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ANTISOCIAL TRAITS, NEGATIVE EMOTIONALITY, AND TRAJECTORIES OF RELATIONSHIP QUALITY IN MEXICAN-ORIGIN COUPLES

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The symptoms of antisocial personality disorder (ASPD) and broader personality trait domains such as negative emotionality (NEM) may prove detrimental for marital quality. Previous research with European Americans has found that ASPD negatively predicts couple functioning, even when controlling for NEM. The current study extends previous work by testing whether ASPD (as well as a history of early conduct disorder) and NEM are related to marital quality trajectories in a sample of 450 Mexican-origin couples followed over 9 years. Consistent with other studies, there was a slight average decline in relationship quality over the course of the study along with differences between couples in the initial level of relationship quality and rate of change. Results indicated that NEM was a stronger correlate of initial levels of marital quality than ASPD. Findings underscore the relevance of NEM as a personality trait domain relevant for relationships.

Keywords: antisocial personality disorder, negative emotionality, personality, marriage, Mexican-origin

Individual differences in personality and psychopathology can serve as “enduring vulnerabilities” for diminished satisfaction and instability in romantic relationships (see Karney & Bradbury, 1995). According to the Vulnerability-Stress-Adaptation Model (VSA; Karney & Bradbury, 1995), psychopathology and personality attributes influence how couples interact with each other (i.e., couple adaptive processes), as well as the nature and intensity of the stressors that couples must confront. These processes are proximal influences on the overall quality and stability of the relationship. For example, individuals with an aggressive disposition are likely to react with hostility during discussions of ongoing problems in the relationship. This may diminish satisfaction and increase the likelihood that a relationship will dissolve. Furthermore, aggressiveness may create additional relationship stressors

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because of increased risk for poor employment and financial problems (e.g., Caspi, Wright, Moffitt, & Silva, 1998; Conger, Martin, Masarik, Widaman, & Donnellan, 2015). Indeed, externalizing problems such as aggressiveness have been found to predict relationship distress (see Whisman, 2013, for a review). Humbad, Donnellan, Iacono, & Burt (2010) specifically found that externalizing problems had both actor (i.e., externalizing problems were related to an individual's own marital adjustment) and partner (i.e., externalizing problems were related to a spouse's marital adjustment) effects.

These findings suggest that personality disorders characterized by externalizing problems may be especially relevant for relationship functioning given the chronicity and severity of externalizing symptoms. Supporting this notion, antisocial personality disorder (ASPD)—or a routine lack of regard for, and violation of, the rights of others (American Psychiatric Association, 2013)—was the strongest predictor of divorce or separation in a large epidemiological study of personality disorders and relationships (Whisman, 2007). Moreover, Savard, Sabourin, and Lussier (2011) found that psychopathic personality attributes (e.g., callousness, impulsivity) were associated with relationship distress in a community sample (see also Savard, Sabourin, & Lussier, 2006). In short, personality disorders related to externalizing problems might prove to be especially important enduring vulnerabilities for relationship processes.

The literature on externalizing problems, personality disorders, and relationships in clinical psychology has often developed in parallel to the literature investigating normal personality traits and relationships (e.g., Humbad et al., 2010; Robins, Caspi, & Moffitt, 2002; South, Krueger, & Iacono, 2011; Whisman, 2013). Considerable evidence supports the prediction that normal-range personality attributes are related to relationship processes (e.g., Caughlin, Huston, & Houts, 2000; Donnellan, Conger, & Bryant, 2004; Dyrenforth, Kashy, Donnellan, & Lucas, 2010; Karney & Bradbury, 1995; Orth, 2013; Robins, Caspi, & Moffitt, 2000; Solomon & Jackson, 2014). Consistent with the work on externalizing problems and antisocial personality attributes, traits related to negative affectivity, hostility, and dispositional aggressiveness (e.g., negative emotionality [NEM]; see Tellegen & Waller, 2008) are some of the most robust trait predictors of relationship variables (e.g., Dyrenforth et al., 2010; Heller, Watson, & Ilies, 2004; Karney & Bradbury, 1995; Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010). Traits related to antagonism and disinhibition (e.g., agreeableness and conscientiousness) have also been associated with both externalizing psychopathology (Jones, Miller, & Lynam, 2011; Miller & Lynam, 2001) and relationship outcomes (Dyrenforth et al., 2010; Malouff et al., 2010; Robins et al., 2001).

The fact that the literature on psychopathology and relationships is often distinct from the literature on normal personality traits and relationships is unfortunate. This is especially true given the strong conceptual and empirical overlap between normal personality traits and psychopathology (e.g., Kotov, Gamez, Schmidt, & Watson, 2010), and between normal personality traits and personality disorders (Lynam & Widiger, 2001). Specifically, the personality attribute of NEM or neuroticism appears to be particularly

important for both externalizing and internalizing psychopathology (e.g., Kotov et al., 2010; Krueger, Caspi, & Moffitt, 2000; Lahey, 2009; Rhee, Lahey, & Waldman, 2015; Tackett et al., 2013; Widiger & Smith, 2008). High levels of NEM and psychopathology could be effective synonyms, reflecting a so-called spectrum association (Widiger & Smith, 2008). Alternatively, measures of NEM may assess a temperamental attribute that serves as a risk factor for both relationship difficulties and psychopathology (South et al., 2011). Regardless of which of these models linking personality and psychopathology is best supported in subsequent research, it is important to investigate personality traits and various forms of psychopathology in the same study (see Humbad et al., 2010; South et al., 2011).

To this end, the current study aims to expand upon previous work by evaluating how ASPD and NEM are related to the trajectory of relationship quality over time in a sample of more than 400 Mexican-origin couples. In addition to ASPD,¹ a history of conduct disorder (CD) was also considered. CD is a necessary prerequisite for a diagnosis of ASPD, but youth who demonstrate conduct problems in adolescence do not necessarily go on to develop ASPD (Magnusson & Bergman, 1990; Séguin & Tremblay, 2013). Some conduct problems are limited to particular developmental periods, and they generally tend to decline across the life span (Burt, 2012; Moffitt, 2017; Séguin & Tremblay, 2013). CD represents both a potential precursor to ASPD for some individuals and a potentially distinct construct that measures antisocial behavioral tendencies during a particular stage of the life span. Evaluating both ASPD and CD can therefore provide information regarding the future relationship outcomes of youth who are most at risk for subsequently developing ASPD, even if the presumed developmental pathway from CD to ASPD is disrupted. For example, youth with CD are also more likely to subsequently develop substance use problems (Séguin & Tremblay, 2013), which could adversely affect relationship functioning even in the absence of comorbid ASPD. Thus, although the primary focus of this investigation is adult ASPD, incorporating CD helps to provide a more robust picture of the longitudinal associations between personality ASPD, NEM, and relationship functioning.

