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### Title

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### Permalink

<https://escholarship.org/uc/item/4378x3b9>

### Journal

Journal of Family Psychology, 32(3)

### ISSN

0893-3200

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### Publication Date

2018-04-01

### DOI

10.1037/fam0000351

Peer reviewed



# HHS Public Access

Author manuscript

*J Fam Psychol.* Author manuscript; available in PMC 2019 April 01.

Published in final edited form as:

*J Fam Psychol.* 2018 April ; 32(3): 343–354. doi:10.1037/fam0000351.

## Longitudinal Effects of Increases and Decreases in Intimate Partner Aggression

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### Abstract

Interventions aimed at reducing interpartner aggression assume that within-couple declines in aggression enhance individual and relational outcomes, yet reductions in aggression may fail to yield these benefits when other risk-generating mechanisms remain intact. The present study evaluates this possibility by investigating whether naturally observed within-couple changes in aggression are associated with improved individual and relational outcomes in the manner assumed by intervention programs. Drawing upon 4 waves of data collected at 9-month intervals from a community sample of 431 newlywed couples (76% Hispanic) living in low-income neighborhoods, Actor-Partner-Interdependence Modeling (APIM) and Structural Equation Modeling (SEM) indicated that levels of aggression at the outset of marriage had limited associations with later outcomes. Changes in aggression, however, were associated with subsequent marital outcomes, such that decreases in aggression were beneficial and increases in aggression were costly. Individuals who experienced increases in aggression worsened in their observed communication over time and reported greater increases in stress. Reports of stress early in marriage predicted escalations in aggression over time. Thus, helping couples to contain increases in aggression might be particularly consequential for their well-being.

### Keywords

Intimate partner aggression; longitudinal; low-income couples; marital satisfaction; stress

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Because intimate partner aggression harms the health and well-being of more than ten million Americans every year (Black et al., 2011), prevention and reduction of couples' hostile acts are high priorities for practitioners, researchers, and policy makers alike. Available interventions are proving to be increasingly potent, raising new questions about how these effects can be broadened and sustained (Whitaker & Lutzker, 2009). Basic longitudinal research on natural changes in aggression is well-suited for this purpose, as understanding the manner in which couples fluctuate in their aggressive acts without intervention can shed light on the types of changes that are possible with intervention. Here, we report on a longitudinal study of newlywed couples that tests the assumption, central to virtually all intervention programs (e.g., Bair-Merritt et al., 2014), that reductions in angry

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Some of the ideas and data appearing in this manuscript were disseminated in form of poster presentations at the 21st International Conference & Summit on Violence, Abuse & Trauma (IVAT) in San Diego, CA (August 2016) and the Seventh International Conference on Stress and Dyadic Coping in Milan, Italy (January 2017).

and aggressive acts promote better relationships, whereas increases in anger and aggression signal a deteriorating partnership. Testing this assumption is important, we believe, because compelling alternative predictions can be made: Reducing aggression may not necessarily be beneficial, for example, if the detrimental effects of earlier aggressive acts on relationship functioning cannot be undone, or if other risk-generating mechanisms remain intact. Likewise, increases in aggression may not necessarily be costly for couples, perhaps because they are able to draw upon other strengths in the relationship. Here we examine the consequences of natural changes in aggression for couple functioning and thus aim to resolve these competing perspectives.

## Consequences of Aggression and Changes in Aggression

In the current study, “aggression” is defined as acts of verbal and physical assault, usually without severe injury (Archer, 2000). When we use the term “aggression,” we refer to verbal behavior (e.g., swearing at, insulting, or threatening one’s partner) and low levels of physical violence (e.g., throwing something at one’s partner; pushing one’s partner; slapping or kicking one’s partner). Based on this definition, relationship aggression entails more than negative partner communication and deficient problem-solving to encompass intentional acts of harm towards a romantic partner (Rogge & Bradbury, 1999). However, severe violence is excluded from our operationalization.

Compared to people with little or no aggression in their relationships, those who do experience aggression face increased risks for a host of adverse outcomes, including relationship distress and dissolution (e.g., Panuzio & DiLillo, 2010), poor communication (e.g., Babcock, Graham, Canady, & Ross, 2011), impaired individual functioning (e.g., depression, Shorey et al., 2011; substance use, Cunradi, Caetano, & Schafer, 2002), and increased stress (e.g., Shortt, Capaldi, Kim, & Tiberio, 2013). The breadth of these effects is noteworthy, as it suggests that aggression can undermine individual and couple well-being via several avenues. At the same time, the utility of these findings for treatment remains limited. Specifically, while *between-person* effects of aggression on various outcomes are becoming well-established, these effects provide little direct relevance for interventions, where the goal is to shift a given couple toward less hostility and aggression, relative to their own baseline at the beginning of treatment. Increasing attention is now turning to these within-person effects, and to the consequences that changes in aggression might have in couples’ lives.

To date, change in aggression has been approached in a few different ways. First, change has been operationalized as relative stability, or the association between levels of aggression at different points in time. Aggression is stable over 6-month intervals but much less so at 30-month intervals (Lorber & O’Leary, 2012), supporting its treatment as a time-varying phenomenon but still allowing for the possibility that some couples are stably aggressive or nonaggressive (O’Leary et al., 1989). Second, change can be operationalized more specifically as escalation versus de-escalation of aggression. Escalation of aggression increases discord, especially for couples with a prior history of aggression (O’Leary et al., 1989), and moderately aggressive couples appear more likely to de-escalate than severely aggressive couples (e.g., Quigley & Leonard, 1996). We aim to replicate the costly

consequences of escalation identified by O’Leary and colleagues while also clarifying whether de-escalation enhances couple functioning. If naturally-observed reductions in aggression do not improve relationship quality and stability, this would run counter to classic behavioral models of couple interaction (e.g., Jacobson & Margolin, 1979) and raise doubts about whether treatment-induced reductions in aggression will necessarily bring partners closer together.

With growing appreciation for within-person and within-couple changes in aggression, important new questions arise regarding whether these changes affect outcomes other than relationship satisfaction and dissolution. Do reductions in aggression, for example, improve the overall tenor and quality of couple interaction? While it is plausible to assume that this will be the case, decreased aggression may not translate into better communication, particularly if detrimental effects of earlier acts of aggression cannot be undone, or if couples remain caught in a pattern of conflict avoidance or mistrust (e.g., Robertson & Murachver, 2006). Similarly, while increases in aggression should detract from partners’ tendencies to communicate effectively (e.g., Babcock et al., 2011), many couples—especially those who engage in less intense forms of aggression, or who attribute their hostile outbursts to outside circumstances—may ‘be on their best behavior’ in an effort to circumvent hostile flare-ups, or otherwise benefit from other strengths in their relationship. We aim to address these possibilities, building on evidence that aggression and observed communication covary in between-couple analyses (Babcock et al., 2011), but extending this association to consider whether patterns of *change* in aggression foreshadow corresponding changes in observed interpersonal processes.

