



Published in final edited form as:

J Soc Pers Relat. 2010 May 1; 27(3): 367–387. doi:10.1177/0265407509348810.

Emotions in Marital Conflict Interactions: Empathic Accuracy, Assumed Similarity, and the Moderating Context of Depressive Symptoms

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Abstract

To examine affectivity in marital interaction, 267 couples participated in laboratory-based marital conflicts and afterward rated their own and their spouses' emotions of positivity, anger, sadness, and fear. Actor-Partner Interdependence Models (Cook & Kenny, 2005) estimated empathic accuracy and assumed similarity effects, with symptoms of depression tested as a moderator. Depressive symptoms moderated spouses' ratings of their partners' negative emotions such that assumed similarity was higher and empathic accuracy was lower in the context of elevated depressive symptoms. The results suggest that depression may influence spouses' judgments of how closely linked partner emotions are (i.e., assumed similarity) and spouses' abilities to accurately perceive their partners' negative emotions (i.e., empathic accuracy), potentially contributing to the established marital dysfunction-psychological distress cycle.

Keywords

Actor-Partner Interdependence Model; Depression; Emotions; Marital Conflict

Partners' emotions in marital interaction hold central importance to both the overall functioning of the relationship (Greenberg & Goldman, 2008; Johnson & Greenberg, 1994) and partners' individual well-being (Mead, 2002). Specifically, spouses' emotions during conflict have been linked to current and long-term relationship adjustment (Fletcher & Thomas, 2000), and individuals' depressive symptomatology is systematically associated with lower positivity and higher negativity in marital conflict interactions (Hautzinger, Linden, & Hoffman, 1982). However, little is known about the role of spouses' perceptions of each other's emotions underlying these relations. Consistent with recent recommendations to more closely examine the *interpersonal contexts* of depression, particularly marriage (Rehman, Gollan, & Mortimer, 2008), the present study utilizes a dyadic analytic framework to test partners' empathic accuracy and assumed similarity in marital conflict interactions and whether they are moderated by spouses' levels of depressive symptoms.

Emotions in Marital Conflict

Emotions in marital conflict interactions are implicated in associations between problematic marital functioning and the distress of family members (Cummings, Goeke-Morey, & Papp, 2002; Jenkins, 2000). Emotions in marital conflict are further linked with broader relationship processes, such as conflict behaviors and relationship satisfaction (Gottman, 1994). The ability of spouses to accurately perceive their partners' emotions in conflict is positively related to the quality of communication and the potential for reaching a resolution (Fruzzetti & Iverson, 2006). Although global affectivity has been a focus of research, specific emotions warrant investigation due to their differential significance to marital communication (Greenberg & Goldman, 2008). For example, anger is identified as the most powerful emotion expressed in relational conflict, and may escalate quickly and manifest itself in cycles (Greenberg & Goldman, 2008; Jenkins, 2000). By contrast, sadness is closely associated with feeling alone or experiencing loss, and may indicate low levels of desired qualities in the relationship (Greenberg & Goldman, 2008). In conflict interactions, sadness is harder to identify than anger; couples may express sadness internally or indirectly. Fear in marital conflict typifies couples in traumatic relationships (e.g., following infidelity), yet linkages are found with attachment and intimacy processes across levels of relationship functioning (Greenberg & Goldman, 2008). Fear as an emotion in marital conflict may inform clinically-based prevention and treatment efforts. Finally, positive emotions are rewarding, enhance the relationship, offset negativity, and keep couples engaged. Positivity indicates the strength of couples' connections, both emotional and physical (Greenberg & Goldman, 2008). Studying positivity in marital conflict in addition to negative emotions provides a more balanced view of marital interaction and likely reflects what community-based couples experience daily in their relationships.

