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The Daily Social and Emotional Worlds of Adolescents who are
Psychologically Maltreated by their Romantic Partners

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Abstract

The purpose of this study was to examine how partner psychological maltreatment is associated with depression, daily interpersonal experiences, and affect. Participants were 67 late adolescents (17- to 22-years-old). Each participant completed a survey followed by reporting affect, and interpersonal hassles and uplifts for seven consecutive days. Compared to those low in maltreatment, participants in the high maltreatment group reported more hassles with partners and friends, less uplifts with family, and more depressive symptoms. Multilevel modeling showed that adolescents in the high as compared to the low maltreatment group were more interpersonally sensitive (defined as greater affective reactions to day-to-day interpersonal hassles). Results reveal that psychological maltreatment by partners is an especially potent experience that occurs along with greater romantic hassles and more interpersonal sensitivity. The effects of maltreatment were also found to spill over into relationships with friends and families by either being associated with more hassles and greater reaction to hassles or fewer uplifts and less reaction to uplifts.

Keywords: psychological maltreatment, partner abuse, interpersonal sensitivity, affective reactivity, romantic relationships, depression, dating

The Daily Social and Emotional Worlds of Adolescents who are Psychologically Maltreated by their Romantic Partners

Many adolescents and emerging adults between the ages of 16 and 22 (henceforth, referred to as *late adolescents* for brevity) place great importance on their couple relationships (Furman, Brown, & Feiring, 1999; Crouter & Booth, 2006). It is almost impossible to underemphasize how important it is that these relationships are void of physical abuse and other forms of partner maltreatment (Wekerle & Wolfe, 1999). However, a significant number of adolescent romantic relationships do involve aggression and too much psychological maltreatment. Among high school students, reported rates of physical victimization and perpetration have ranged from 14% to 45% (Feiring, Deblinger, Hoch-Espada, & Haworth, 2002; Gray & Foshee, 1997; O'Keefe & Treister, 1998; Schwartz, O'Leary, & Kendziora, 1997). Similar rates of physical violence perpetration and victimization are found among university students (Harned, 2001; Shook, Gerrity, Jurich, & Segrist, 2000). When verbal and psychological maltreatment are considered, rates are even higher with some reported prevalence rates higher than 80% (Feiring et al., 2002; Harned, 2001; Jackson, Cram, & Seymour, 2000; Kasian & Painter, 1992).

Dating violence and maltreatment in adolescence have been linked to poor academic performance (Bergman, 1992), substance use (Coker et al., 2000; Silverman, Raj, Mucci, & Hathaway, 2001), higher rates of eating disordered behaviors (Ackard & Neumark-Sztainer, 2002; Silverman, et al., 2001), higher rates of suicidal ideation and suicide attempts (Ackard & Neumark-Sztainer, 2002; Coker et al., 2000; Silverman, et al., 2001), and lower levels of self-esteem and psychological well-being (Ackard & Neumark-Sztainer, 2002; Callahan, Tolman, & Suanders, 2003; Jezl, Molidor, & Wright, 1996; Katz & Arias, 1999; Salazar, Wingood, DiClemente, Lang, & Harrington, 2004; Thompson et al., 2000). The significance of these adversities and the high prevalence rates of maltreatment warrant continued study of the social

and emotional factors associated with partner maltreatment. Furthermore, patterns of violence in adolescent romantic relationships may escalate in later committed adult relationships. This makes adolescence an important window of opportunity for long-term preventative intervention for at-risk couples and/or individuals. For intervention to be effective, a thorough understanding of risk factors and protective factors is required.

In the current study, the purpose was to examine how partner psychological maltreatment is associated with late adolescents' well-being, and linked to day-to-day interpersonal negative events (*hassles*) and positive events (*uplifts*) with romantic partners, friends, and family. We also examined participants' interpersonal sensitivity and determined whether this sensitivity was explained by partner psychological maltreatment. Interpersonal sensitivity was identified by relatively greater affective reactions to day-to-day interpersonal hassles. This investigation was limited to psychological maltreatment, because of the higher prevalence rates of psychological compared to physical abuse (Gorman-Smith, Tolan, Sheidow, & Henry, 2001; Jezl et al., 1996, Magdol, Moffitt, Caspi, & Silva, 1997), and there is evidence that psychological maltreatment may precede physical violence (Murphy & O'Leary, 1989).

The Social World of Adolescents Maltreated by their Partners

Researchers who have investigated the social worlds of adolescents generally do so through the examination of social support from multiple social network members. These studies find that victims of dating violence have poorer perceptions of their social support networks than nonmaltreated adolescents (Thompson et al., 2000) and that social support from friends and family members may mediate the relationship between dating violence and psychological adjustment (e.g., Salazar et al., 2004). Another area of interest has been the use of social control tactics where deliberate attempts are made to isolate victims from their family and friends (Kasian & Painter, 1992; Katz & Arias, 1999). Social isolation may partly explain why

maltreated individuals report that they have smaller networks of supportive persons and are less satisfied with their social support networks. Although research has established the link between partner maltreatment and lack of social support from others, much less is known about the *daily* social worlds of late adolescents who are psychologically maltreated by their partners.

A review of the literature revealed no studies reporting associations of unmarried late adolescents' psychological maltreatment by partners with *daily* interpersonal hassles and uplifts. Additionally, only a limited number of studies were identified that focused on this or closely related topics among married couples (Harper, Schaalje, & Sandberg, 2000; Larson & Richards, 1994). In one of these studies, using experience sampling techniques to gather intensive daily data from married couples, distressed couples reported more negative experiences together, but not fewer positive experiences than nondistressed couples (Larson & Richards, 1994). In another study of later life marriages, poorer marital quality and low relationship intimacy were associated with more daily hassles (Harper et al., 2000). Due to the absence of studies investigating the association of partner maltreatment with daily interpersonal events in an adolescent population, one of our primary research aims was to examine the daily social worlds of adolescents who are psychologically maltreated by their partners compared to those who are not. This was accomplished by examining associations of psychological maltreatment with daily hassles and uplifts with romantic partner, friends, and family.