The longitudinal component of this study also offers an opportunity to both document how marital attributes change over time and test whether personality attributes are relevant to these changes in relationship variables over time. Personality attributes are typically related to initial status, whereas evidence that personality attributes are reliably associated with change over time is difficult to find (e.g., Donnellan et al., 2004; Karney & Bradbury, 1997; Langer, Lawrence, & Barry, 2008; Lavner, Lamkin, & Miller, 2017). This could be related to statistical power because the components that capture the rate of change (i.e., slopes) in growth models tend to have smaller variances and less reliability than the components that capture initial status (i.e., intercepts), and many studies have used relatively small samples and few time points (e.g., Karney & Bradbury, 1997; Langer et al., 2008; Lavner

1. Throughout the article, we use the acronym ASPD to specifically refer to symptoms of adult antisocial personality disorder.

et al., 2017). Alternatively, personality traits (antisocial or otherwise) may generally contribute to the stable and enduring features of a relationship, such as how couples act toward one another (i.e., the enduring dynamics model; see Huston, Caughlin, Houts, Smith, & George, 2001; also see Donnellan et al., 2004, pp. 500–501). Under such a model, one would not expect to find consistent evidence that traits are robust predictors of change in relationship variables.

In addition to longitudinal research, there is a pressing need for ethnic diversity in studies of marriage (Karney, Kreitz, & Sweeney, 2004). Indeed, even though Mexican-origin couples are one of the largest and most rapidly increasing ethnic groups in the United States (U.S. Census, 2011), there is relatively little study of this group (Cruz et al., 2014), especially in regard to the role of personality and psychopathology. Thus, the current sample provides an important opportunity to test the generalizability of existing findings about the association between relationship processes and antisocial traits and NEM. There are some hints that the potentially negative effects of NEM are attenuated for Latinos in the United States because of cultural factors emphasizing social connection and the importance of interdependent relationships in this group (Campos et al., 2014). This work may lead to the prediction that NEM is not an especially relevant trait for the current sample. Conversely, antisocial traits could be particularly problematic for Mexican-American couples given that such traits would be especially counternormative in cultural contexts that emphasize interpersonal connectedness. The present study thus helps test whether the effects examined in predominantly European/European-American samples reflect more general processes.

METHOD

PARTICIPANTS AND PROCEDURES

Couples were drawn from the California Families Project, a longitudinal study of Mexican-origin youth and their parents. There were initially 674 families in the project, but the current analyses focus on data from 450 of the target youths' biological mothers and their long-term romantic partners (total $N = 900$).² We excluded mothers who reported breaking up with one partner and entering a new relationship with another given our focus on trajectories of relationship quality.³ To recruit families, children were drawn at random from school rosters in the Sacramento and Woodland, California, school districts. The focal child had to be in the fifth grade, living with her or his biological mother, and of Mexican origin (i.e., of Mexican ancestry). Participants were interviewed in their homes in Spanish or English, depending on their preference. The first assessment occurred when the youth were in fifth grade (Wave 1), and subsequent follow-up assessments were conducted annually. Mothers and their romantic partners reported on their relationship

2. Most romantic partners were the biological fathers of the target youth, from 100% at Wave 1 to 94% at Wave 7.

3. Including these mothers did not alter the results.

TABLE 1. Descriptive Statistics for Relationship Variables Over Time

	Women			Men			<i>d</i>	<i>r</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>		
Relationship Quality								
Wave 1	3.53	.57	441	3.63	.50	377	-.19	.46
Wave 3	3.55	.57	429	3.61	.56	159	-.11	.53
Wave 5	3.56	.57	450	3.62	.54	369	-.11	.50
Wave 7	3.46	.60	438	3.53	.59	345	-.12	.54
Wave 9	3.41	.65	399	—	—	—	—	—
Relationship Instability								
Wave 1	1.18	.51	440	1.11	.33	375	.16	.41
Wave 3	1.19	.53	429	1.11	.38	361	.17	.61
Wave 5	1.24	.59	448	1.13	.42	367	.21	.54
Wave 7	1.22	.56	436	1.20	.51	341	.04	.53

Note. *M* = mean; *SD* = standard deviation; *n* = number of reports at a given wave; *d* = Cohen's *d* for mean difference between women and men; *r* = correlation between women's and men's ratings at that time point. Only women's reports of relationship quality were available at Wave 9.

every 2 years. The current study includes data from the Wave 1 assessment (Women: mean age = 36.77 years, *SD* = 5.92; Men: mean age = 39.42 years, *SD* = 6.08), as well as the Wave 3, 5, and 7 assessments. A limited interview was also conducted with the mothers at the Wave 9 assessment, and these data are included when applicable. Retention rates across the waves were generally high (see Table 1), although due to a programming error many of the participating fathers were not administered the relationship quality measure at Wave 3. More mothers reported at each wave of assessment given the recruitment strategy of the California Families Project, which emphasized the initial and continued participation of mothers.

PERSONALITY MEASURES

Antisocial Personality Disorder. Symptoms of ASPD were assessed using the Composite International Diagnostic Interview (CIDI), a structured interview for assessing mental disorders as defined by the *ICD-10* and *DSM-IV* (Haro et al., 2006). Thirty-six items assessing various antisocial behaviors in adulthood were presented to respondents (α = .53 for women and .69 for men; correlations between Wave 1 and 3 were .51 for women and .75 for men).⁴

Respondents answered using a 3-point scale (1 = Never, 2 = Only Once, 3 = Yes) regarding how frequently they had performed behaviors such as "Have you hit your spouse or partner or thrown things that could have hurt him or her?" ASPD scores were calculated by summing up the responses to the individual items. ASPD scores from the Wave 1 assessment are used here.