Whereas aggression and changes in aggression have long been understood as interpersonal acts with interpersonal consequences (Tjaden & Thoennes, 2000), recent work articulates how aggression in relationships is linked at the between-subjects level with individual outcomes, including depressive symptoms (e.g., Shorey et al., 2011) and substance use (e.g., Cunradi et al., 2002), and the chronic and acute stresses that partners and couples confront (Shortt et al., 2013). Less clear from the treatment literature and from the basic research literature is whether changes in aggression bring about changes in these common features of couples’ daily lives. Increases in aggression may generate more depressive symptoms and greater substance use, for example, putting aggressive couples on a worsening course marked by affective instability and dysregulation, and thus promoting conditions that lead to escalations in aggression. Along similar lines, increases in aggression may leave partners feeling that they cannot turn to each other for support, leaving them vulnerable to increased levels of perceived stress that might further heighten risk for aggression (Capaldi, Knoble, Shortt, & Kim, 2012). Specifically, if partners do not feel supported within their intimate relationship when they experience stressful events, even if these events originate outside the dyad, they may perceive these stressors as even more intense and resort to aggression due to frustration or perceived lack of control. Thus, while escalating and de-escalating patterns of aggression should signal to partners that the overall quality of their relationship is worsening or improving, understanding these effects is incomplete without knowing if those same changes in aggression predict individual and contextual outcomes that render their relationship harder or easier to maintain.

## Functioning at the Outset of Marriage and Longitudinal Changes in Aggression

Given that aggression does change, and assuming that changes in aggression are consequential for important individual and dyadic outcomes, it becomes important to know which couples, based on their characteristics at the outset of marriage, are most likely to escalate or de-escalate in aggression over time. Partner aggression can be understood from a dynamic developmental systems perspective (DDS; Capaldi, Shortt, & Kim, 2005) according to which aggression results from an interactional pattern responsive to both partners' individual characteristics and behaviors as well as contextual factors and relationship processes. Within this perspective, dyadic risk for intimate partner aggression arises from relationship discord, individual risk is marked by depressive symptoms and substance use, and contextual risk arises from financial stress and low income (Capaldi et al., 2012). Thus, couples who are most likely to escalate in aggression may be deficient in many respects, and couples who are most likely to de-escalate maybe capable in many respects. If partners' characteristics at the outset of marriage foreshadow changes in aggression over time, secondary prevention would hold particular promise and couples could be selected for intervention based on the factors that govern changes in aggression. On the other hand, if functioning at the outset of marriage is not systematically related to changes in aggression, then the majority of couples might be capable of improvements regardless of background risk.

### The Present Study

Interventions targeting couples' anger and aggression assume that changing these behaviors will affect the subsequent quality and course of their relationships, yet there are plausible reasons to expect changes in anger and aggression to have muted effects on couples. Resolving this issue is important, we believe, as doing so can clarify the types of effects that are possible with structured interventions. We therefore pursue three main research aims. First, we attempt to replicate previously established longitudinal associations between aggression at the outset of marriage and decrease in relationship (e.g., relationship satisfaction, communication behaviors, and separation/divorce) and individual outcomes (e.g., depressive symptoms and substance use) and increases in stress-related outcomes (e.g., chronic and acute stress). Second, independent of aggression at the outset of marriage, we examine the effects of observed *changes* in partner aggression over the first few years of marriage on these outcomes. In all of these domains, we expect decreases in aggression to be beneficial, and increases to be costly—though whether this is true, and equally true across all of these outcomes, remains unknown. Third, we examine whether indices of individual and couple functioning at the outset of marriage are associated with subsequent changes in aggression. We expect to find strong associations here, which will highlight the possibility of identifying couples at greatest risk for escalating aggression. On the other hand, if weak associations emerge, this would suggest that changes in aggression are largely independent of early couple characteristics and that even very risky couples could cycle out of early patterns of aggression.

We test these three aims with data collected longitudinally from both partners in a community sample of 431 newlywed couples. A community sample, in which rates of aggression tend to reflect psychological aggression more than physical aggression, is appropriate in light of prior findings showing that psychological aggression might be the most consistent correlate of negative outcomes (e.g., Panuzio & DiLillo, 2010). Furthermore, because partner aggression and its many correlates tend to be overrepresented among economically disadvantaged couples, who are often culturally diverse (e.g., Tjaden & Thoennes, 2000), we situated the study within this population. Collecting data from both members of the dyad will allow us to employ a dyadic data analytic approach, the Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006). Using the APIM, we will be able to examine the differential effects of husband- and wife-perpetrated partner aggression, while controlling for interdependence between husbands and wives. This differential examination is important in light of previous, somewhat inconsistent findings regarding the role of gender in the association between relationship aggression and associated outcomes (e.g., Stith, Green, Smith, & Ward, 2008). Using an APIM framework will allow to tease apart such differential effects.

## Method

The current data collection was approved by the Human Subjects Protection Committee at the RAND Corporation (Protocol number: k0256-07-02; Title of study: Development and Maintenance of Low-income Newlywed Marriages).

## Sampling

The sampling procedure was designed to yield only first-married newlywed couples in which both partners were of the same ethnicity (Hispanic, African American, or Caucasian), living in neighborhoods with a high proportion of low-income residents in Los Angeles County. Recently married couples were identified through names and addresses on marriage license applications. Addresses were matched with census data to identify applicants living in low-income communities, defined as census block groups wherein the median household income was no more than 160% of the 1999 federal poverty level for a 4-person family. Next, names on the licenses were weighted using data from a Bayesian Census Surname Combination, which integrates census and surname information to produce a multinomial probability of membership in each of four racial/ethnic categories (Hispanic, African American, Asian, and Caucasian/other). Couples were chosen using probabilities proportionate to the ratio of target prevalences to the population prevalences, weighted by the couple's average estimated probability of being Hispanic, African American, or Caucasian. These couples were telephoned and screened to ensure that they had married, that neither partner had been previously married, and that both spouses identified as Hispanic, African American, or Caucasian. A total of 3,793 couples were contacted through addresses listed on their marriage licenses; of those, 2,049 could not be reached and 1,522 (40%) responded to the mailing and agreed to be screened for eligibility. Of those who responded and agreed to be screened for eligibility, 824 couples were screened as eligible, and 658 of those couples agreed to participate in the study, with 431 couples actually completing the study within the data collection window.

## Participants

The sample comprised 431 couples identified with the above procedures. At Time 1, marriages averaged 4.8 months in duration ( $SD = 2.5$ ), and 38.5% of couples had children. Husbands' mean age was 27.9 ( $SD = 5.8$ ) and wives' mean age was 26.3 ( $SD = 5.0$ ). Couples had a median household income of \$45,000 ( $M = \$55,364$ ,  $SD = \$42,671$ ). Eighty-nine (20.6%) husbands had less than a high school degree, 117 (27.1%) had a high school degree, 140 (32.5%) had completed some college, and 84 (19.5%) had a college degree or higher. Sixty-three (14.6%) wives had less than a high school degree, 108 (25.1%) had a high school degree, 139 (32.3%) had completed some college, and 121 (28.1%) had a college degree or higher. Twelve percent of couples were African American, 12% were Caucasian and 76% were Hispanic.