The Emotional World of Adolescents Maltreated by their Partners

Diary studies have found that adolescents compared to adults show a wider range of moods, experiencing higher highs and lower lows, although their moods are more short-lived/changeable (Larson, Csikszentmihalyi, & Graef, 1980). Furthermore, empirical research has revealed that these highly variable emotional states can be linked to romantic relationships in adolescence (Larson, Clore, & Wood, 1999), and romantic stress has been associated with

escalating levels of depressive symptoms over time (Rizzo, Daley, & Gunderson, 2006; Welsh, Grello, & Harper, 2003; Zimmer-Gembeck, Siebenbruner, & Collins, 2001). Overall, romantic experiences have been shown to be important correlates of adolescents' depressive symptoms, emotional reactions, and reactivity.

Affective reactivity is one important aspect of the daily emotional lives of adolescents. *Affective reactivity* is defined as the relationship between daily events (interpersonal and/or non-interpersonal) and daily emotional outcomes such as negative affect (Bolger & Zuckerman, 1995). An affectively reactive individual, for example, is identified by a strong positive within-person association between number of daily hassles and end of day negative affect, whereas someone less affectively reactive is identified by a weaker within-person association between number of daily hassles and end of day negative affect. More recently, affective reactivity to *interpersonal* daily events (i.e., daily hassles and uplifts with romantic partner, friends, and family) has been conceptualized as *interpersonal sensitivity* (O'Neil, Cohen, Tolpin, & Gunthert, 2004), with interpersonal sensitivity defined as an excessive awareness of and reactivity to the behaviors and feelings of others (Boyce & Parker, 1989).

Although interpersonal sensitivity has primarily been measured with cross-sectional self-report questionnaires (e.g., Interpersonal Sensitivity Measure, Boyce & Parker, 1989), interpersonal sensitivity was operationalized in the current study as a within-person association between daily hassles and daily affect. This approach had an advantage over more traditional single questionnaire measures of interpersonal sensitivity, which have to rely on retrospective reports or ask about expected reactions to interpersonal events. Diary methods of data collection were used because they provide such an intensive assessment of experiences and affect, and have been used to examine day-to-day variations in hassles, uplifts, and emotional functioning (Harper et al., 2000). An advantage of diary methods is that events can be reported close in time to when

they occurred, and retrospective biases are reduced because affect is reported closer in time to measured events (Bolger, Davis, & Raffaelli, 2003). Additionally, the repeated measurements from diary methods allow for estimation of within-person variability and investigation of factors that can account for individual differences in within-person variability (Bolger et al., 2003).

Cross-sectional research using a self-report measure of interpersonal sensitivity has established that interpersonal sensitivity, psychological maltreatment, and well-being are associated (Purdie & Downey, 2000; Wolfe, Wekerle, Reitzel-Jaffe, & Lefebvre, 1998). For example, most relevant to the current research, interpersonal sensitivity has been associated with greater risk of dating violence (Wolfe et al., 1998). Hence, interpersonal sensitivity may be an important risk factor for dating violence. Such studies have been founded in theories that point toward links between relationship dependency (Bornstein, 2006), rejection sensitivity (Downey, Bonica, & Rincon, 1999; Downey & Feldman, 1996), and insecure attachment style (Wekerle & Avgoustis, 2003; Wekerle & Wolfe, 1998) as interpersonal sensitivities that covary with relationship maltreatment. For example, evidence has emerged that prior parental maltreatment (Wolfe et al., 1998) and rejection (Purdie & Downey, 2000) are related to difficulties in romantic relationships. Purdie and Downey (2000) describe how parental messages of rejection leave the child hypervigilant to rejection cues in other relationships. Such interpersonal sensitivity or insecurity can pave the way for abuse in at least two ways. First, greater preoccupation with relationships may increase vulnerability when individuals overlook partner faults and abusive behavior. Second, individuals may be attracted to partners who are more dependent. However, dependency may manifest in greater jealousy, controlling behaviors, and other maltreatment (Bornstein, 2006; Purdie & Downey, 2000).

Although this highlights interpersonal sensitivity as a risk factor for forming romantic relationships that include psychological maltreatment, these and other theories also show how

interpersonal sensitivity may emerge from interpersonal experiences, such as maltreatment. For instance, interpersonal sensitivity to rejection has been proposed as an outcome of interpersonal experiences (Downey et al., 1999). Also, avoidance or anxiety about relationship experiences or working models of attachment can vary across relationships. This variation suggests that different interpersonal contexts can modify interpersonal sensitivity, such as being more preoccupied with a romantic relationship than in the parent-adolescent relationship (Furman & Wehner, 1994). Drawing these theories and the associated empirical evidence together provides a firm foundation for our hypothesis that interpersonal sensitivity would be associated with maltreatment in relationships, although interpersonal sensitivity may be both an outcome and an antecedent of maltreatment.

In the current study, extensions were made to prior research that has established a link between partner maltreatment and interpersonal sensitivity by using daily diary methods to capture interpersonal sensitivity. Furthermore, previous research was extended by examining associations of partner maltreatment with affective reactivity to daily positive events (i.e., daily uplifts). Of most interest was whether psychological maltreatment was associated with interpersonal sensitivity. It was expected that individuals who reported more partner psychological maltreatment would be more interpersonally sensitive than their peers.

Aims of the Current Study

The general purpose of this study was to examine the social and emotional worlds of late adolescents who are psychologically maltreated by their romantic partners. There were three primary study aims. The first aim was to establish associations between partner psychological maltreatment and the daily interpersonal events of adolescents. Based on findings of Harper et al. (2000) and Larson and Richards (1994), we hypothesized that psychological maltreatment would be associated with more daily hassles and greater perceived stressfulness of hassles with

romantic partners. Positive associations were also expected between psychological maltreatment and the number of daily hassles with friends and family, and the perceived stressfulness of these hassles. Daily uplifts with partners, friends, and family also were investigated. Because isolation from others can be part of psychological maltreatment (Kasian & Painter, 1992; Katz & Arias, 1999), it was hypothesized that maltreatment would be associated with fewer daily uplifts with family and friends.