Conduct Disorder. A history of childhood/adolescent CD was also assessed using the 25-item CIDI interview (α = .70 for women and .73 for men; cor-

4. Alpha for the ASPD scale and CD scale represents marginal reliability as computed in the flexMIRT item response theory software. Item response modeling was used given the small number of response categories.

relations between Wave 1 and 3 were .76 for women and .59 for men). This interview captured the extent of participants' antisocial acts prior to adulthood. Participants responded in either the affirmative or the negative to behaviors such as "Did you skip school a lot without permission?" Individual responses were summed up to create an overall CD composite score. CD data from Wave 1 were used here.

Negative Emotionality. NEM was assessed using items from the Iowa Personality Questionnaire (IPQ; Donnellan, Conger, & Burzette, 2005), a short measure of personality based on the Multidimensional Personality Questionnaire (MPQ; Tellegen & Waller, 2008). The IPQ provides scores for the same dimensions assessed by the MPQ. Participants rate, on a 5-point scale, the degree to which several brief personality descriptors (e.g., "I am extremely tense, nervous, or worried") apply to them. NEM scores were calculated by averaging together all of the individual items that assessed the broad dimension ($\alpha = .74$ for women, $.78$ for men). Donnellan, Conger, and Burzette (2005) reported that scores on the IPQ and MPQ NEM composites were strongly correlated ($r = .75$).

Because the IPQ was not administered to participants during the baseline assessment, scores from the Wave 3 assessment were used in the main analyses. Although it is not ideal that baseline neuroticism was not available, personality traits tend to be rather stable at this point in the life span (e.g., Roberts & DelVecchio, 2000). Accordingly, the Wave 3 measure should provide an adequate proxy of initial levels of NEM. Furthermore, results from analyses that included ASPD and CD assessments from Wave 3 (i.e., when all predictor variables came from the same wave of assessment) were consistent with the main analyses (i.e., differences in effect sizes across analyses were generally $< .05$).

RELATIONSHIP MEASURES⁵

Relationship Quality. Relationship quality was measured using a 4-item scale that was based on items developed for the Iowa Youth and Families Project (later the Family Transitions Project; Elder & Conger, 2000). This scale reflects an overall evaluative judgment of the relationship and captures the degree of satisfaction participants derive from their relationship. Participants responded on a 4-point scale ranging from 1 (*Not at all true*) to 4 (*Mostly true*) to statements such as "Your relationship with [partner] makes you happy." Scores were computed by averaging item responses. This relationship quality scale was only available for women at Wave 9.

Relationship Instability. Relationship instability was measured using an abbreviated version of the Marital Instability Index (Booth, Johnson, & Edwards, 1983). This scale assessed the extent to which partners have considered ending the relationship. Participants responded on a 4-point scale ranging from 1 (*Not in the last year*) to 4 (*Yes, within the last 3 months*) to

5. We also examined measures of partner-reported warmth and hostility. Results are omitted in the interest of space because they were consistent with results reported here.

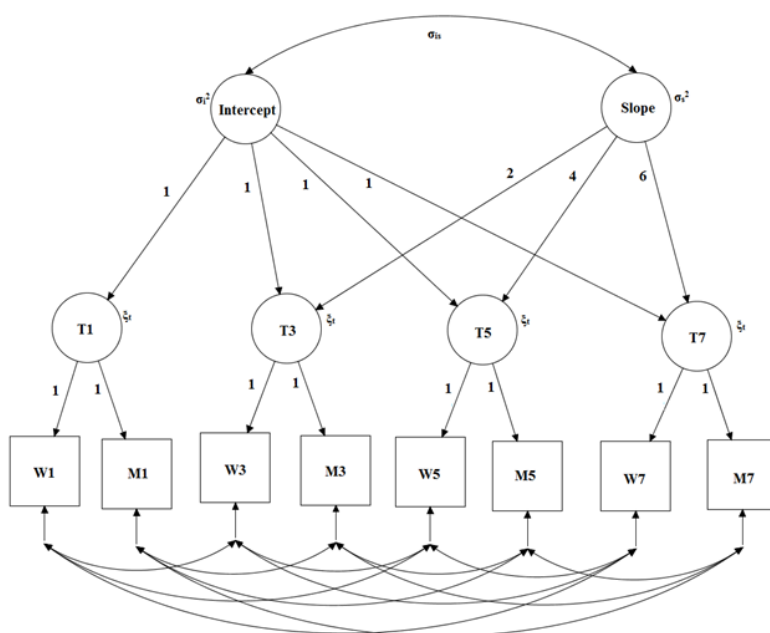


FIGURE 1. The Common Fate Growth Model (with linear trajectory). W1...W7 = women's observed ratings across time; M1...M7 = men's observed ratings across time; T1...T7 occasion-specific latent factors; σ_i^2 = intercept factor variance; σ_s^2 = slope factor variance; σ_{is} = intercept/slope factor covariance; ξ_t = occasion specific latent factor residual variance. Only the covariance structure is depicted in this figure; the mean structure has been omitted. The intercept and slope factor means were freely estimated. The occasion-specific latent factor intercepts and the intercepts for women's reports were fixed to 0. The intercepts for men's reports were fixed to equality across time.

questions such as "Has the thought of separating or getting a divorce crossed your mind?" Scores were computed by averaging the item responses.

DATA ANALYTIC STRATEGY

Before the main analyses, differential item functioning (DIF; i.e., measurement invariance) in the relationship scales was examined over time and between informants (Clark et al., 2016; Millsap & Olivera-Aguilar, 2012; Tay, Meade, & Cao, 2015). Assessing DIF/measurement invariance is important for confirming that assessments function similarly over time and between raters. If there are substantial psychometric differences along these dimensions, observed trends may reflect measurement artifacts as opposed to genuine effects. However, if problematic levels of noninvariance are identified and explicitly modeled, these problems can be mitigated (e.g., Edwards & Wirth, 2012). DIF was specifically assessed here using flexMirt's (Cai, 2012) "DIF sweep" procedure, which simultaneously tests all item discrimination (i.e., factor loading) and threshold (similar to intercepts in continuous

data models) values for DIF using a preliminary estimate of the focal group's factor mean and variance (Woods, Cai, & Wang, 2013). This procedure is somewhat vulnerable to Type I error, making it a potentially overconservative test of DIF. Thus, if several items demonstrated DIF during this sweep, more targeted tests of DIF were conducted using candidate items (i.e., items that did not demonstrate DIF in the initial sweep) to link the different factors in subsequent DIF tests. These general tests of DIF were complemented by the consideration of effect sizes based on a latent trait estimation approach (Tay et al., 2015), which effectively provides a Cohen's *d* for the extent that DIF distorts mean comparisons in the observed scales across time. All examinations of DIF were based on the comparison of two factors at once (e.g., Time 1 versus Time 3, women at Time 1 versus men at Time 1); all possible pairwise comparisons were evaluated.