## Procedure

At Time 1 (T1), couples were visited in their homes by two interviewers who took spouses to separate areas to obtain informed consent and orally administer self-report measures. After completing self-report measures individually, partners were reunited for three 8-minute videotaped discussions. For the first interaction, partners were asked to identify a topic of disagreement in their relationship and then to devote 8 minutes to working toward a mutually satisfying resolution of that topic. For the second interaction, one randomly chosen spouse was asked to "talk about something you would like to change about yourself" while the partner was instructed to "be involved in the discussion and respond in whatever way you wish." Spouses were instructed to avoid selecting or discussing any topics that were sources of tension or difficulty within the relationship. After a short break, a third discussion was held that was identical to the second discussion, with the roles reversed. Couples were debriefed and paid \$75 for participating. Interviewers returned at 9 months (T2), 18 months (T3), and 27 months (T4) later and administered the same interview protocol. Couples who reported that they had divorced or separated did not complete the interview. Couples were paid \$100 for T2, \$125 for T3 and \$150 for T4. Data collection took place between 2009 and 2013 for T1 through T4.

## Measures

**Partner aggression**—Partner aggression during the past nine months was assessed with an adapted version of the revised Conflict Tactics Scales (CTS-R; Straus & Douglas, 2004), which contained a total of 14 items (7 items assessing perpetration and 7 items assessing victimization). There were three items discussing psychological aggression and three items discussing physical aggression. Examples include, "Did you ever insult or swear at [FILL SPOUSE NAME]?" and "Did you ever stomp out of the room or leave the house during an argument with [FILL SPOUSE NAME]?" For each item, participants were asked if they had engaged in the act described (measure of perpetration) and if their spouse had engaged in the act described (measure of victimization). If they indicated that an act had happened, participants were asked to indicate the number of times each event had occurred, with the response options being 1 (Once or twice), 2 (Several times), and 3 (Often).

In many prior studies, psychological and physical aggression are examined separately. However, in the present sample, there was no empirical basis for this separation as

concluded based on the following: First, there was low endorsement of the items assessing whether individuals had beat or had been beaten by their partner (means ranging from 0.00 to 0.003 across the four time points). As removing these items increased internal reliability for the aggression scales, these items were excluded from the analyses, leaving a total of six perpetration items and six victimization items. Second, examination of internal consistency coefficients across all four time points showed that coefficients were higher when combining all aggression items than when separating items into distinct measures. Third, results of exploratory factor analyses indicated no distinct factors for physical versus psychological aggression. Thus, scores on all individual male-to-female and female-to-male aggression items were summed to yield total scores of aggression (summation of six items assessing swearing at partner; stomping out of the room after an argument; threatening to hit partner; throwing something at partner; pushing, grabbing, or shoving partner; slapping, kicking, biting, or punching partner).

Husband and wife reports of perpetration and victimization were combined to yield overall measures of male-to-female and female-to-male partner aggression. Aggression was considered to have occurred if at least one partner reported an aggressive incident in the past nine months, regardless of whether the incident was corroborated by the other partner. Coefficient  $\alpha$  was acceptable at each time point (mean = 0.70 for husbands and 0.77 for wives, range: 0.68–0.79). *Partner aggression at Time 1* was used as the predictor in the first set of analyses (and as a covariate in subsequent analyses). *Change in partner aggression*, as measured using husbands' and wives' slope of the aggression variable across the four time points, was used as a predictor in the second and as an outcome in the third set of analyses.

**Relationship satisfaction**—Relationship satisfaction at Time 1 and at Time 4 were assessed by summing responses on an 8-item questionnaire ( $\alpha = .70$  and  $.83$  for husbands,  $.70$  and  $.79$  for wives). Five items asked how satisfied individuals were with certain areas of their relationship (e.g., “satisfaction with the amount of time spent together”) and were scored on 5-point scales (1 = very dissatisfied to 5 = very satisfied). Three items asked the degree to which individuals agreed with a statement about their relationship (e.g., “how much do you trust your partner”) and were scored on 4-point scales (1 = not at all, 2 = not that much, 3 = somewhat, 4 = completely). These questions were adapted from Rauer, Karney, Garvan, and Hou (2008) and include items from the General Social Survey (Davis, Smith, & Marsden, 2006). The items have been used in large surveys with low-income couples (e.g., Rauer et al., 2008).

**Divorce/separation**—Dissolutions were assessed by designating couples as either separated or divorced (0) or intact (1) based on data collected at all time points.

**Communication behaviors**—Communication behaviors at Time 1 and at Time 4 were assessed using behavioral observations from videotaped discussions that were scored by 16 trained coders using the Iowa Family Interaction Rating Scales (IFIRS; Melby et al., 1998). A composite *positivity* scale was created by averaging an individual's scores on the group enjoyment, positive mood, warmth/support, physical affection, humor/laugh, endearment, and listener responsiveness codes. At each time point, a positivity score was calculated for each of the three discussion tasks, and the average of these three scores was used in the



analyses. A composite *negativity* scale was created by averaging an individual's scores on the angry coercion, contempt, denial, disruptive process, dominance, hostility, interrogation, and verbal attack codes. At each time point, a negativity score was calculated for each of the three discussion tasks, and the average of these three scores was used in the analyses. Finally, a composite *effectiveness* scale was created by averaging an individual's scores on the assertiveness, communication, effective process, solution quality, and solution quantity codes. At each time point, an effectiveness score was calculated for each of the three discussion tasks, and the average of these three scores was used in the analyses ( $\alpha$  ranging from .74 to .80 for husbands and .74 to .78 for wives; for details, see Williamson, Bradbury, Trail, & Karney, 2011).

**Depressive symptoms**—Depressive symptoms at Time 1 and at Time 4 were assessed by summing responses six items ( $\alpha = .70$  and  $.75$  for husbands,  $.69$  and  $.81$  for wives) addressing the degree to which participants experienced specific symptoms (e.g., “worthlessness,” “restlessness”) during the past 30 days. Items were scored on a 5-point scale ranging from 1 = all of the time to 5 = none of the time (reverse-scored).

**Substance use**—Substance use at Time 1 and at Time 4 were assessed by summing yes/no (1/0) responses to four items adapted from the CAGE questionnaire for alcohol dependence (Mayfield, McLeod, & Hall, 1974) and three items based on DSM–IV diagnostic criteria for substance abuse (American Psychiatric Association, 1994;  $\alpha = .75$  and  $.69$  for husband,  $.67$  and  $.63$  for wives). The DSM–IV items assessed whether participants' drinking impaired functioning in areas such as family relationships (e.g., “Has your drinking caused trouble with a family member or friend?”) and physical safety (e.g., “Have you been under the influence in situations where you could get hurt, like driving?”).