The second research aim was to establish associations between maltreatment and the emotional functioning of adolescents. One purpose was to examine associations of psychological maltreatment with daily reports of negative and positive affect. We expected that adolescents maltreated by their partners would report more negative daily affect and less positive daily affect than their peers. A second purpose was to replicate previous findings indicating that partner maltreatment covaries with higher levels of depressive symptoms (Callahan et al., 2003; Katz & Arias, 1999; Salazar et al., 2004).

The final aim was to investigate if psychological maltreatment was associated with interpersonal sensitivity. Late adolescents who reported a higher level of psychological maltreatment were expected to be more interpersonally sensitive than other adolescents. Specifically, those psychologically maltreated by their partners were expected to report higher end-of-day levels of negative affect and lower levels of positive affect in association with daily interpersonal hassles than those who reported less maltreatment. In addition, analyses were conducted to determine whether adolescents psychologically maltreated by their partners showed different affective reactions to daily partner, friend, and family uplifts compared to others.

Method

Participants

The study participants were 67 late adolescents (age 17 to 22, age $M = 18.82$ years; 70% female) in a current romantic relationship (relationship length $M = 15$ months, range 1 to 64 months) recruited from a larger study ($N = 143$) involving first semester university students enrolled in an introductory psychology course. The majority of the sample was white/Caucasian (90%), 6% were of Asian decent, and 4% reported being of “other” nationality. Most adolescents lived with two parents (45%) or one parent (21%). Twenty seven percent lived on their own or with friends and the remainder reported “other” living arrangements. The 67 participants did not differ from the larger sample on any measures, including partner maltreatment, $t(137) = -.38$, $p = .71$, and depressive symptoms, $t(141) = -.38$, $p = .70$.

All but four participants completed the seven daily diary forms (two participants completed five entries and two completed six entries). Empirical evaluation of missing data techniques has shown that substituting the mean response *of a person* to be the most robust approach for handling a modest amount of missing repeated measures data (Roth, Switzer, & Switzer, 1999). Therefore, missing diary entries for these four participants were replaced by the *person* mean of scores on the day before and the day after. If the last diary entry was missing, the data point was replaced with the individual score from the previous day. A single participant did not complete the measure of hassles on all seven days and was removed from analyses of hassles.

Measures

Romantic partner maltreatment. A version of the Psychological Maltreatment of Women Inventory (Tolman, 1989) modified by Kasian and Painter (1992) for university students and adolescents was used in this study to measure psychological maltreatment. Aspects of psychological maltreatment measured by the PMI included diminishment of self-esteem (nine

items), verbal abuse (five items), social and emotional control (13 items), and jealousy (seven items). A sample item for the diminishment of self-esteem scale was “*my partner treated me like I was stupid*”. The verbal abuse scale consisted of items such as “*my partner swore at me*”. Sample items from the social and emotional control subscale were “*my partner tried to keep me from seeing or talking to my family*” and “*my partner tried to make me feel like I was crazy*”. An example item from the jealousy subscale was “*my partner monitored my time and made me account for my whereabouts*”. Respondents reported on the frequency that each behavior had occurred during the duration of their relationship on a scale ranging from 1 (*never*) to 6 (*more than 20 times*). The subscales correlated highly with one another, r ranged from .78 to .84, all $p < .01$. Therefore, the four averaged subscale scores were averaged to form a single measure of *psychological maltreatment*. Items on this scale had a high interitem correlation, $\alpha = .95$.

A categorical indicator of low versus high partner maltreatment was formed for analyses. Participants with a psychological maltreatment score above the median (a score of 1.5) were identified as the *high maltreatment* group (coded 1, $n = 32$); other participants were identified as the *low maltreatment* group (coded 0, $n = 35$). The use of the median as the demarcation of groups was a decision that required careful consideration. The median was used because no existing norms for measures of psychological maltreatment could be located. Hence, it is necessary to rely on the sample or a previous sample “norm” as the cut-off. Because the mean level of maltreatment ($M = 1.82$) in this study was similar to that found by Kasian and Painter (1992, $M = 1.81$) in their study of U.S. college students, the current sample seemed representative of university students included in previous studies, and increased confidence in using the sample median as the norm and cut-off. Although any maltreatment can be a problem, 97% of participants reported some maltreatment, so this made the nonmaltreated group too small for analyses. Conversely, very high

levels of maltreatment would be of interest. However, groups had to be large enough for meaningful and stable results and the use of the median was ideal for this purpose.

Depression. The Reynolds Adolescent Depression Scale (RADS, Reynolds, 1987) measured depressive symptoms. Participants endorsed whether each symptom-related item had occurred in the past 2 weeks. Response options included almost never, hardly ever, sometimes, or most of the time. Example items included “*I feel sad*”, “*I feel that no one cares about me*” and “*I feel like crying*”. After reverse scoring seven items, responses were summed to form a single index of depressive symptoms. In the current study, internal consistency also was high, $\alpha = .91$, and similar to past research (Reynolds, 1987).

Daily and 7-day mean positive and negative affect. Positive and negative affect were assessed using items from the Positive and Negative Affect Schedule – Expanded Form (Watson & Clark, 1994). Similar to previous diary studies (Tolpin, Cohen, Gunthert, & Farrehi, 2006), 10 items measured positive affect and 10 items measured negative affect each day. Respondents were required to indicate at the end of the day to what extent they had felt each of the emotions during that day on a 5-point Likert-type scale from 1 (*very slightly or not at all*) to 5 (*very much*). Items were averaged to form seven daily measures of positive and negative affect. Additionally, daily positive affect scores were averaged to form a 7-day mean positive affect score and a parallel score was formed for negative affect. In this study, reliabilities calculated on each of the seven days ranged from $\alpha = .87$ to $.93$ for positive affect and $\alpha = .75$ to $.87$ for negative affect.