The primary analyses were based on the Common Fate Growth Model (CFGGM; see Figure 1), a second-order latent growth curve model for examining change over time in shared, dyadic constructs (Ledermann & Kenny, 2012; Ledermann & Macho, 2014).⁶

This modelling approach is ideal when there is interest in dyad-level constructs, such as the overall quality of the romantic relationship between partners (versus only one partner's impression). In this model, each partner's reports at a given time point are used as indicators of an occasion-specific dyad-level latent variable. Latent intercept and slope factors are then added on to the occasion-specific latent factors. Parameter estimates are interpreted as those from latent growth curve models, but the implied trajectories reflect change in a dyadic construct (e.g., relationship quality) as opposed to an individual construct (e.g., women's reports of relationship quality). As is the case in the traditional latent growth curve modeling framework, the intercept and slope factors can be regressed on covariates to evaluate statistical predictors of trajectories.

Relationship quality and instability were each analyzed in turn using the CFGGM. Relationship quality and instability were moderately correlated over time (*r*s ranged from $-.55$ to $-.63$ within wave of assessment for women, and from $-.37$ to $-.66$ for men). Bivariate latent growth curve models also suggested a moderate to strong degree of correspondence between initial levels (*r* between intercept factors was $-.81$ for women and $-.78$ for men) and the rate of change over time (*r* between slope factors was $-.47$ for women and $-.97$ for men). Despite these associations, we analyzed these variables separately to be consistent with the notion that positive and negative aspects of relationship functioning represent distinct dimensions (Bradbury, Fincham, & Beach, 2000). Indeed, there is evidence that positive and negative dimensions of relationship functioning may have different correlates (Bradbury et al., 2000), and the approach here allows us to consider whether ASPD and NEM are differentially related to these two aspects of the marital relationship.

6. We also conducted analyses using parallel latent growth curve models (one for women's relationship variables, one for men's). Results were consistent with what was found with the common fate models (see: osf.io/tmq36/).

Unconditional CFGMs were first specified such that both women's and men's ratings at each time point loaded on to an occasion-specific latent factor (T1...T7 in Figure 1). The one exception was the Wave 9 factor for the relationship quality model because only women provided reports on relationship quality. Factor loadings for both partners were set to 1. Women's intercepts at each occasion were constrained to 0, and men's intercepts were constrained to equality over time. Occasion-specific latent factor means were set to 0, and their (residual) variances were constrained to equality across time. Indicator residual variances across time were all correlated within a given relationship partner (see Figure 1).

Correlated latent intercept and slope factors were then added on top of the occasion-specific latent factors ("Intercept" and "Slope" in Figure 1). Each occasion-specific factor had its loading on the intercept factor set to 1. The Wave 1 factor's loading on the slope factor was set to 0, and the subsequent waves had their loadings fixed to 2, 4, 6, and 8, respectively. This set "wave of assessment" as the time scale, roughly approximating years. This specification imposes a linear change trajectory. A linear trajectory is generally consistent with the observed means and past research (e.g., Donnellan et al., 2004). Also, quadratic and "latent basis" growth models (Wu, Selig, & Little, 2013) did not improve upon the already well-fitting linear models (see below). Some of these more complicated models also proved difficult to estimate.

Three alternative unconditional models were estimated and compared to the baseline model to test if certain constraints should be relaxed (e.g., overly restricted residuals in latent growth curve models can bias intercept and slope variance estimates; Ferron, Dailey, & Yi, 2002; Grimm & Widaman, 2010). Models were primarily compared using the chi square difference test, but changes in other fit statistics (e.g., root-mean square error of approximation [RMSEA], comparative fit index [CFI]) were also considered (e.g., Meade, Johnson, & Braddy, 2008). First, men's factor loadings across time were freely estimated, followed by men's intercepts across time, and finally, the residual variance of the latent occasion-specific factors. After the optimal unconditional model was established, the latent intercept and slope factors for the couple trajectory were regressed on the personality predictor variables. Both partners' scores were included in these models simultaneously.

ASPD, CD, and NEM were initially examined as separate predictors. ASPD and CD were initially considered individually. This allowed us to separately examine associations for more contemporary antisocial behaviors (i.e., "adult antisocial personality disorder"), as well as a history of antisocial behaviors in childhood and adolescence. These two variables were moderately to strongly correlated (r s of .60 for women and .57 for men), suggesting a fair degree of continuity over time. Differences in predictive power between women's and men's traits were examined in these models by constraining paths to equality and evaluating the impact on model fit. Next, ASPD and CD were each examined as predictors in turn while controlling for NEM. In the final conditional models, ASPD, CD, and NEM were all simultaneously included as predictors to investigate the predictive power of ASPD while controlling for both NEM and early life antisocial tendencies.

Last, to further evaluate the dyadic nature of the associations between personality traits and relationship variables, a series of cross-sectional Actor-Partner Interdependence Models (APIM; Kenny, Kashy, & Cook, 2006) were estimated. The CFGM is useful for analyzing dyad-level trends over time; however, this model is not ideal for investigating the nature of effects at the individual partner level. As specified, the CFGM does not easily disentangle the extent to which one partner's traits are related specifically to her or his own relationship outcomes (actor effects), versus the other partner's relationship outcomes (partner effects). Thus, supplemental APIM models were estimated to determine whether ASPD, CD, and NEM had actor and partner effects in men and women. These APIM models also provide a useful replication of past work on actor and partner effects in the context of externalizing problems, NEM, and relationship functioning (e.g., Humbad et al., 2010, found both actor and partner effects). In these models, women's and men's reports of relationship quality and instability were used as outcome variables that were each regressed in turn on each partner's ASPD, CD, or NEM. Outcome variables were examined at Wave 1 because the most reliable effects in the primary analyses were found in the paths running to the intercept (i.e., Wave 1) factor.⁷ As with the primary analyses, effects were tested for equality across men and women.