**Stress**—Chronic stress at Time 2 (chronic stress was not assessed at Time 1) and at Time 4 were assessed by summing responses on a ten-item questionnaire asking about participants' perceptions of the stressfulness of a number of situations (e.g., participants' living situation, financial status) during the past nine months. Items were scored on a scale from 0 = not at all stressful to 2 = extremely stressful. Acute stress at Time 1 and at Time 4 were assessed by summing yes/no (1/0) responses from a 13-item questionnaire asking about whether or not participants had experienced a number of acute stressors (e.g., “Did you suffer from a serious illness, injury, or an assault?”) during the past nine months. Because stress may be localized within specific situations and domains for a given respondent, coefficient alpha is not a relevant metric to evaluate these scales and is thus not reported.

**Covariates**—Husbands' and wives' age, education, and household income were included as covariates in all analyses. Time 1 levels of outcome measures (for Aims 1 and 2: Time 1 relationship satisfaction, positivity, negativity, effectiveness, depressive symptoms, perceived substance use, chronic stress, and acute stress; for Aim 3: Time 1 aggression) were also included. All covariates were centered at their means before entering them into the models.

## Analytical Approach

Structural equation modeling (SEM) was used to assess an Actor-Partner Interdependence Model (APIM; Kenny et al., 2006). Mplus Version 7.3 (Muthén & Muthén, 2002) with Maximum Likelihood Robust (MLR) as the estimator was used to conduct all analyses. As husbands and wives are non-independent within couples, the APIM was chosen with the specific goal of examining the independent effects of husbands' and wives' aggression (controlling for the partner's level of aggression). Determining the differential effects of men versus women's aggression on individual, relationship, and contextual outcomes will provide knowledge useful to the solution of the gender symmetry/asymmetry debate of intimate partner aggression (e.g., Archer, 2000). MLR accommodates for missing data so that models were estimated using all available observations ( $N=431$  for each of the models described below). Furthermore, the use of MLR was appropriate due to non-normal distribution of the data. We ran three series (one for each research aim) of eight APIMs (one model per individual outcome) and one model predicting the couple-level outcome divorce/separation.

To address Aim 1, husbands' and wives' partner aggression at Time 1 were added as predictors, and husbands' and wives' Time 4 relationship satisfaction, positivity, negativity, effectiveness, depressive symptoms, perceived substance use, chronic stress, and acute stress were added as outcomes. Husbands' and wives' age, education, household income, and Time 1 values of outcome measures were included as covariates in all models. In the ninth model, for which we ran a logistic regression, husbands' and wives' partner aggression at Time 1 were added as predictors and couples' divorce/separation status was added as the outcome. The models run to address Aim 2 were similar to the models run to address Aim 1 with the addition of two further predictors, husbands' and wives' change in partner aggression, to each model. To address Aim 3, husbands' and wives' Time 1 relationship satisfaction, positivity, negativity, effectiveness, depressive symptoms, perceived substance use, chronic stress, and acute stress were added as predictors, and husbands' and wives' change in partner aggression were added as outcome variables (see Figure 1). Husbands' and wives' age, education, household income, and Time 1 aggression were included as covariates in these models.

To test whether actor and partner effects differed for husbands and wives, we generated nested models by constraining paths to be equal and compared the constrained models with the baseline models using Satorra and Bentler's (1994) scaled  $\chi^2$  that corrects for non-normality. However, as this statistic cannot be used in a normal  $\chi^2$  difference test because the distribution of the actual difference does not follow the  $\chi^2$  distribution, we used formulas created by Satorra and Bentler (2001). As solutions with fewer factors always have poorer fit, a significant p-value indicates that the solution with more factors is a significantly better fit (i.e., actor or partner effects should not be constrained to be equal as they do in fact differ significantly). If the test is non-significant, it suggests that the addition of the additional factor does not significantly improve the fit of the data (i.e., actor and partner effects do not differ significantly).

Overall model fit was determined using the recommendations of Bentler (2007). We used (a) the Comparative Fit Index (CFI; Bentler, 1990), with values greater than .90 indicating a

plausible model; (b) the Root Mean Square Error of Approximation (RMSEA; Steiger, 1990), an absolute index of overall model fit with values less than .08 indicative of acceptable model fit; and (c) the Standardized Root Mean Residual (SRMR; Hu & Bentler, 1999), an absolute index of overall model fit with values less than .08 indicative acceptable model fit. The likelihood ratio  $\chi^2$  is also reported for completeness. Fit indices for all models are included in Table 2, 3 and 4. All results presented below and in the tables are standardized model results (STDYX standardization). For purpose of succinctness, we only highlight significant effects here.

## Results

### Attrition and Descriptive Statistics (Table 1)

By Time 4, the marital status of 85.2% of couples of the initial 431 couples was known ( $n(\text{together}) = 344$ ,  $n(\text{dissolved}) = 24$ ). Due to 8 cases on which key variables were missing, the final sample for analysis consisted of 336 intact couples who provided data at Time 4 (78% of original sample). Couples in the original Time 1 and the final Time 4 samples did not differ in aggression at Time 1 ( $t(429) = 1.28$ ,  $p = 0.20$  for husbands and  $t(429) = 1.06$ ,  $p = 0.29$  for wives). Overall, mean levels of aggression decreased from Time 1 to Time 4, as evidenced by husbands' and wives' mean levels of aggression at each of the four time points as well as the overall negative mean slope value. Although the current study combined psychological and physical aggression into one overall measure, it is worth noting that this overall pattern of decreasing aggression over time was also found for both types of aggression when examined separately. Specifically, husbands' (77.5, 68.8, 63.8, and 58.9% at Time 1, 2, 3, and 4, respectively) and wives' (81.0, 74.4, 69.9, and 67.9% at Time 1, 2, 3, and 4, respectively) reports of psychological aggression (summation of swearing at partner; stomping out of the room after an argument; and threatening to hit partner) declined from Time 1 to Time 4. Similarly, husbands' (17.4, 15.2, 12.3, and 9.8% at Time 1, 2, 3, and 4, respectively) and wives' (29.7, 22.4, 22.0, and 19.6% at Time 1, 2, 3, and 4, respectively) reports of physical aggression (summation of throwing something at partner; pushing, grabbing, or shoving partner; and slapping, kicking, biting, or punching partner) declined from Time 1 to Time 4.

At Time 1, 77.7% of husbands and 82.1% of wives had engaged in one or more aggressive acts. By Time 4, this percentage had decreased to 58.9% and 67.9%, respectively. Of those participants for whom data were available, 61.9% ( $n = 198$ ) of husbands and 62.6% ( $n = 214$ ) of wives decreased in aggression and 32.5% ( $n = 104$ ) of husbands and 32.2% ( $n = 110$ ) of wives increased in aggression throughout the four time points. Wives' mean levels of aggression were significantly higher than husbands' levels of aggression across all four time points ( $t(430) = 7.64$ ,  $t(374) = 4.65$ ,  $t(358) = 5.77$ ,  $t(335) = 4.53$ , all  $p$ s < .001 for T1, T2, T3 and T4).

