. (2023). Social support and posttraumatic growth: A meta-analysis. *Journal of Affective Disorders*, 320, 117-132.

Nock, M. K., Green, J. G., Hwang, I., McLaughlin, K. A., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2013). Prevalence, correlates, and treatment of lifetime suicidal behavior among adolescents: results from the National Comorbidity Survey Replication Adolescent Supplement. *JAMA psychiatry, 70(3),* 300-310.

Olson, D. H., Russell, C. S., & Sprenkle, D. H. (1983). Circumplex model of marital and family systems: Vl. Theoretical update. *Family process, 22(1),* 69-83.

Ozbay, F., Johnson, D. C., Dimoulas, E., Morgan Iii, C. A., Charney, D., & Southwick, S. (2007). Social support and resilience to stress: from neurobiology to clinical practice. *Psychiatry (edgmont), 4(5),* 35.

Park, S. S. (2006). Exposure to community violence and aggressive beliefs in adolescents: Role of posttraumatic growth and developmental resources. Dissertation *Abstracts International: Section B: The Sciences and Engineering, 67(3-B),* 1732.

Pernice-Duca, F. (2010). Family network support and mental health recovery. *Journal of marital and family therapy, 36(1),* 13-27.

Phipps, S., Long, A. M., & Ogden, J. (2007). Benefit finding scale for children: Preliminary findings from a childhood cancer population. *Journal of Pediatric Psychology, 32(10),* 1264-1271.

Prati, G., & Pietrantoni, L. (2009). Optimism, social support, and coping strategies as factors contributing to posttraumatic growth: A meta-analysis. *Journal of loss and trauma, 14(5),* 364-388.

Program for Prevention Research. (1999). *Family bereavement program manual.* (Available from Program from Prevention, Arizona State University, P.O. Box 876005, Tempe, AZ 85287-6005.)

Rice, F. P., & Dolgin, K. G. (2002). The adolescent: Development, relationships, and culture. Allyn & Bacon.

Rogler, L. H. (1994). International migrations: A framework for directing research. *American Psychologist, 49(8),* 701.

Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B. V., & Perez-Stable, E. J. (1987). Hispanic Familism and Acculturation: What Changes and What Doesn't? *Hispanic Journal of Behavioral Sciences, 9*(4), 397–412.

Schaefer, J., & Moos, R. (1998). The context for posttraumatic growth: Life crises, individual and social resources, and coping. In R. Tedeschi. Park, & L. Calhoun (Eds.), Posttraumatic growth: Positive changes in the aftermath of crisis (pp. 99 – 126). *Mahwah, NJ: Erlbaum*.

Sisk, L. M., & Gee, D. G. (2022). Stress and adolescence: vulnerability and opportunity during a sensitive window of development. *Current Opinion in Psychology, 44,* 286-292

Smokowski, P. R., Rose, R. A., Bacallao, M., Cotter, K. L., & Evans, C. B. R. (2017). Family dynamics and aggressive behavior in Latino adolescents. *Cultural Diversity and Ethnic Minority Psychology*, *23*(1), 81–90.

Streiner, D. L., Norman, G. R., & Cairney, J. (2015). *Health measurement scales: A practical guide to their development and use* (5th ed.). Oxford University Press.

Substance Abuse and Mental Health Services Administration. (2015). Racial/ethnic differences in mental health service use among adults (HHS Publication No. SMA-15-4906). Rockville, MD: Author.

Tedeschi, R. G., & Calhoun, L. G. (1995). Trauma & transformation: Growing in the aftermath of suffering. *Sage Publications, Inc.*

Tedeschi, R. G., & Calhoun, L. G. (1996). The post-traumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9(3),* 455–471.

Tedeschi, R.G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15,* 1 – 18.

Tedeschi, R. G., & Calhoun, L. G. (2006). Time of change? The spiritual challenges of bereavement and loss. *OMEGA-Journal of Death and Dying, 53(1),* 105-116.