All major analyses were conducted using Mplus version 7.4 (Muthén & Muthén, 1998–2016) with full information maximum likelihood estimation. This estimator provides relatively unbiased parameter estimates and standard errors in the face of missing data (Allison, 2009; Graham & Coffman, 2012). DIF was primarily examined using the flexMIRT item response theory modeling software (Cai, 2012).

RESULTS

PRELIMINARY ANALYSIS

Descriptive statistics for the relationship variables, including the correlation between partners' reports within wave, are presented in Table 1. Across variables and informants, the average scores at each wave suggest lower relationship quality over time. By the end of the study, ratings of relationship quality were lower compared to baseline for both women (Cohen's d for difference between first and last wave = $-.21$) and men ($d = -.20$), whereas ratings of relationship instability were slightly higher for women ($d = .08$) and men ($d = .27$). Partners' reports of relationship quality and instability were moderately to strongly correlated, and they showed only small mean differences between men and women. Descriptive statistics for the personality variables can be found in Table 2. Men on average reported more ASPD symptoms than women, but overall, rates of ASPD symptoms were low. A similar pattern was observed for early life CD. Women and men, on average, demonstrated similar levels of NEM. ASPD and CD were strongly correlated within partners, but were only moderately correlated between partners (r s

7. Analyses were also run using composite scores of the relationship variables across waves. Results were equivalent to what was observed in simply examining Wave 1.

TABLE 2. Descriptive Statistics and Intercorrelations for Personality Variables

	ASPD - W	ASPD - M	CD - W	CD - M	NEM - W	NEM - M
ASPD - W	—					
ASPD - M	.36	—				
CD - W	.60	.30	—			
CD - M	.23	.56	.27	—		
NEM - W	.12	.04	.11	.10	—	
NEM - M	.16	.24	.09	.15	.25	—
<i>M</i>	.75	1.87	.63	1.38	2.33	2.29
<i>SD</i>	1.56	2.43	1.28	2.00	.53	.54

Note. *M* = mean; *SD* = standard deviation; ASPD = antisocial personality disorder; CD = conduct disorder; NEM = negative emotionality; W = women; M = men.

of .36 for ASPD and .27 for CD). NEM had a small correlation with ASPD and CD within individuals. There was a modest correlation between partners for NEM ($r = .25$). This finding is consistent with past research that has found only moderate levels (at best) of assortative mating for personality traits (e.g., Robins, Caspi, & Moffitt, 2000).

The DIF analyses suggested that the outcome variables were generally invariant across time and respondent. That is, most items did not demonstrate DIF over time, or between informants. Evidence for DIF was mostly restricted to women's reports of relationship quality over time, which suggested noninvariance in up to three items. Effect size indices suggested a negligible impact of this noninvariance on all possible mean comparisons over time (d s from .00 to .11; average d was .02). In other words, the mean differences between time points were mostly equivalent whether DIF was explicitly accounted for in the measurement model or not. Together, these results suggest a general lack of DIF in the scales, and when there was DIF, it was of negligible practical significance. Thus, results based on modeling the observed scores over time should not reflect mere artifacts of measurement.

RELATIONSHIP QUALITY

Fit information for the baseline and alternative models is provided in Table 3. None of the less constrained models offered a substantial improvement in fit over the baseline model, so it was retained for the subsequent analyses.⁸ This model indicated that couples reported relatively high levels of relationship quality at Wave 1 ($\mu_i = 3.56$) with a small, but statistically significant, decrease in quality each year ($\mu_s = -.02$). There was also statistically significant variability in both the intercept ($\sigma_i^2 = .11$) and slope ($\sigma_s^2 = .002$) factors, which implies differences between couples in both initial quality and the rate of change over time (e.g., some couples may experience no decrease over time and others might even increase). By Wave 9, the average couple's relationship quality was predicted to drop from 3.56 to 3.40.

8. For this and relationship instability, although results from only one model are presented, each individual model considered provided very similar conclusions.

TABLE 3. Fit Indices for Unconditional Common Fate Growth Models

	χ^2	<i>df</i>	<i>p</i>	RMSEA	SRMR	CFI	TLI	χ^2	Δdf	Δp
Relationship Quality										
Baseline	60.50	22	< .001	.06	.06	.97	.95			
Free Factor Loadings	58.11	19	< .001	.06	.06	.97	.95	2.39	3	.50
Free Intercepts	58.31	19	< .001	.06	.07	.97	.95	2.19	3	.53
Free Residuals	58.34	19	< .001	.06	.06	.97	.95	2.16	3	.54
Relationship Instability										
Baseline	43.61	17	< .001	.06	.08	.96	.94			
Free Factor Loadings	—	—	—	—	—	—	—	—	—	—
Free Intercepts	41.04	14	< .001	.06	.07	.96	.92	2.57	3	.46
Free Residuals	28.80	14	.01	.05	.05	.98	.96	14.81	3	0.002

Note. Final model retained is bolded; chi square difference tests are all in relation to the baseline model; dashes denote convergence issue and/or inadmissible solutions; Baseline refers to model with all factor loadings fixed to 1, intercepts constrained to equality across time within rater, and factor residual variances constrained to equality across time; Free Factor Loadings refers to model with men's factor loadings freely estimated; Free Intercepts refers to model with men's intercepts freely estimated; Free Residuals refers to model with factor residuals freely estimated across time. RMSEA: root-mean square error of approximation; SRMR: standardized root mean square residual; CFI: comparative fit index; TLI: Tucker–Lewis index.

Results from the individual predictor analyses can be found in Table 4. With the exception of the effect of CD on the slope factor, all paths could be constrained to equality across men and women. ASPD symptoms had trivial and statistically nonsignificant relations with intercepts and slopes values. Women's CD symptoms, however, predicted a significant decrease in the slope factor, suggesting that relationship quality decreased more rapidly over time for women with a history of early life antisocial acts. NEM significantly predicted lower initial levels of relationship quality to a moderate degree.