Daily and 7-day mean uplifts. Ten items from the Positive Events Scale (Maybery, 2003) were used to measure uplifts with romantic partners (four items), friends (three items), and family members (three items). Sample daily uplifts included “*talking with your friends*”, “*support from your family*”, and “*hanging out with your boyfriend/girlfriend*.” Participants were required to first consider if the uplift had occurred that day. If the uplift did not occur, respondents checked 0 (*did*

not occur). If the uplift occurred, participants rated how “happy” the uplift made them feel on a scale ranging 1 (*did not make me happy*) to 5 (*made me very happy*).

Daily uplifts were scored four ways. First, ratings of happiness were averaged on each day within each interpersonal domain. Second, these seven daily scores within each domain were averaged to produce a 7-day mean measure of happiness of uplifts. Third, the daily incidence of uplifts within each interpersonal domain was calculated. Finally, these seven incidence scores were averaged to form a 7-day mean number of uplifts in each interpersonal domain.

Daily and 7-day mean hassles. Items to assess hassles were drawn from existing daily hassles measures (Bagley, 1992; Bobo, Gilchrist, Elmer, Snow, & Schinke, 1986; Brantley, Waggoner, Jones, & Rappaport, 1987; Byrne & Mazanov, 2002; Kohn & Milrose, 1993). In addition, a number of items were created for this study to include items representing romantic hassles. Family hassles (five items, e.g., *disagreements between you and your parents*), friend hassles (eight items, e.g., *let down by a friend*), and romantic partner hassles (12 items, e.g., *boyfriend/girlfriend was not available*) were used. Similar to the uplifts measure, respondents indicated whether the hassle occurred or not. If the hassle did not occur, respondents indicated 0 (*did not occur*). If the hassle did occur, participants rated how stressful the daily hassle was from 1 (*not at all stressful*) to 5 (*was extremely stressful*). The scoring of hassles paralleled the scoring described for uplifts with family, friends, and romantic partners. Hence, daily and 7-day mean scores were calculated for the incidence of hassles as well as the stressfulness of hassles.

Procedure

As is typical practice by the Human Research Ethics Committee of Griffith University, approval for the participation of university students ages 17 and up was dependent on students’ informed consent. Following informed consent, participants completed a questionnaire that included measures of partner psychological maltreatment and depressive symptoms. At the

conclusion of this questionnaire, those who expressed interest in further research participation were provided with diary research packs that included instructions and seven questionnaires, one for each of seven consecutive nights.

The study aims depended upon end-of-day reports of hassles, uplifts, and affect. Hence, diary forms were designed to capture information across an entire day. Participants were instructed to complete diary entries before retiring to bed and to report on the entire day. Prior to using the method of one diary entry per day in the evening, different timing and methods of data collection were considered or tested with a separate group of participants. For example, a longer diary period (14 days) was tested, but was abandoned due to lower response rates, and repeated assessment throughout the day was considered but was not used to reduce error that might have been produced when participants were asked to report hassles and uplifts multiple times in a day.

Diary entries were returned to a reception area at the university on the following day. Over a weekend, participants were required to seal their diary entries in envelopes and returned all sealed envelopes on Monday. This method of collection allowed daily tracking of participation so that reminder calls could be made and issues of return discussed with appropriate participants. Every day, all participants received friendly text messages as a reminder to complete their forms.

Overview of Analyses

Following the examination of bivariate correlations and comparisons of participants high and low in psychological maltreatment, a number of multilevel models were estimated. These models were used to test the association of partner maltreatment with interpersonal sensitivity, measured as affective reactivity to interpersonal daily hassles and uplifts with romantic partners, friends, and family. Multilevel modeling has been used in research on daily stress and affect (e.g., Bolger & Zuckerman, 1995; David & Suls, 1999; Gunthert, Cohen, & Armeli, 1999;

Gunthert, Cohen, & Armeli, 2002; Tolpin et al., 2006). These analyses were conducted with Hierarchical Linear and Nonlinear Modeling software (Raudenbush, Bryk, & Congdon, 2007).

Multilevel modeling is useful for data with a hierarchical structure, such as measures that are repeated within each participant. Such methods account for the nonindependence of the repeated measures over time. In this study, two levels were modeled with the daily diary data (Level 1) nested within participants (Level 2). That is, daily repeated measures of positive affect, negative affect, and interpersonal hassles and uplifts were Level 1 variables repeatedly measured for seven days for each participant. Partner psychological maltreatment was the primary Level 2 variable, which was measured prior to the completion of repeated daily measures. Another Level 2 variable, sex, was also considered. However, given the focus on maltreatment and the possibility of small cell sizes when also considering participants' sex, it was not included as a covariate in any of the models. No sex differences were found when preliminary t-tests comparing males and females on all study measures were conducted.