Tedeschi, R. G., Shakespeare-Finch, J., Taku, K., & Calhoun, L. G. (2018). Posttraumatic growth: Theory, research, and applications. Routledge.

Tolan, P. H., Gorman-Smith, D., Huesmann, L. R., & Zelli, A. (1997). Assessment of family relationship characteristics: A measure to explain risk for antisocial behavior and depression among urban youth. *Psychological Assessment*, *9*(3), 212–223.

Tsai, J., Sippel, L. M., Mota, N., Southwick, S. M., & Pietrzak, R. H. (2016). Longitudinal course of posttraumatic growth among US military veterans: Results from the National Health and Resilience in Veterans Study. *Depression and Anxiety, 33(1),* 9–18.

Tsai, A. P.-T., Smith, R. K., Gonzalez, M., Youngstrom, E. A., Daughters, S. B., Youngstrom, J. K., & Findling, R. L. (2022). Diagnostic accuracy of Achenbach scales in detecting youths' substance use disorders. *Psychological Assessment, 34(6),* 570–582.

U.S. Census Bureau. (2018). Demographic turning points for the United States: Population projections for 2020 to 2060.

U.S. Department of Health and Human Services. (2022, December 15). Most reported substance use among adolescents held steady in 2022. *National Institutes of Health.*

U.S. National Library of Medicine. (n.d.). *Substance use: Medlineplus medical encyclopedia*. MedlinePlus.

Vaughn, A. A., Roesch, S. C., & Aldridge, A. A. (2009). Stress-related growth in racial/ethnic minority adolescents: Measurement structure and validity. *Educational and Psychological Measurement, 69(1),* 131-145.

Vega, W. A., Gil, A. G., Warheit, G. J., Zimmerman, R. S., & Apospori, E. (1993). Acculturation and delinquent behavior among Cuban American adolescents: Toward an empirical model. *American journal of community psychology, 21(1),* 113.

Vega, W. A., Kolody, B., Aguilar-Gaxiola, S., Alderete, E., Catalano, R., & Caraveo-Anduaga, J. (1998). Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Archives of general psychiatry, 55(9),* 771-778.

Wolchik, S. A., Coxe, S., Tein, J. Y., Sandler, I. N., & Ayers, T. S. (2009). Six-year longitudinal predictors of posttraumatic growth in parentally bereaved adolescents and young adults. *OMEGA-Journal of Death and Dying, 58(2),* 107-128.

Yaskowich, K. M. (2003). Posttraumatic growth in children and adolescents with cancer. Diss Abstr Inl: Section B: *The Sciences and Engineering, 63(8-B).*

Yu, Y., Peng, L., Chen, L., Long, L., He, W., Li, M., & Wang, T. (2014). Resilience and social support promote posttraumatic growth of women with infertility: The mediating role of positive coping. *Psychiatry research, 215(2),* 401-405.

Zambrana, R. E. (1995). The Study of Latino Families: A Point of Departure. In *Understanding latino families: Scholarship, policy and practice* (pp. 4–54). *essay, Sage.*

Zayas, L. H., Lester, R. J., Cabassa, L. J., & Fortuna, L. R. (2005). Why do so many Latina teens attempt suicide? A conceptual model for research. *American Journal of Orthopsychiatry, 75(2),* 275-287.

Appendix

Appendix A: The Family Cohesion Scale (FCS) (Tolan et al., 1997)

Instructions

"1. Rate how much you agree with the following statements about your family."

0 = not at all

1 = hardly ever true

2 = true a lot

3 = almost always or always true

Items

I'm available when others in the family want to talk to me.

I listen to what other family members have to say, even when I disagree.

Family members ask each other for help.

Family members like to spend time with each other.

Family members feel very close to each other.

We can easily think of things to do together as a family.

Appendix B: Post Traumatic Growth Inventory for Children Revised (PTGI-C-R) (Kilmer et al., 2009)

Instructions

"1. Everyone goes through bad things in life, and sometimes we grow from bad experiences. Think about a bad experience you had and write it here"

"2. Now, answer the questions below about any way you have changed for the better because of what you went through."