Results from the multiple predictor analyses can be found in Table 5. ASPD and CD were first examined as predictors while simultaneously controlling for both partners' NEM. ASPD was not related to either factor, and again, only women's CD significantly predicted the slope factor. There was effectively no change in the magnitude of this parameter. NEM was still associated with the intercept factor in these models, to an equivalent magnitude as before. Finally, all three predictor variables were included simultaneously. In this model, all analogous paths could be constrained across men and women. The only statistically significant effects observed in these models were the paths from NEM to the intercept factor; the size of these coefficients was similar to paths from the previous models.

RELATIONSHIP INSTABILITY

Fit for the baseline model, and less constrained models, are presented in Table 3. The final model included freely estimating residual variances on the occasion-specific latent factors. On average, there was only a low level of relationship instability at the outset of the study ($\mu_i = 1.19$); however, there was a small but significant increase over time ($\mu_s = .01$). Although the model suggests that instability increases with time, the predicted increase is rather modest (i.e., model-implied average instability scores rise from 1.19 to 1.25 from the start of the study to the end). There was also a significant degree of

TABLE 4. Single Predictor Conditional Common Fate Growth Model Results

	Relationship Quality				Relationship Instability			
	STD		Un-STD		STD		Un-STD	
	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
ASPD								
Women	-.05	-.04	-.01	-.001	.08*	.13*	.01*	.01*
Men	-.09	-.06	-.01	-.001	.15*	.24*	.01*	.01*
CD								
Women	-.06	-.23*	-.01	-.01*	.04	.08*	.01	.004*
Men	-.10	.10	-.01	.002	.06	.14*	.01	.004*
NEM								
Women	-.27*	-.04	-.16*	-.003	.13*	.06	.06*	.01
Men	-.27*	-.04	-.16*	-.003	.13*	.06	.06*	.01

Note. Where appropriate, coefficients come from model with paths constrained to equality across women and men. STD = standardized regression coefficients; Un-STD = unstandardized regression coefficients. ASPD = antisocial personality disorder; CD = conduct disorder; NEM = negative emotionality. * $p < .05$.

variability in both the intercept ($\sigma_i^2 = .08$) and slope ($\sigma_s^2 = .003$) factors, suggesting differences between couples in these trends. The covariance between these factors was also statistically significant, and negative ($\sigma_{is} = -.01$), indicating that couples who began the study more unstable showed smaller increases in instability over time.

Regression coefficients for the single-predictor conditional models are presented in Table 4. All paths could be constrained to equality across women and men. ASPD symptoms were significantly predictive of both the intercept and slope factors, implying that more symptoms were associated with both a higher degree of instability at the start of the study and a more rapid increase in instability over time. CD was not significantly related to the intercept factor, but CD did predict a faster rate of increase in instability. NEM significantly predicted more instability at the start of the study.

Results from the multiple predictor analyses can be found in Table 5. ASPD symptoms remained a significant predictor of the slope factor when included with NEM; coefficients were of similar magnitude as before. NEM also still significantly predicted the intercept factor. However, CD was no longer related to the slope factor when NEM was included in the model. When all predictors were entered into a model together, ASPD remained a significant predictor of the slope factor, and NEM remained a significant predictor of the intercept factor. Coefficients could be constrained across men and women, and they were similar in magnitude to what was observed in the models with fewer predictors.

ACTOR-PARTNER INTERDEPENDENCE ANALYSES

For relationship quality, there was a significant actor effect for women's ASPD ($\beta = -.20$), but not for men's ($\beta = .02$). There were no other noteworthy effects for ASPD or CD (all β s $< .10$). There were significant actor ($\beta = -.17$) and partner ($\beta = -.13$) effects for NEM that did not significantly differ in magnitude across men and women (consistent with Humbad et al.,

TABLE 5. Multiple Predictor Conditional Common Fate Growth Model Results

	Relationship Quality				Relationship Instability			
	STD		Un-STD		STD		Un-STD	
	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
ASPD (W)	.02	-.01	.01	.00	.02	.12*	.00	.01*
ASPD (M)	.04	-.02	.01	.00	.05	.27*	.00	.01*
NEM (W)	-.28*	-.02	-.16*	.00	.13*	-.01	.05*	.00
NEM (M)	-.28*	-.02	-.16*	.00	.13*	-.01	.05*	.00
CD (W)	.00	-.24*	.00	-.01*	.01	.07	.00	.00
CD (M)	.01	.19	.00	.00	.03	.13	.00	.00
NEM (W)	-.27*	-.03	-.15*	.00	.14*	.02	.06*	.00
NEM (M)	-.27*	-.03	-.15*	.00	.14*	.02	.06*	.00
ASPD (W)	.02	-.05	.01	.00	.02	.12*	.01	.01*
ASPD (M)	.05	-.12	.01	.00	.05	.26*	.01	.01*
CD (W)	-.01	.06	.00	.00	.00	-.02	.00	.00
CD (M)	-.01	.12	.00	.00	.00	-.03	.00	.00
NEM (W)	-.26*	-.05	-.16*	.00	.13*	-.01	.05*	.00
NEM (M)	-.26*	-.05	-.16*	.00	.13*	-.01	.05*	.00

Note. Where appropriate, coefficients come from model with paths constrained to equality across women and men. STD = standardized regression coefficients; Un-STD = unstandardized regression coefficients. ASPD = antisocial personality disorder; CD = conduct disorder; NEM = negative emotionality; W = women's trait; M = men's trait. * $p < .05$.

2010). Thus, higher levels of NEM in one relationship partner was modestly associated with lower relationship quality as reported by *both* partners. On the other hand, women's ASPD symptoms primarily predicted lower relationship quality as reported by women. For relationship instability, there were significant actor effects for women's ASPD ($\beta = .18$) and CD ($\beta = .18$), and a significant but smaller actor effect for men's ASPD ($\beta = .13$). Again, there were both actor ($\beta = .11$) and partner ($\beta = .06$) effects for NEM that were equal across partners. Thus, higher levels of NEM in one relationship member was associated with slightly higher relationship instability as reported by both partners. Greater ASPD symptoms were related to partners' own ratings of greater instability, but these actor effects were stronger in women, and also extended to early conduct problems only for women.