At Level 1, the within-person association between interpersonal daily events (either hassles or uplifts) and affect (positive or negative) was modeled to estimate each individual's interpersonal sensitivity. At Level 2, the between-person variable of partner psychological maltreatment was introduced. A significant effect of partner maltreatment would indicate that interpersonal sensitivity differed between the high and low maltreatment groups. Models were estimated separately for each domain of hassles and uplifts and for each of the repeated dependent variables of positive and negative affect. The Level 1 and 2 models were:

$$\text{Level 1:} \quad \text{Affect}_{ij} = B_{0j} + B_{1j} (\text{day}_{ij}) + B_{2j} (\text{HU}_{ij}) + e_{ij}$$

$$\text{Level 2:} \quad B_{0j} = \tilde{a}_{00} + \tilde{a}_{01} (\text{PM}_j) + u_{0j}$$

$$B_{1j} = \tilde{a}_{10} + \tilde{a}_{11} (\text{PM}_j) + u_{1j}$$

$$B_{2j} = \tilde{a}_{20} + \tilde{a}_{21} (\text{PM}_j) + u_{2j}$$

The Level 1 equation models the association between the daily interpersonal hassle/uplift (HU) and affect for each individual. The dependent variable, $Affect_{ij}$, is the amount of negative affect or positive affect on day i for person j . It is a function of the intercept (B_{0j} , affect on day 1 of the diary), and slope (B_{1j}) for each person j and the association between daily affect and hassles or uplifts (B_{2j}). HU_{ij} is the number of hassles or uplifts in one interpersonal domain only (either romantic partner, friend or family) on day i for person j and e_{ij} is the within-person error term. At Level 2, B_{0j} is expressed as a function of the between persons intercept ($\tilde{a}_{00}$), the effect of the between-persons variable Psychological Maltreatment ($\tilde{a}_{01}$), and a between persons error term (u_{0j}). The within persons slopes, B_{1j} , are a function of the mean slope between persons ($\tilde{a}_{10}$) and between-persons error term (u_{1j}) that captures the difference in the pattern of affect over the seven days between the high and low maltreatment groups. B_{2j} , is a function of the average association between affect and hassles/uplifts ($\tilde{a}_{20}$) and between-persons error term (u_{2j}) that captures differences in interpersonal sensitivity in the group with high psychological maltreatment compared to the group with low psychological maltreatment.

Results

Correlations between Measures and Comparison of High and Low Maltreatment Groups

Correlations between all measures are shown in Table 1. Due to significant correlations among groups of dependent variables, four MANOVAs were conducted followed by univariate group comparisons (see Table 2). There were three dependent variables in the first MANOVA, including the number of hassles with friends, family, and romantic partners. The three dependent variables in the second MANOVA were perceived stressfulness of hassles in the three interpersonal domains. There were no significant differences between maltreatment groups on the number of hassles reported for friends, family, and romantic partners, $F(3, 62) = 1.52, p = .22$. Yet, the stressfulness of friend, family, and romantic partner hassles just reached

significance at an alpha level of .05, $F(3, 62) = 2.81, p = .05$. Adolescents in the high partner psychological maltreatment group reported that their romantic partner and friend hassles were more stressful when averaged over the seven days when compared to those in the low partner psychological maltreatment group (see Table 2). In addition, the average number of hassles with partners and friends across the 7-days were marginally different, with those high in psychological maltreatment reporting more hassles than those low in psychological maltreatment.

With respect to daily uplifts, we expected that psychological maltreatment would be associated with lower levels of 7-day uplifts with family and friends as well as lower levels of happiness associated with these uplifts. Two MANOVAs were estimated with two dependent variables each. The first MANOVA included family and friend uplifts as dependent variables. The second MANOVA included perceived happiness associated with family and friend uplifts as dependent variables.

Contrary to our hypotheses, the number of daily uplifts with friends and family did not significantly differ between groups, $F(2, 64) = 2.22, p = .12$. However, as predicted, there was a significant difference in the level of happiness associated with friend and family uplifts, $F(2, 64) = 4.52, p = .02$. Univariate comparisons showed that those in the high psychological maltreatment group reported less happiness with uplifts with family than those in the low psychological maltreatment group (see Table 2). The happiness associated with daily uplifts with friends did not differ between maltreatment groups, nor did the number or happiness associated with romantic partner uplifts.

Emotional Worlds of Adolescents Psychologically Maltreated by their Partners

There were differences in the emotional experiences of participants who were in the high psychological maltreatment group compared to their low maltreated peers (see Table 1). Those in

the high maltreatment group had significantly more depressive symptoms than those in the low psychological maltreatment group. Furthermore, there were marginal group differences when 7-day mean levels of negative and positive affect were compared, with the high psychological maltreatment group reporting lower levels of positive affect and higher levels of negative affect compared to their peers.

Partner Psychological Maltreatment and Interpersonal Sensitivity

Hierarchical linear modeling was used to estimate the association of maltreatment with interpersonal sensitivity. Recall that it was expected that late adolescents who were in the high psychological maltreatment group would be more interpersonally sensitive than their peers. Hence, we expected stronger associations between daily affect and daily negative interpersonal events (*hassles*) among those high in partner psychological maltreatment compared to those low in psychological maltreatment. Although no specific hypotheses could be made, analyses were also conducted to explore whether adolescents in the high partner psychological maltreatment group had stronger or weaker affective reactions to the number of partner, friend, and family uplifts compared to their peers who had low experiences of partner psychological maltreatment.

As hypothesized, adolescents with high psychological maltreatment were more interpersonally sensitive when compared to their peers with low psychological maltreatment (see Table 3). More specifically, a relatively higher number of romantic partner hassles was associated with higher levels of daily negative affect for both low and high psychological maltreatment groups. However, the association was marginally stronger among the group high in partner psychological maltreatment when compared to those low in psychological maltreatment. Furthermore, the number of partner hassles over the seven days was associated with marginally less positive affect among those high in psychological maltreatment, but was not associated with positive affect among those low in psychological maltreatment.

Adolescents in the high psychological maltreatment group were also more interpersonally sensitive to daily hassles with friends and family than their peers. Specifically, there were significantly stronger associations of daily friend and family hassles with end-of-day negative affect and positive affect in the high psychological maltreatment group as compared to the low maltreatment group. In summary, participants who reported high maltreatment were more interpersonally sensitive to hassles than those who reported low maltreatment, and this interpersonal sensitivity extended to all the interpersonal domains assessed in this study.