By Time 4, 55 (12.8%) couples had separated or divorced and 283 (65.7%) couples remained married. For husbands, higher Time 1 aggression was significantly related to more detrimental outcomes for all outcome variables, including separation or divorce, except for acute stress. Escalation of aggression (slope variable) was also significantly related to several detrimental outcomes including lower satisfaction, lower effectiveness, higher

depressive symptoms, and higher chronic stress. For wives, higher Time 1 aggression was significantly related to more detrimental outcomes for all variables, including separation or divorce, except for effectiveness and acute stress. Escalation of aggression was significantly related to lower satisfaction and higher depressive symptoms at Time 4.

### Main Analyses

For our main analyses, we report standardized path coefficients with associated p values as well as model fit indices in Tables 2 and 3. Standardized path coefficients can be interpreted as effects sizes ( $r$ ). All of the statistically significant effects reported below correspond to effect sizes that are at least small in magnitude (i.e.,  $> .10$ , see Cohen, 1992).

#### Do Time 1 Levels of Aggression Predict Residualized Change Through Time 4? (Table 2)

**Dyadic outcomes**—Higher husband Time 1 aggression was related to smaller increases in husband positivity as well as husband effectiveness at Time 4, and greater risk for divorce. Higher wife Time 1 aggression was related to *greater* increases in husband effectiveness at Time 4. Husbands' and wives' actor and partner effects differed significantly for the effectiveness effects.

**Individual outcomes**—Higher wife Time 1 aggression was related to greater increases in husband depression at Time 4.

**Stress**—All effects of the models testing stress outcomes were *ns*.

#### Do Changes in Aggression Predict Residualized Change Through Time 4? (Table 2)

Effects for Time 1 aggression and change in aggression are shown in Table 2. Here, we will focus on the main variable of interest for Aim 2, change in aggression.

**Dyadic outcomes**—Escalation of husband aggression was related to smaller increases in satisfaction for both partners, greater increases in husband negativity, smaller increases in husband effectiveness, and greater risk for divorce or separation. Husbands' and wives' actor effects differed significantly for negativity and effectiveness. Husbands' and wives' partner effects differed significantly for satisfaction.

**Individual outcomes**—Escalation of husband aggression was related to greater increases in husband and wife depressive symptoms and greater increases in husband perceived substance use. Escalation of wife aggression was related to greater increases in wife depressive symptoms.

**Stress**—Escalation of husband aggression was related to greater increases in husband and wife chronic stress as well as greater increases in wife acute stress. Husbands' and wives' actor and partner effects differed significantly for chronic stress.

### Do Time 1 Characteristics Predict Changes in Aggression? (Table 3)

**Dyadic outcomes**—Lower wife satisfaction at Time 1 was related to escalation in husband aggression over time. Higher wife negativity at Time 1 was related to escalation in wife aggression over time.

**Individual outcomes**—All effects of the models testing individual outcomes were *ns*.

**Stress**—When wives reported more chronic stress at Time 1, husbands' and wives' aggression tended to escalate. When husbands and wives reported more acute stress at Time 1, husbands' aggression tended to escalate. Partner effects differed significantly for chronic stress.

## Discussion

Because intimate partner aggression has potentially harmful physical and mental consequences for affected individuals and for society in general (Max et al., 2004), policy makers, researchers, and clinicians have increasingly focused their attention on the development of prevention and intervention programs to reduce partner aggression. These interventions assume that changing aggressive behaviors will affect how relationships develop, yet there are plausible reasons to expect that changes in aggression may in fact have muted effects on couples. To clarify the types of effects that are possible with structured interventions, we applied the Actor-Partner-Interdependence Model (Kenny et al., 2006) to four waves of data from a diverse sample of low-income newlywed couples, allowing us to examine effects of changes in couples' aggressive acts on dyadic, individual, and contextual outcomes. In line with previous research on rates of aggression among newlywed couples (e.g., Lorber & O'Leary, 2012), psychological and physical aggression decreased across the four time points, and rates were significantly higher among women than among men. Independent of levels of aggression at the outset of marriage, reductions in angry and aggressive acts promoted better outcomes, and increases in these behaviors signaled deterioration. Levels of stress at the outset of marriage predicted whether partners fell into a pattern of increasing aggression in subsequent years, possibly leading to a perpetuating cycle whereby stress and partner aggression reinforce one another. We elaborate on these findings below, emphasizing those effects that were statistically significant and exceeded an effect size of .20 while noting a few instances when results fall short of this effect size cut-off.

As expected, decreases in aggression were beneficial, whereas increases were costly, so that individuals who experienced increases in aggression were generally at higher risk for increases in relationship distress, depression, substance use, higher stress, and risk for separation (effect sizes for significant effects ranging from .12 to .32). More effects were observed for husbands than for wives, and effects were more likely to arise from husbands' than from wives' increases in aggression. Thus, while it is typically the case in the couples literature that wives' behaviors and reports are better 'barometers' of relational change (e.g., Bloch, Haase, & Levenson, 2014), here we see that husbands' increases in aggression appear to exert stronger effects on outcomes than do wives' increases in aggression (although only 3 out of 8 actor effects and 2 out of 8 partner effects were significantly stronger for husbands than for wives), perhaps owing to husbands' greater capacity to do harm and cause injury

(Stith et al., 2008). These differential effects of male and female aggression align with findings by Kar and O'Leary (2010) who found that physically victimized women fear their partners' aggression more and have greater depressive symptoms than non-physically victimized women. In short, while there may be gender symmetry in rates of aggression (or even higher rates for women as compared to men as observed in the present sample) for men and women early in marriage, there can be gender asymmetry in the effects of such aggression.

In contrast, relatively few longitudinal associations were evident between aggression at the outset of marriage and residualized change in individual, dyadic, and contextual outcomes through the first years of marriage (effect sizes for significant effects ranging from .14 to .21; all but one effect size of significant effects below .20 cut-off). Specifically, of the 34 effects testing whether *changes* in aggression predicted different outcomes, 12 effects were statistically significant. However, of the 34 effects testing whether aggression at the outset of marriage predicted residualized change in different outcomes, only five effects were statistically significant. Of particular note is our finding that husbands' aggression at the outset of marriage increases risk for dissolution, suggesting that although aggression early in marriage may not have strong impacts on residual change in individual and relational outcomes when examined separately, husbands' aggression in particular may lead to relationship deterioration and breakup. Nevertheless, the general pattern of null results for aggression at the outset of marriage runs counter to some studies (e.g., substance use, Cunradi et al., 2002; depression, Shorey et al., 2011) and aligns with others (e.g., substance use, relationship satisfaction, Amanor-Boadu et al., 2011).