DISCUSSION

We evaluated associations between ASPD, CD, NEM, and trajectories of relationship quality and instability in a sample of Mexican-origin couples. Reports of marital quality tended to decrease in value over time, whereas reports of instability increased. These effects were small, however, and there was a significant amount of variation between couples in these trajectories. The consistency of these findings with those observed in other samples based on predominantly White couples (e.g., Karney & Bradbury, 1997) supports the idea that this is a broadly generalizable trend in couple functioning.

NEM was the most consistent predictor of relationship quality and instability across couples, although these effects were mostly limited to the

intercept factors. NEM was therefore related to differences in baseline relationship functioning, but generally not to the rate of change. ASPD and early life CD were related to the rate of change over time (i.e., the slope factors), albeit sporadically; results were inconsistent across partners and analyses. Including NEM as a covariate also mostly eliminated these effects. The exception to this pattern was the path from ASPD symptoms to the relationship instability slope factor, which also remained statistically significant when CD was added to the model. There was thus some equivocal evidence that adult ASPD may contribute to more rapid increases in relationship instability over time beyond what is contributed by NEM and an adolescent history of antisocial behaviors.

The present findings with NEM bolster previous studies suggesting that this trait is associated with worse relationship functioning (e.g., Donnellan et al., 2005; Humbad et al., 2010; Robins et al., 2000). It is also notable that there was evidence that these effects are similar across men and women. The ancillary APIM analyses reinforced these conclusions, showing that NEM had both actor and partner effects that were mostly equal across partners. One partner's NEM was therefore associated with both her or his own reports of relationship quality and instability and the other partner's reports of relationship quality and instability. The partner effects are particularly worth highlighting because these paths are not inflated by shared informant biases.

Because the couples included in this study were drawn from a Mexican-origin sample, the current results help bolster the transcontextual validity (e.g., Weisz, 1978) of the negative association between NEM and relationship functioning. Indeed, the current results extend past work based on couples from New Zealand (Robins et al., 2000) and couples from the Midwest region of the United States (Humbad et al., 2010). Although emerging work by Campos et al. (2014) suggests that some of the negative correlates of neuroticism (a trait largely isomorphic with NEM) might be attenuated in Latinas, the present findings suggests that this finding may not extend to marital distress.

Past work also converges with the results presented here in suggesting that NEM may contribute to an enduring dynamic of marital satisfaction (or dissatisfaction) more so than to changes in marital outcomes *per se*. In other words, NEM and neuroticism are typically associated with stable conditions in relationships (i.e., intercepts) as opposed to changes over time (i.e., slopes; e.g., Donnellan et al., 2005; Karney & Bradbury, 1997). This can be interpreted as suggesting that traits such as NEM help set the parameters for the interactional dynamics of the couple, which then persists over time (i.e., an enduring dynamic). It may also be the case, however, that personality variables contribute to slopes at earlier phases of the relationship, such as when two individuals are first coming together to form a romantic union. Although it is challenging to find large samples of couples first forming a relationship, this kind of study is needed for testing when (and if) traits such as NEM are related to slopes. Of course, NEM could also mostly provide a stable way of viewing and relating to the world that is largely distinct from the specific transactional processes of a relationship. Without considering specific patterns of interaction and more targeted time frames, it is difficult to

distinguish between these various accounts because they are each consistent with the present results. Finally, it is worth acknowledging that NEM and related traits could affect relationship quality and instability by influencing who is selected as a relationship partner (i.e., assortative mating). However, there was only a small degree of assortative mating in the present sample, and past work also suggests that assortative mating is relatively low for personality variables (e.g., Robins et al., 2000). Thus, this pathway might not be especially promising for understanding how personality traits are associated with relationship processes.

Counter to our expectations, we found only mixed evidence that ASPD and CD were related to relationship quality and instability. Furthermore, about half of the statistical effects that initially emerged were eliminated when NEM was included as a covariate. This suggests that the components of ASPD that overlap with NEM—likely high degrees of hostility and aggressiveness—are likely the key elements captured in the existing associations. Despite this, ASPD and CD still predicted the slope factors somewhat reliably, suggesting that there are some unique features of these related symptom clusters that may be related to worsening relationship functioning over time. Although there were some instances where CD predicted the slope factor and ASPD did not, these effects were mostly eliminated when either NEM or ASPD was introduced into the model. This implies that adolescent conduct problems are related to future romantic functioning primarily as a marker for general negativity and later for more contemporaneous antisocial behaviors. ASPD remained a significant predictor of the relationship instability slope factor, however, even after controlling for NEM and CD. This finding and other evidence from large sample studies (e.g., Whisman et al., 2007) supports the idea that ASPD is associated with some elements of relationship dysfunction. Taking everything together, however, the evidence remains inconsistent for ASPD symptoms providing unique predictive power over that gained by simply considering “normal-range” NEM.

One caveat to the current results is that rates of ASPD symptoms were generally low in this sample, which may have reduced the power to detect effects. In addition, a reliability analysis of the ASPD scale suggested that it is best at making distinctions between individuals who demonstrate more pathological behaviors (i.e., information values were highest from one standard deviation above the mean onward). This is unsurprising given the focus on clinically relevant problems, but it also means that the scale has less reliability when assessing those with lower scores, which further reduces the power to detect effects. This issue is also related to the recruitment strategy because individuals with higher levels of ASPD symptoms were probably less likely to participate in the current study. To the extent that ASPD is a risk factor for relationship dissolution (e.g., Whisman et al., 2007), the most disordered relationship partners may have already left the target family by the time data collection started when the target youth were in fifth grade. Because the sampling focus for this study is the children, there might be a later opportunity to observe how antisocial traits in adolescents are related to their relationship experiences as they enter adulthood. Nonetheless, the window of time in which relationship functioning was examined in this study

may not be optimal for sensitively examining the association between ASPD and relationships.

Beyond specific concerns with ASPD, it might be useful to consider other personality disorders, and externalizing problems more broadly, in future studies. As is well documented, personality disorders tend to be highly comorbid with other personality and nonpersonality disorders. There is also evidence that more general inventories of externalizing psychopathology may be more strongly related to relationship functioning than fairly narrow assessments of ASPD and CD (e.g., Humbad et al., 2010). Future work can also examine personality traits, disorders, *and* interaction patterns between partners over time to more closely examine how these attributes are specifically related to relationship functioning over time (e.g., if and how the effects observed here are mediated through actual interactions; Robins et al., 2000).