Models were estimated to test the association of psychological maltreatment with affective reactivity to daily *uplifts* with romantic partner, friends, and family (see Table 4). On days when partner uplifts were elevated, positive affect was higher and negative affect was lower. However, there were no differences in reactivity to daily partner uplifts between the two maltreatment groups. Similarly, the number of friend uplifts was associated with more positive affect, but not lower negative affect, and there was no difference in reactivity to friend uplifts between the high and low psychological maltreatment groups.

In contrast to findings for partner and friend uplifts, the association between family uplifts and positive affect was different for the two maltreatment groups. For participants who reported low psychological maltreatment, daily family uplifts was associated with more positive affect, but associations were significantly weaker for those who reported high psychological maltreatment by romantic partners. There was no significant linear association between the number of family uplifts and negative affect for either the high or low maltreatment group.

Discussion

The purpose of this study was to examine the daily social and emotional worlds of late adolescents maltreated by their partners. Psychological maltreatment included behaviors by a partner that could undermine self-esteem (belittling, lack of respect), verbal abuse, social and

emotional control, and jealous behaviors. Participants completed measures of psychological maltreatment and depressive symptoms in a single session, which was followed by completion of a 7-day diary that assessed end-of-day affect and daily interpersonal hassles and uplifts with romantic partners, family, and friends. It was predicted that psychological maltreatment would be associated with an increased number and stressfulness of hassles with partners, friends, and family, and fewer uplifts with friends and family. Secondly, psychological maltreatment was expected to be associated with poorer emotional functioning, including more depressive symptoms, lower average levels of daily positive affect, and higher average levels of daily negative affect. Our third hypothesis was that psychological maltreatment would be associated with greater interpersonal sensitivity. More specifically, we expected a stronger association between affect and daily interpersonal hassles with partners, friends, and family among late adolescents who reported high psychological maltreatment compared to those who reported low psychological maltreatment. In general, there was support for each of these hypotheses.

Our first prediction was largely supported; partner psychological maltreatment was associated with a greater number of hassles with partners, friends, and family, and greater perceived stressfulness of these hassles. Compared to adolescents in the low maltreatment group, adolescents who experienced high psychological maltreatment reported marginally more hassles with their partners and friends when averaged over seven days, and perceived these hassles to be more stressful than those with low partner maltreatment. These findings are consistent with studies of married couples, in which distressed couples were reported to have more negative experiences together (Larson & Richards, 1994) and more daily hassles in general (Harper et al., 2000). As would be expected, psychological maltreatment by a romantic partner comes with more negative interactions with the partner and these are perceived as more stressful when compared to the romantic hassles in relationships with low psychological maltreatment.

When compared to other adolescents, those who were maltreated reported more hassles with their friends (e.g., being left out, let down by a friend), but not with their parents. There are at least three reasons why hassles with friends would be elevated when psychological maltreatment by a partner is high. First, salient and distressing experiences in one relationship within the peer social world may have repercussions for other peer relationships (Zimmer-Gembeck, 1999). It was clear from our findings that partner hassles had a much stronger association with negative affect when compared to hassles with friends or family. Hence, psychological maltreatment by a partner may be a highly salient experience that spills over into relationships with others in the peer group. Second, psychological maltreatment is likely to include behaviors that can erode friendships (Follingstad, Rutledge, Berg, Hause, & Polek, 1990; Katz & Arias, 1999; Kasian & Painter, 1992; Stets, 1991; Tolman, 1989). This is likely to be accompanied by more hassles with friends over changes in time spent together and disagreements about partner behaviors or related concerns.

Third, the association between psychological maltreatment and friend hassles may be explained by an unmeasured variable that accounts for the similar findings across partner and friend relationships. This variable would need to be something that is common to both relationships, such as a personality trait or particular attitudes and behaviors of the individual involved in each interpersonal relationship. However, our findings with regards to family provide more support for the first two rather than the third explanation. Psychological maltreatment did not come with significantly more hassles with family, such as disagreements or arguments. Therefore, when only the number of hassles is considered, the spill over of negative experiences with a partner seems limited to relationships with friends, and systemic, peer group explanations seem more likely the culprit than individual traits.

Yet, there was evidence of some spillover of maltreatment to family relationships when daily uplifts were considered. As expected, individuals in the high partner psychological maltreatment group were found to have fewer uplifts with family and rated lower happiness from these uplifts. To our knowledge, this study is the first that has reported associations of partner psychological maltreatment with daily *uplifts* with partners, friends, and family. Although these findings require replication, they are consistent with research that shows lower levels of social support from friends and family among those in distressed or abusive relationships compared to others (Mitchell & Hodson, 1983; Salazar, et al., 2004; Thompson et al., 2000).

The second aim of this study was to examine how maltreatment was associated with the emotional functioning of adolescents. Depressive symptoms were higher among those with high as compared to low levels of partner psychological maltreatment. This finding provides a replication of previous findings of associations between violence or maltreatment in dating relationships and depression (Callahan et al., 2003; Katz & Arias, 1999; Salazar et al., 2004). In addition to replication of previous findings, previous studies were extended by showing that psychological maltreatment is not only associated with scores on a cross-sectional report of depressive symptoms, but also is associated with daily diary reports of positive and negative affect when averaged over seven consecutive days. Those with high levels of partner psychological maltreatment reported marginally higher daily negative affect, and marginally lower positive affect than their peers who reported low psychological maltreatment. As others have discussed (La Greca & Harrison, 2005), these findings add empirical support to commonly held beliefs that negative experiences within late adolescents' romantic relationships will have implications for mental health and affect.

The third aim of the current study was to establish that partner psychological maltreatment is associated with late adolescents' interpersonal sensitivity. With guidance from O'Neil et al.

(2004) and Bolger and Zuckerman (1995), interpersonal sensitivity was operationalized as the within-person association between repeated measures of daily hassles and end-of-day affect. Based on previous findings of cross-sectional links between romantic stress and interpersonal sensitivity (Rizzo et al., 2006; Wolfe et al., 1998; Zimmer-Gembeck & Vickers, 2007), we predicted that those high in partner psychological maltreatment would be more interpersonally sensitive than their peers. In other words, we expected to find stronger associations between end-of-day affective reactions and daily interpersonal events among participants who reported high partner psychological maltreatment compared to those reporting low maltreatment.