Although these specific emotions are expressed by individuals in marital conflict interactions, both partners in the relational context evaluate and respond to them. As such, the specific emotions hold important implications for how similar (or not) partners feel along these emotional dimensions and for how in tune each partner is to how the other feels. A guiding framework for how spouses' emotions are connected to relationship functioning and partner well-being is provided by emotion-focused couples therapy, which posits that – just as emotional attunement with a caregiver in infancy is critical to a child's developing a sense of self (Stern, 1985) – the skills of mirroring and validating emotions are also critical to adults in marital relationships (Greenberg & Goldman, 2008). More specifically, attunement to a partner's affect (both positivity and negativity) builds an individual's identity as a valuable partner in an intimate relationship. We posit that as a first step of validating partner emotions, accurate understanding of the specific emotions needs to occur. *Empathic accuracy* – or the ability of one partner to correctly infer the thoughts and feelings of the other (Ickes & Simpson, 1997) – is a key indicator of affective attunement between partners (Mast & Ickes, 2007). In the present study, empathic accuracy is reflected in the similarity between an individual's rating of their spouse on a specific emotion during marital conflict and the spouse's self-rating of that same emotion.

How specific emotions are expressed by one person in marital conflict also holds relevance for their perception of their partner's affective expressions. *Assumed similarity of emotions* describes the extent to which a spouse's rating of their partner corresponds to how much they themselves felt the same emotion during conflict. Couples who describe themselves in terms of teamwork and collaboration rather than in isolation demonstrate higher relationship functioning (Driver, Tabares, Shapiro, Nahm, & Gottman, 2003) and are more likely to remain committed and satisfied over time (Rusbult & Buunk, 1993). Furthermore, improved emotional understanding has been linked to higher marital satisfaction (Noller, 1980). However, whereas assumed similarity of positive emotions is likely to be beneficial for

couples' functioning, the assumed similarity of negative emotions may be problematic. For example, a spouse's elevated assumed similarity of their partner's negative emotions (e.g., anger or sadness) may in fact lead to an overestimation of partner negativity, thereby increasing or maintaining marital distress over time. We extend the study of assumed similarity to partners' expressions of specific emotions (both positive and negative) in conflict situations by examining whether spouses' ratings of their partners' specific emotions depend on how they felt themselves in the same conflict interaction.

Actor-Partner Interdependence Model

The present research examined husbands' and wives' ratings of self and partner emotions in laboratory-based marital conflict interactions using the Actor-Partner Interdependence Model (APIM; Cook & Kenny, 2005; Kashy & Kenny, 2000). In brief, the APIM is a dyadic data analytic approach that simultaneously estimates the effect that a respondent's independent variable has on both their own dependent variable (i.e., actor effect) and on another respondent's dependent variable (i.e., partner effect) (Campbell, Simpson, Kashy, & Rhoads, 2001). APIMs have been utilized widely to examine actor and partner effects in couple relationships (e.g., Ramirez, 2008; Simpson, Oriña, & Ickes, 2003), with the interpretation of these actor and partner effects dependent on the particular variables included in the model. As partners are both reporting the same constructs (i.e., conflict emotions of positivity, anger, sadness, and fear), APIM actor and partner effects are interpreted as providing *assumed similarity* and *empathic accuracy* estimates, respectively.

Figure 1 presents the APIM parameters of interest. Paths *a* and *d* reflect estimates of *assumed similarity*, that is, the similarity between wives' and husbands' respective ratings of their own emotions in marital conflict and their ratings of their partners' emotions. In other words, *assumed similarity* captures the degree to which spouses' perceptions of their partners' emotions are related to how they themselves felt (Wilhelm & Perrez, 2004). In the present APIMs, significant or stronger assumed similarity estimates reflect that spouses judged that they and their partner felt similar intensities of a particular emotion. Next, paths *b* and *c* shown in Figure 1 reflect estimates of *empathic accuracy*, that is, the degree to which husbands' and wives' respective ratings of their partners' emotions are similar to how their partners rated themselves. *Empathic accuracy* has also been referred to as understanding (Kenny & Acitelli, 2001), and, as noted above, serves as an indicator of affective attunement with one's spouse (Mast & Ickes, 2007). In the present APIMs, significant or stronger empathic accuracy estimates reflect the ability to infer and identify partner feelings in marital conflict interaction.