CONCLUSION

The current study highlights the association between NEM and relationship dissatisfaction and distress. Given that the lines between so-called normal personality traits and personality disorders are increasingly blurry (e.g., Widiger & Oltmanns, 2017), these results suggest that NEM should be an important consideration for researchers interested in both pathological personality traits and relationship functioning (see also Krueger et al., 2000). Indeed, the negative correlation between NEM and relationship functioning seems to have transcontextual validity because we found evidence that previous work extends well to Mexican-origin couples. Moreover, the continued synergy between clinically oriented research and social/personality research holds promise for a more unified understanding of the psychological traits that serve as enduring vulnerabilities for relationships.

APPENDIX

TABLE A1. Results for Unconditional Multivariate Growth Curve Models

	μ_i	σ^2_i	μ_s	σ^2_s	r_{is}	r_{wmi}	r_{wms}
Relationship Quality							
Women	3.55*	.22*	-.01*	.005*	-.29*	—	—
Men	3.64*	.13*	-.02*	.004*	-.12	.59	.49*
Relationship Instability							
Women	1.19*	.14*	.01*	.004*	-.32*	—	—
Men	1.10*	.05*	.01*	.002*	-.03	.92*	.99*

Note. μ_i = intercept mean; σ^2_i = intercept variance; μ_s = slope mean; σ^2_s = slope variance; r_{is} = correlation between intercept and slope; r_{wmi} = correlation between women's and men's intercept; r_{wms} = correlation between women's and men's slope. Residuals across time within rater constrained to equality in relationship quality, but not instability, model. The appropriateness of these constraints was evaluated by testing nested models. Covariances between women's and men's residuals within a given wave of assessment were also specified. Fit for the relationship quality model was: $\chi^2 = 72.09$, $df = 24$, $p < .00$; RMSEA = .06; SRMR = .074; CFI = .959; TLI = .952. Fit for the relationship instability model was: $\chi^2 = 38.33$, $df = 18$, $p < .00$; RMSEA = .047; SRMR = .052; CFI = .971; TLI = .954. * $p < .05$.

TABLE A2. Single Predictor Conditional Multivariate Growth Curve Models

	Intercept (W)	Intercept (M)	Slope (W)	Slope (M)
Relationship Quality				
ASPD (W)	-.08 (-.25)*	-.02 (-.06)	.003 (.08)	-.001 (-.03)
ASPD (M)	.01 (.06)	.004 (.03)	-.002 (-.07)	-.004 (-.15)
CD (W)	-.05 (-.12)	.005 (.02)	-.01(-.21)*	-.01 (-.17)
CD (M)	-.008 (-.04)	-.009 (-.05)	.004 (.13)	.00 (.003)
NEM (W)	-.21 (-.25)*	-.10 (-.14)*	.01 (.06)	.001 (.01)
NEM (M)	-.15 (-.18)*	-.16 (-.23)*	-.002 (-.02)	-.02 (-.15)
Relationship Instability				
ASPD (W)	.07 (.29)*	.02 (.16)	.001 (.03)	.004 (.10)
ASPD (M)	.008 (.06)	.006 (.08)	.002 (.07)	.008 (.42)*
CD (W)	.08 (.26)*	.01 (.08)	.000 (-.01)	.003 (.07)
CD (M)	-.02 (-.08)	.001 (.01)	.003 (.11)	.006 (.24)*
NEM (W)	.11 (.18)*	.02 (.05)	-.01 (-.11)	-.002 (-.03)
NEM (M)	.10 (.15)*	.08 (.22)*	.01 (.09)	.02 (.27)*

Note. In these models, only one characteristic was included as a predictor of the slope and intercept factors. Unstandardized paths outside of parentheses, standardized paths inside of parentheses. ASPD = antisocial personality disorder; CD = conduct disorder; NEM = negative emotionality; W = women’s trait; M = men’s trait. **p* < .05.

TABLE A3. Multiple Predictor Conditional Multivariate Growth Curve Models

	Intercept (W)	Intercept (M)	Slope (W)	Slope (M)
Relationship Quality				
ASPD (W)	-.07 (-.18)*	-.003 (-.01)	.006 (.14)	-.003 (-.05)
ASPD (M)	.02 (.13)	.01 (.09)	-.001 (-.05)	-.001 (-.06)
NEM (W)	-.22 (-.26)*	-.13 (-.18)*	.003 (.04)	.002 (.02)
NEM (M)	-.13 (-.16)*	-.16 (-.22)*	.006 (.07)	-.014 (-.12)
CD (W)	-.04 (-.10)	.03 (.08)	-.009 (-.19)	-.012 (-.20)*
CD (M)	.01 (.05)	-.003 (-.07)	.004 (.18)	.004 (.14)
NEM (W)	-.22 (-.27)*	-.12 (-.17)*	.004 (.04)	.003 (.03)
NEM (M)	-.13 (-.17)*	-.14 (-.20)*	.006 (.07)	-.017 (-.15)
Relationship Instability				
ASPD (W)	.04 (.16)	.02 (.12)	.01 (.19)	.008 (.20)
ASPD (M)	.01 (.06)	-.005 (-.07)	-.001 (-.03)	.006 (.36)*
NEM (W)	.12 (.21)*	.030 (.09)	-.01 (-.12)	-.005 (-.06)
NEM (M)	.05 (.09)	.07 (.21)*	.008 (.07)	.003 (.04)
CD (W)	.06 (.19)*	.003 (.02)	.008 (.17)	.010 (.23)*
CD (M)	-.01 (-.08)	.000 (-.003)	.000 (.000)	.002 (.09)
NEM (W)	.11 (.20)*	.03 (.09)	-.012 (-.12)	-.008 (-.09)
NEM (M)	.07 (.13)	.07 (.21)*	.008 (.08)	.013 (.16)

Note. In these models, ASPD or CD was included as a predictor of the slope and intercept factors alongside NEM. Unstandardized paths outside of parentheses, standardized paths inside of parentheses. ASPD = antisocial personality disorder; CD = conduct disorder; NEM = negative emotionality; W = women’s trait; M = men’s trait. **p* < .05.

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