Indeed, multilevel modeling revealed that adolescents high in partner psychological maltreatment were more interpersonally sensitive to hassles with partners, friends, and family than those low in psychological maltreatment. Although the primary indicator of interpersonal sensitivity was expected to be negative affect, this was found for both negative and positive affect. It should be noted that a few of these findings were marginally significant ($p < .10$) and associations were modest in magnitude with the exception of the strong association between romantic hassles and negative affect. Yet, these findings are strengthened because associations were found across all measures of hassles and affect, and they are consistent with prior evidence that interpersonal sensitivity, when measured with a self-report scale, is associated with negative romantic relationship experiences such as dating violence and stress (Rizzo et al., 2006; Wolfe et al., 1998). Moreover, our study extends upon this research by measuring interpersonal sensitivity indirectly via an assessment of affect as related to daily interpersonal hassles across seven days.

Although it was difficult to form hypotheses because little previous research on daily interpersonal uplifts was located, associations between partner psychological maltreatment and affective reactions to daily uplifts were also investigated. Multilevel modeling revealed significant associations between all measures of uplifts with romantic partners and end-of-day

affect. Similarly, the association between daily uplifts with friends and positive affect was significant. Maltreatment did not seem to play a role in these associations; affective reactions to daily uplifts with partners and friends were similar among high and low partner maltreatment groups. However, there was a difference in positive reactivity to family uplifts between the two maltreatment groups; adolescents in the high psychological maltreatment group did not seem to reap the positive emotional boost associated with family uplifts that was seen among those who reported low maltreatment. It seems that maltreatment by a partner may spill over as greater interpersonal sensitivity to hassles with friends and family, and attenuates the benefits of family but not friend uplifts.

We are arguing here that it is maltreatment that can invade the social and emotional worlds of adolescents. Caution is needed, however, because this study is correlational. This means that the findings do not rule out the possibility that psychological maltreatment may both lead to and follow from emotionality, emotional reactivity or interpersonal sensitivity. Whereas some researchers suggest and find support for psychological maltreatment as a precursor of poorer emotional functioning (La Greca & Harrison, 2005; Katz & Arias, 1999), others have demonstrated how poorer emotional functioning may change relationships with others (Daley & Hammen, 2002; Mort, 2006). Daley and Hammen (2002) described how individuals who are higher in depressive symptoms might gravitate toward relationships that are lower in quality or may play a role in their own negative relational experiences. In previous research, children and adolescents with more depressive symptoms have been found to generate their own stress, especially interpersonal conflicts or peer relationship problems (Daley et al., 1997; Rudolph et al., 2000; Zimmer-Gembeck, Hunter, Waters, & Pronk, under review). In other research, individuals who are interpersonally sensitive to rejection have been shown to perceive ambiguous partner behavior as more uncaring, they have been found to be more hypervigilant for

rejection, and they become more depressed when rejected (see Mort, 2006 for a review). In addition, there is evidence that high-rejection-sensitive persons generate their own stress by prompting negative interpersonal experiences and more rejection via their unpleasant behaviors. The current research study cannot tease apart whether maltreatment leads to interpersonal sensitivity or if interpersonal sensitivity leads to maltreatment (or both). Future research with intensive data collection strategies should focus on extending the longitudinal nature of the current study design to better test the directionality of the associations found here.

This study could also be extended by including both members of the couple in order to consider dyadic relationship processes. Studies find that over 45% of individuals in violent relationships report being both the perpetrator and the recipient of abuse (Bookwala, Frieze, Smith, & Ryan, 1992; Gray & Foshee, 1997). This suggests that the participants in this study may not only have experienced psychological maltreatment, but also may have engaged in maltreatment. These behaviors may be displays of their interpersonal sensitivity and depressive symptoms.

Despite the intriguing results of this study, it is important to mention two other limitations that are related to the sample. First, the sample size was modest and this made it unfeasible to examine some potentially important covariates, particularly gender. In addition, the modest sample size may have reduced study power, but this was overcome to some extent by the use of seven repeated measurements for each participant. Nevertheless, examining both maltreatment and gender in a larger sample is one important direction for future research.

Second, the sample included university students who were fairly socioeconomically and racially homogeneous (middle income, white Australian). This compromises some of the generalizability of study findings and may have resulted in weaker associations given the relative

low risk status of the sample. Hence, sample demographics do have to be considered when generalizing findings.

Although the relatively low risk sample might have resulted in weaker associations between study variables, there are also reasons to suspect that the associations found here were positively biased. In particular, a single source of information was relied upon for all measures. This is likely to have resulted in shared method variance and associations that may be biased upwards. In addition, perceptual biases may be at work. For example, those who are more reactive to interpersonal hassles may attend to and report more hassles than others. These limitations could be minimized in future research by including a larger and more diverse sample, and collecting data using multiple sources of information.

To conclude, the findings of the current study identify psychological maltreatment by romantic partners as a correlate of greater perceived significance of daily hassles with partners and friends, and of stronger stress-affect associations, which was referred to as greater interpersonal sensitivity. Psychological maltreatment seems to be an especially potent experience that occurs along with greater romantic hassles and more negative affective reactivity to hassles. Additionally, maltreatment seems to spill over into relationships with friends and families by either increasing hassles and reactions to hassles in the case of friends, or decreasing uplifts and positive reactions to uplifts in the case of family. Although the findings are indicative of the influence of maltreatment on social and emotional experience, it is also important to acknowledge that these findings may show that individuals who are more prone to distress and negative reactions and/or who are less prone to react positively when they experience uplifts may precipitate stressful events and circumstances in their lives (Hammen, 1991). Either way, adolescents who are psychologically maltreated by their partners are multiply affected by more

social and emotional problems than other adolescents. These findings provide clear support for continued research and prevention efforts focused on adolescent dating and couple relationships.