It is important to note that comparing the present findings to previous research bears some limitations due to differences in research approaches and methodologies used. For example, Amanor-Boadu et al. (2011) and Shorey et al. (2011) used non-dyadic convenience samples of college students and Cunradi et al. (2002) focused on male-perpetrated aggression only. Furthermore, it is possible that shared variance or overlap in aggression between partners, a methodological approach neither used in the current study nor the studies cited above, which focused on male and female partners' unique variance in aggression, could predict change in outcomes over time. Notwithstanding these concerns, these null findings for aggression at the outset of marriage may suggest that intimate partners adapt to normative forms of aggression. (Other work similarly shows that couples adapt to adverse experiences like chronic illness if they are stable features of their lives; e.g., Gamarel & Revenson, 2015). *Changes* in aggression appear to be highly salient, however, as our analysis indicates that important aspects of couples' lives are sensitive to increases and decreases in aggression, even when those fluctuations occur within the normative range of severity. These findings are in line with Shortt et al. (2013), who studied patterns of changes in stress and partner violence, focusing on dyadic levels of aggression as opposed to partners' differential (i.e., non-shared) aggression. Thus, *changes* in aggression (both partners' overlap in aggression as well as differential aggression) away from one's idiosyncratic functioning early in marriage appear to be more predictive of changes in other domains than aggression *levels* early in marriage, perhaps because these changes prove most diagnostic to partners as they evaluate their well-being.

We also sought to understand why some couples might be more inclined than others to change in aggression, thus treating aggression slopes as the dependent variable and baseline indices of individual symptoms, couple functioning, and stress as predictors of those slopes. Here, 6 of the 32 effects relating Time 1 characteristics to changes in aggression were statistically significant. Specifically, when wives were less satisfied ( $ES = .20$ ) and more stressed (both chronically,  $ES = .20$ , and acutely,  $ES = .17$ ), their husbands were more likely to undergo increases in aggression over the next 27 months. Wives who were more chronically stressed at the outset of marriage were also more likely to increase in their own aggression ( $ES = .19$ ). These results may shed new light on the DDS model proposed by Capaldi et al. (2005). As noted above, this model argues that partner aggression results from the interplay of relationship processes, individual characteristics, and contextual factors (Capaldi et al., 2012). While we did not find much evidence that Time 1 measures of individual and dyadic processes predicted change in aggression, we do see fairly robust evidence that reports of stress, especially wives' stress, put newlyweds on a path of increased aggression. Interventions aimed at reducing stress may therefore prove beneficial. Null findings for individual and relational factors at the outset of marriage suggest that a wide range of couples might be responsive to such intervention.

Interpretation of these results is qualified by a few key considerations. First, all of the risk factors discussed here could be a function of aggression that had already occurred before marriage, i.e., prior to the first point of data assessment. As the previous course of aggression and of these other time-varying risk factors cannot be determined, implications about the current results need to be drawn with caution. Second, although our work responds to a call by Johnson (2012) and others to study lower-income, ethnically diverse couples, our findings may not generalize to, e.g., more affluent couples, couples seeking treatment, unmarried cohabiting couples, gay and lesbian couples, or couples for whom distress and aggression are severe. In the current sample, rates of severe physical aggression were low. The relatively low recruitment rate of the current study (431 of the 3,793 couples who were originally targeted and completed the study) may be a potential explanation for the relatively low rates of severe physical aggression in our sample (i.e., a selection effect). The use of a community sample of couples who may be engaging in 'situational couple violence' (Kelly & Johnson, 2008) may also explain the lack of effects Time 1 findings in that there may be something categorically different between the kind of aggression observed in our community sample and the severe violence that may be observed in clinical samples or samples recruited from domestic violence shelters (i.e., intimate terrorism, see Kelly & Johnson, 2008). Furthermore, in more distressed samples, physical and psychological aggression might emerge as distinct concepts. We did not find evidence for this idea in the community sample used here, leading to our decision to combine physical and psychological aggression items into an overall measure. In more distressed samples, physical and psychological aggression might produce distinct effects. Therefore, the results reported here should be noted with caution, given that most of the aggression experienced by our couples was verbal and emotional in nature. Nevertheless, our use of a relatively well-functioning community sample does increase confidence that similar or even stronger associations would be detected in a sample with higher levels of aggression. Third, our use of self-report data might bias the current findings. We sought to counter this problem by combining independent reports from

both partners and by collecting multiple waves of data, including observational data, in a longitudinal design. Nevertheless, self-reports of aggression can be biased and inaccurate, potentially distorting or undermining our ability to detect effects. Fourth, our data are correlational, preventing us from drawing causal conclusions. Although we attempted to rule out some alternative explanations by including demographic variables as covariates in all of our analyses, we could not rule out all possible third variables that might have driven the current effects. Finally, the large number of outcomes examined—nine, including divorce, each examined for husbands and wives—increases experiment-wise error.

Notwithstanding these limitations, the current study advances understanding of the association between couples' aggression, changes in aggression, and associated dyadic, individual, and contextual outcomes during the newlywed years. The current findings on aggression and stress highlight a self-perpetuating and cyclical pattern by which these two variables might reinforce one another: Husbands in marriages in which both partners were more stressed were more likely to escalate in aggression. When husbands aggressed, they became more negative and less effective in their interactions, and both partners went on to experience less satisfaction, increasing symptoms of depression, and higher levels of stress; in principle, this could increase the likelihood of aggression in the future. If future studies corroborate this pattern, we will be better able to appreciate the challenges that couples face once aggression becomes part of their behavioral repertoire and we can speculate about how preventive interventions might address this problem. Our data suggest that selecting couples on the basis of reported stress, especially wives' stress, and low satisfaction might be good starting points for preventing aggression. Subsequent strategies that would enable couples to manage stress better, and perhaps re-connect in constructive ways after angry outbursts, might alter stress-aggression-stress patterns and slow relationship decline. Alternatively, interventions that reduce stress for couples more generally, often seen in transition to parenthood programs, might achieve a similar end.

In sum, understanding how aggression fluctuates outside the context of intervention may shed light on the types of effects that are possible with intervention. The present results indicate that reductions in angry and aggressive acts will promote better relationship, individual, and contextual outcomes, whereas increases in anger and aggression will signal deteriorating outcomes. These effects may be more consistent for husbands' aggression than for wives' aggression. Finally, initial levels of stress and satisfaction may heighten risk for escalation in aggression, thus lending specificity to secondary prevention of adverse relationship outcomes.

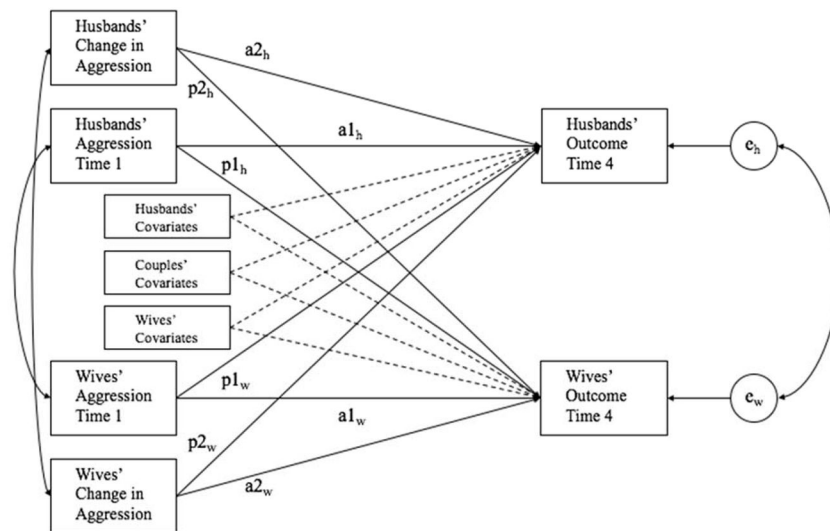
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**Figure 1.** Conceptual actor-partner interdependence model for Aims 1 and 2. Actor effects of Time 1 aggression are shown in the a1 paths, partner effects of Time 1 aggression are shown in the p1 paths, actor effects of change in aggression are shown in the a2 paths, and partner effects of change in aggression are shown in the p2 paths, with h and w subscripts marking paths for husbands and wives, respectively. Curved arrows represent correlations between predictor variables and outcome variables. Covariates are represented with dashed lines. Aim 1 models include a1 and p1 paths only. Aim 2 models include all paths depicted here.   
 \*\*Note: Conceptual actor-partner interdependence model for Aim 3 followed the same layout, interchanging predictors and outcomes (in Aim 3, change in aggression variables were the outcomes, whereas Time 1 characteristics were the predictors).