0 = no change

1 = a little

2 = some

3 = a lot

Items

I can now handle big problems better than I used to.

I feel closer to other people (friends or family) than I used to.

My faith (belief) in God is stronger than it was before.

I have learned that I can deal with more things than I thought I could before.

I have new ideas about how I want things to be when I grow up.

I know what is important to me better than I used to.

I learned how nice and helpful some people can be.

I understand how God works better than I used to.

I now have a chance to do some things I couldn't do before.

I appreciate (enjoy) each day more than I used to.

Appendix C: Major Events Measure (MEM) (Grant et al., 2020)

Instructions

MEM: Losing People In The Past

Most of us have lost someone in some way, like when someone dies or moves away, or when our parents divorce and we don't see one of them as much, or when we stop talking with a friend because we can't get along.

Have you ever lost someone you are close with? (Yes or No)

Answer the next questions about the person you lost who you were the closest with.

Items

WHO is (or was) this person to you?

Write in their exact relationship to you (like "my best friend")

HOW did you lose this person? You may check more than one answer

Write the exact way may you lose that person (like "my girlfriend is going to break up with me")

WHEN did you lose this person?

HOW OFTEN did you see or talk to this person before you lost or were separated from them?

HOW OFTEN do you see or talk to the person now?

(This process is repeated in case they have lost a second important person. The final question asks if they have experienced the loss of anyone else and gives them the opportunity to discuss it)

Instructions

MEM: People Rejecting or Betraying Us

The next questions ask you to think about different ways that people can reject or betray us. For each one, first, mark HOW MANY times it has happened in your life. Then, think about the WORST time it happened to you and answer the questions about who was involved and when and where it happened.

0 = never

1 = once

2 = twice

3 = three times

4 = four or more times

Sample Items

Someone spread rumors about me

Someone refused to be my friend

Someone ignored me and acted as if I don't exist

Someone got me into trouble or turned me in

Someone disrespected me to my face

Instructions

MEM: People Hurting or Threatening our Bodies or Taking our Things

Has anyone ever hurt or threatened your body or taken your things? (Yes or No)

The next questions ask you to think about different ways that people hurt or threaten our bodies or take our things. For each one, first, mark HOW MANY times it has happened in your life. Then, think about the WORST time it happened to you and answer the questions about who was involved and when and where it happened.

0 = never

1 = once

2 = twice

3 = three times

4 = four or more times

Sample Items

Someone threatened to hurt my body

Someone stole from me or messed up my things

Someone took advantage of me sexually

Someone sexually assaulted or raped me

Someone pushed, hit, or kicked me

Instructions

MEM: Seeing Other People Get Their Bodies Threatened or Hurt of Their Things

Many people have watched other people get hurt. The next questions ask about times you may have seen other people get their bodies threatened or hurt or their things taken in real life. Don't count anything you have seen on T.V., in movies, or on the internet.

Have you ever seen anyone get hurt or threatened or their things taken in real life? (Yes or No)

The next questions ask you to think about different ways you might have seen other people get their bodies hurt or threatened or their things taken in real life. For each one, first, mark HOW MANY times you have seen it in real life. Remember, don't count anything you have seen on T.V. or movies or the internet. Then, think about the WORST time you saw that happen and answer the questions about who was involved and when and where it happened.

0 = never

1 = once

2 = twice

3 = three times

4 = four or more times

Sample Items

I saw someone's body threatened in real life

I saw someone's things stolen or messed up

I saw someone taken advantage of sexually

I saw someone sexually assaulted or raped

I saw someone get pushed, hit, or kicked

Instructions

MEM: Disappointments

No one can escape disappointment and failure in life. The questions below ask about major disappointments or failures you might have already had. Answer them as honestly as you can.

0 = never

1 = once

2 = twice

3 = three times

4 = four or more times

Sample Items

Got suspended

Got moved to a lower class

Failed a class

Failed a grade

Got expelled