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Table 1
Correlations between Variables (N = 66 to 67)

Variable	1	2	3	4	5	6	7	8	9	10
1. Length of relationship	--									
2. Depressive symptoms	.01	--								
3. Positive affect ^a	-.16	-.35**	--							
4. Negative affect ^a	-.13	.34**	-.22	--						
Hassles: Number ^a										
5. Romantic partner	-.12	.01	-.09	.32*	--					
6. Friend	-.15	.17	-.03	.42**	.60**	--				
7. Family	-.16	.12	-.15	.37**	.47**	.54*	--			
Hassles: Stressfulness ^a										
8. Romantic partner	-.12	.14	-.19	.46**	.88**	.50**	.42**	--		
9. Friend	-.14	.16	-.04	.47**	.47*	.92**	.48**	.50**	--	
10. Family	-.11	.18	-.16	.48**	.46**	.55**	.91**	.38**	.41**	--
Uplifts: Number ^a										
11. Romantic partner	.17	-.06	.06	-.01	.26*	.18	.15	.13	.09	.14
12. Friend	-.38**	-.13	.20	.05	.22	.30*	.18	.16	.27*	.17
13. Family	-.20	-.28*	.13	.09	.20	.23	.46**	.15	.18	.36**
Uplifts: Happiness ^a										
14. Romantic partner	.16	-.15	.26*	-.02	.19	.18	.13	.02	.09	.15
15. Friend	-.38**	-.16	.33**	.05	.19	.24*	.14	.14	.20	.16
16. Family	-.22	-.39**	.30*	.02	.09	.16	.26*	.05	.15	.15

Table 1 continues on the next page

Table 1, continued

Correlations between Variables (N = 66 to 67)

Variable	11	12	13	14	15
1. Length of relationship					
2. Depressive symptoms					
3. Positive affect ^a					
4. Negative affect ^a					
Hassles: Number ^a					
5. Romantic partner					
6. Friend					
7. Family					
Hassles: Stressfulness ^a					
8. Romantic partner					
9. Friend					
10. Family					
Uplifts: Number ^a					
11. Romantic partner	--				
12. Friend	.11	--			
13. Family	.12	.25*	--		
Uplifts: Happiness ^a					
14. Romantic partner	.91**	.10	.13	--	
15. Friend	.08	.93**	.21	.15	--
16. Family	.12	.25*	.93**	.18	.27*

* $p < .05$. ** $p < .01$.^aDaily reports averaged to construct 7-day mean levels.

Table 2

*Comparisons of Participants Low (n = 35) versus High (n = 32) in
Partner Psychological Maltreatment*

Variable	Low Maltreatment		High Maltreatment		<i>t</i> (1,65)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Length of relationship, months	11.03	8.47	19.84	13.71	-3.20**
Depressive symptoms	23.20	11.76	31.35	11.35	-2.88**
Positive affect ^a	2.90	.53	2.68	.55	1.69 ^r
Negative affect ^a	1.47	.25	1.61	.38	-1.80 ^r
Hassles: Number ^a					
Romantic partner	1.94	1.14	2.71	2.09	-1.84 ^r
Friend	.79	.55	1.40	1.72	-1.90 ^r
Family	1.00	1.10	1.33	1.48	-1.02
Hassles: Stressfulness ^a					
Romantic partner	.28	.19	.48	.38	-2.65**
Friend	.16	.13	.37	.53	-2.20*
Family	.48	.61	.70	.98	-1.09
Uplifts: Number ^a					
Romantic partner	2.79	.93	3.13	.82	-1.60
Friend	2.12	.72	1.97	.72	.81
Family	1.96	.98	1.45	1.00	2.10*
Uplifts: Happiness ^a					
Romantic partner	2.92	1.14	3.14	1.15	-.75
Friend	2.72	1.09	2.39	1.03	1.24
Family	2.35	1.33	1.47	1.08	2.98**

^r*p* < .10. **p* < .05. ***p* < .01.

^aDaily reports were averaged to construct 7-day mean levels.

Table 3

Results of Hierarchical Linear Models Testing the Association between Partner Psychological Maltreatment and Affective Reactions to Daily Hassles with Romantic Partners, Friends, and Families

	Positive affect	Negative affect
Fixed effects	<i>B</i> (<i>SE</i>)	<i>B</i> (<i>SE</i>)
Model 1		
Romantic partner hassles	.02 (.03)	.39 (.02)*
Psychological maltreatment	-.06 (.03) ^r	.04 (.02) ^r
Model 2		
Friend hassles	.09 (.05)	.02 (.03)
Psychological maltreatment	-.16 (.06)**	.07 (.03)*
Model 3		
Family hassles	.02 (.04)	.03 (.03)
Psychological maltreatment	-.12 (.05)*	.09 (.04)*

Note. Each analysis is based on 469 daily data observations nested within 67 persons.

^r*p* < .10. **p* < .05. ***p* < .01.

Table 4

Results of Hierarchical Linear Models Testing the Association between Partner Psychological Maltreatment and Affective Reactions to Daily Uplifts with Romantic Partners, Friends, and Families

	Positive affect	Negative affect
Fixed effects	<i>B (SE)</i>	<i>B (SE)</i>
Model 1		
Romantic partner uplifts	.09 (.03)**	-.05 (.02)*
Psychological maltreatment	-.03 (.04)	.02 (.02)
Model 2		
Friend uplifts	.20 (.05)**	-.07 (.03)
Psychological maltreatment	-.06 (.05)	.05 (.03)
Model 3		
Family uplifts	.12 (.05)**	-.02 (.02)
Psychological maltreatment	-.12 (.05)*	.05 (.03)

Note. Each analysis is based on 469 daily data observations nested within 67 persons.

* $p < .05$. ** $p < .01$.