Table 1

Descriptive Statistics and Bivariate Correlations Between Husbands and Wives' Characteristics

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. T1 Aggression	.69**	.67**	.58**	.50**	-.33**	-.26**	-.18**	-.16**	-.20**	.28**	.22**	-.08	-.08	-.19**	.17**	.13**	.18**	.09	.02	.22**	.19**	.17**
2. T2 Aggression	.62**	.71**	.66**	.58**	.01	-.25**	-.23**	-.10	-.17**	.25**	.14*	-.12*	-.10	.21**	.13*	.04	.08	.05	.05	.28**	.19**	.19**
3. T3 Aggression	.56**	.67**	.72**	.75**	.32**	-.23**	-.27**	-.08	-.19**	.24**	.20**	-.14**	-.10	.12*	.18**	.13*	.22**	.05	.06	.31**	.25**	.07
4. T4 Aggression	.51**	.66**	.71**	.72**	.48**	.23**	-.34**	-.05	-.24**	.20**	.25**	-.07	-.16**	.13*	.22**	.07	.26**	.09	.12*	.30**	.28**	.10
5. Aggression Slope	-.27**	.15*	.34**	.55**	.45**	.01	-.17**	.02	-.08	-.03	.02	-.01	-.08	-.04	.15*	-.02	.04	-.02	.00	.12*	.07	-.02
6. T1 Satisfaction	-.29**	-.25**	-.17**	-.22**	.03**	.32**	.52**	.25**	.30**	-.16**	-.10	.13**	.15**	-.25**	-.29**	-.12**	.13*	-.06	-.04	-.34**	-.20**	-.18**
7. T4 Satisfaction	-.20**	-.26**	-.30**	-.37**	-.25**	.56**	.48**	.14*	.23**	-.08	-.15**	.07	.16**	-.18**	-.37**	.02	-.17**	-.16**	-.17**	-.30**	-.31**	-.08
8. T1 Positivity	-.14**	-.11*	-.11*	-.09	.00	.16**	.07	.82**	.37**	-.11*	-.08	.27**	.24**	-.09	-.02	.03	.09	-.07	-.04	-.03	-.02	.03
9. T4 Positivity	-.21**	-.16**	-.19**	-.19**	-.08	.14*	.24**	.37**	.80**	-.10	-.18**	.18**	.44**	-.16**	-.18**	.02	-.03	-.20**	-.07	-.16**	-.16**	-.09
10. T1 Negativity	.21**	.11*	.16**	.11*	-.07	-.15**	-.11	-.19**	-.20**	.54**	.41**	-.14**	-.04	-.03	.04	.01	.02	.16**	.12*	.10	.01	.03
11. T4 Negativity	.22**	.20**	.30**	.27**	.13**	-.16**	-.17**	-.11	-.21**	.50**	.61**	-.19**	-.21**	-.01	.08	.13*	.16**	.13*	.10	.05	.07	.04
12. T1 Effectiveness	-.16**	-.15**	-.17**	-.19**	-.08	.03	.07	.35**	.23**	-.16**	-.18**	.56**	.37**	-.15**	.03	-.06	-.06	-.03	.00	.01	.01	-.03
13. T4 Effectiveness	-.15**	-.13**	-.18**	-.24**	-.19**	.08	.12*	.20**	.50**	-.17**	-.19**	.56**	.47**	-.02	-.11	-.03	-.07	-.10	-.06	-.03	-.08	-.07
14. T1 Depression	.29**	.25**	.22**	.27**	-.02	-.32**	-.12**	-.04	-.11*	.14**	.06	-.10	-.05	.18**	.48**	.16**	.14*	.07	.10*	.35**	.28**	-.01
15. T4 Depression	.18**	.21**	.29**	.27**	.14*	-.29**	-.30**	-.04	-.14*	.06	.08	-.12*	-.13*	.45**	.11*	.09	.15**	.07	.16**	.32**	.41**	.06
16. T1 Substance Use	.24**	.12*	.24**	.15**	-.01	-.20**	-.13**	-.09	-.13**	.11*	.19**	-.06	-.13*	.24**	.17**	.20**	.44**	-.04	.05	.06	.14*	.02
17. T4 Substance Use	.25**	.24**	.27**	.24**	.09	-.12*	-.19**	.03	-.06	.03	.11	-.10	-.12*	.05	.15**	.43**	.22**	.02	-.02	.07	.18**	.10
18. T1 Acute Stress	.11*	.16**	.07**	.08	-.09	-.04	-.02	-.04	-.08	.18**	.09	-.04	-.11*	.21**	.07	.03	.05	.60**	.27**	.08	.00	.02
19. T4 Acute Stress	.08	.11*	.09	.06	-.08	-.08	-.06	-.06	-.07	.01	.03	-.04	-.04	.06	.15**	.01	.04	.31**	.18**	.14*	.21**	.00
20. T2 Chronic Stress	.18**	.16**	.15**	.21**	.05	-.30**	-.20**	.08	-.03	.08	.11	.09	.07	.32**	.32**	.14**	.08	.08	.00	.24**	.53**	.10
21. T4 Chronic Stress	.12*	.14**	.23**	.30**	.23**	-.19**	-.29**	.08	-.08	.04	.16**	-.01	-.08	.27**	.35**	.12*	.1**	.05	.00	.58**	.32**	.09
22. Divorce <sup>d</sup>	.20**	.23**	.10**	.17**	.11**	-.09	-.14**	.02	-.10	.02	.03	-.05	-.08	.09	.15**	.06	-.04	.04	.06	.02	.11	--
Husbands: <i>M (SD)</i>	1.94 (1.84)	1.74 (1.93)	1.56 (1.89)	1.52 (1.90)	-0.20 (0.64)	33.90 (3.05)	33.02 (4.05)	2.38 (0.78)	2.33 (0.60)	1.91 (0.59)	1.81 (0.57)	4.18 (0.89)	3.85 (0.90)	4.00 (3.32)	3.63 (3.30)	0.70 (1.28)	0.45 (0.99)	2.25 (1.90)	1.41 (1.73)	5.22 (3.23)	4.88 (3.10)	12.88 Div(N=338)
Wives: <i>M (SD)</i>	2.64 (2.59)	2.14 (2.31)	2.05 (2.25)	1.90 (2.17)	-0.21 (0.65)	35.15 (3.39)	32.30 (4.15)	2.35 (0.76)	2.35 (0.58)	1.94 (0.58)	1.93 (0.65)	4.29 (0.87)	4.00 (0.90)	3.70 (3.03)	3.65 (3.48)	0.25 (0.72)	0.19 (0.63)	1.88 (1.65)	1.50 (1.60)	5.57 (3.15)	5.24 (2.88)	

Note. Intercorrelations between husbands' characteristics are reported below the diagonal, and wives' characteristics are reported above the diagonal. Values in bold along the diagonal represent correlations between husbands' and wives' characteristics. T1/T4 = Time 1/Time 4.

\*  $p < .05$ .

\*\*  $p < .01$

T1 *physical* aggression for husbands ( $r = .11, p = .04$ ) and wives ( $r = .18, p = .001$ ) and T2 aggression only for wives ( $r = .16, p = .01$ ) but not for husbands ( $r = .09, p = .11$ ) were significantly associated with divorce.

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**Table 2**  
 Aims 1 & 2: Do Time 1 Levels of Aggression and Changes in Aggression Predict Residualized Change in Outcomes Through Time 4?

Predictors <sup>xx</sup>	Husbands' Outcomes				Wives' Outcomes				Fit Indices			
	H Agg	W Agg	H Agg	W Agg	H Agg	W Agg	H Agg	W Agg	CFI	RMSEA	SRMR	$\chi^2$
Aim 1												
T4 Satisfaction	0.01	-0.09	-0.06	-0.02	-0.06	-0.02	-0.02	.88	.11	.06		37.88**
T4 Positivity	-0.16**	0.01	-0.09	-0.10	-0.09	-0.10	-0.10	.99	.04	.02		10.17
T4 Negativity	0.11	0.01	-0.02	0.11	-0.02	0.11	0.03	.99	.03	.02		7.81
T4 Effectiveness	-0.17*** <sup>a</sup>	0.14* <sup>p</sup>	-0.12 <sup>p</sup>	0.03 <sup>a</sup>	-0.12 <sup>p</sup>	0.03 <sup>a</sup>	.02	.99	.02	.01		7.20
T4 Depression	-0.03	0.15*	0.00	0.10	0.00	0.10	.05	.96	.05	.02		12.60
T4 Substance Use	0.11	0.07	0.02	0.13	0.02	0.13	.03	.97	.03	.02		8.92
T4 Chronic Stress	0.07	-0.04	0.12	-0.02	0.12	-0.02	.00	1.00	.00	.01		4.47
T4 Acute Stress	0.10	-0.08	0.00	0.00	0.00	0.00	.05	.91	.05	.02		13.41*
Divorce <sup>xx</sup>	0.21*	0.04	--	--	--	--	--	--	--	--		--
Aim 2												
T4 Satisfaction	-0.22**	-0.06 <sup>p</sup>	-0.28** <sup>p</sup>	-0.05	-0.28** <sup>p</sup>	-0.05	.91	.10	.04			33.48**
T4 Positivity	-0.12	-0.07	-0.13	-0.08	-0.13	-0.08	.99	.04	.02			10.14
T4 Negativity	0.25** <sup>a</sup>	-0.09	0.10	0.01 <sup>a</sup>	0.10	0.01 <sup>a</sup>	.99	.03	.02			8.17
T4 Effectiveness	-0.24*** <sup>a</sup>	0.05	-0.14	0.00 <sup>a</sup>	-0.14	0.00 <sup>a</sup>	.99	.03	.01			7.97
T4 Depression	0.15*	0.01	0.13*	0.13*	0.13*	0.13*	.96	.06	.02			14.02*
T4 Substance Use	0.14*	-0.06	0.10	0.04	0.10	0.04	.97	.03	.02			8.61
T4 Chronic Stress	0.27** <sup>a</sup>	-0.05 <sup>p</sup>	0.24** <sup>p</sup>	-0.11 <sup>a</sup>	0.24** <sup>p</sup>	-0.11 <sup>a</sup>	1.00	.00	.01			3.40
T4 Acute Stress	0.01	-0.02	0.19***	-0.12	0.19***	-0.12	.92	.05	.01			12.11
Divorce	0.30*	-0.05	--	--	--	--	--	--	--	--		--

Agg = Aggression, H = Husband, W = Wife, T1 = Time 1, T4 = Time 4. Covariates included in all models: Husband age, Wife age; Husband Education, Wife Education; Household Income; Husband T1 Outcome, Wife T1 Outcome. Standardized (STDYX) results are shown. Estimator = MLR.

<sup>a</sup> Actor effects are statistically different for husbands and wives.

<sup>p</sup> Partner effects are statistically different for husbands and wives.

<sup>xx</sup> For Aim 1, Predictors include T1 Husband and Wife Aggression, for Aim 2, predictors include Husband and Wife Changes in Aggression.

10' < d  
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'50' < d  
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**Table 3**

Aim 3: Do Time 1 Characteristics Predict Changes in Aggression?

	Husband Predictors										Wife Predictors					
	Sat	Pos	Neg	Eff	Dep	Use	CSt	ASt	Sat	Pos	Neg	Eff	Dep	Use	CSt	ASt
Husband Outcomes	-0.02	-0.03	-0.01	-0.12	0.07	0.08	0.04	-0.15*	-0.20**	-0.01	0.04	-0.07	0.07	0.00	0.20*** <sup>p</sup>	0.17*
Wife Outcomes	-0.03	0.09	0.00	-0.07	0.06	0.02	0.01 <sup>p</sup>	0.05	-0.10	-0.09	0.12*	-0.01	0.04	0.02	0.19***	-0.01
CFI	.94	.92	.91	.93	.93	.93	.94	.92	--	--	--	--	--	--	--	--
RMSEA	.07	.08	.08	.07	.07	.07	.07	.08	--	--	--	--	--	--	--	--
SRMR	.01	.03	.03	.03	.03	.03	.02	.03	--	--	--	--	--	--	--	--
$\chi^2$	18.41*	21.76***	23.39***	19.69***	19.33***	20.07***	17.31*	21.25***	--	--	--	--	--	--	--	--

Agg = Aggression (Time 1), Sat = satisfaction, Pos = Positivity, Neg = Negativity, Eff = Effectiveness, Dep = Depressive Symptoms, Use = Perceived Substance Use, CSt = Chronic Stress, ASt = Acute Stress. Covariates included in all models: Husband Time 1 Aggression, Wife Time 1 Aggression, Husband age, Wife age; Husband Education, Wife Education; Household Income. Standardized (STDYX) results are shown. Estimator = MLR.

<sup>a</sup> Actor effects are statistically different for husbands and wives.

<sup>p</sup> Partner effects are statistically different for husbands and wives.

\* p < .05

\*\* p < .01