Notably, empathic accuracy and assumed similarity both yield important information about how close relationship partners perceive one another and are not mutually exclusive. That is, a spouse can demonstrate both empathic accuracy and assumed similarity in their perceptions of their partner, which is likely to occur when examining couples' perceptions of their relationship and their partner (Acitelli, Douvan, & Veroff, 1993; Kenny & Acitelli, 2001). At the same time, the implications of empathic accuracy and assumed similarity do vary depending on whether the APIMs are examining positive or negative affectivity in marital conflict. Although empathic accuracy of all types of emotions (positivity and negativity) is expected to typically be beneficial for couples, only assumed similarity of positive emotions is desirable for relationship satisfaction, as misjudging negative emotionality has been shown to hold problematic implications for partners (Fitness & Duffield, 2004; Verhofstadt, Buysse, Ickes, Davis, & Devoldre, 2008).

Depression and Marital Conflict

Depression and marital dysfunction are interconnected over time (Cox, Paley, Burchinal, & Payne, 1999; Davila, Karney, Hall, & Bradbury, 2003), with spouses with elevated depressive symptomatology showing heightened risk for impaired communication and relational dissatisfaction (Goering, Lin, Campbell, Boyle, & Offord, 1996). Compared to nonsymptomatic spouses, the interactions of spouses with depression include lower levels of problem-solving and self-disclosing behavior and less maintained eye contact (Biglan, Hops, Sherman, Friedman, Arthur, & Osteen, 1985; Gotlib & Whiffen, 1989). However, variability across studies exists, thereby underscoring the importance of accounting for marital satisfaction (Schmaling & Jacobson, 1990). Recent findings indicate that spouses' levels of depressive symptoms distinguish among characteristics of marital conflict expressed in home (Papp, Goeke-Morey, & Cummings, 2007) and laboratory settings (Du Rocher Schudlich, Papp, & Cummings, 2004), with both husbands' and wives' symptoms demonstrating linkages with higher levels of destructive conflict expressions and lower levels of constructive expressions, even after accounting for marital satisfaction. Further supporting the relational context of depression, couple therapy has demonstrated efficacy in treating partner depressive symptoms (Gollan, Friedman, & Miller, 2002).

Taken together, the evidence suggests depressive symptomatology warrants examination in interpersonal contexts – including couples' problem solving discussions – although research is needed to elucidate characteristics that place partners at risk for experiencing a negative cycle between interpersonal processes and mental health. Laboratory-based dyadic interactions involving conflict or disagreements are commonly employed to assess processes contributing to affective relational contexts (e.g., Waldinger & Schulz, 2006). Dyadic interactions in laboratory settings resemble closely those that occur in everyday life, based on an ongoing emotional connection between partners (Roberts, Tsai, & Coan, 2007), and can inform research with regard to marital conflict interactions and mental health linkages.

A focal issue is to identify characteristics that increase or decrease the strength of the empathic accuracy and assumed similarity effects outlined above. The present study extends previous research on interpersonal processes and mental health by utilizing the APIM framework to assess the moderating effect of spouses' depressive symptoms on empathic accuracy and assumed similarity in rating partners' emotions in marital conflict interactions. Figure 2 presents an APIM that includes empathic accuracy and assumed similarity pathways moderated by depressive symptoms. Our models control for partner depressive symptoms, reducing the likelihood that empathic accuracy and assumed similarity effects emerge due to assortative mating (Merikangas, 1984), and for both partners' marital satisfaction, which has been linked to couple interaction expressions (Jackman-Cram, Dobson, & Martin, 2006). Our models also control for observer-rated marital conflict behaviors, which may relate to why partners express or perceive similar emotions in marital conflict. Thus, our analyses provide estimates of the unique moderating effect of husband or wife depressive symptoms on the empathic accuracy and assumed similarity path of interest, accounting for effects of the partner's depressive symptoms score, both partners' marital satisfaction levels, and observed marital conflict behavior.

Extending research based largely on wives' depressive symptomatology (Brown, 2000; Jackman-Cram et al., 2006), the present study investigated both husbands' and wives' depressive symptoms as moderators of empathic accuracy and assumed similarity in rating marital conflict emotions. Individuals with diagnosed depression show greater emotional impairment than nonaffected individuals (Berenbaum & Oltmanns, 1992), including in relational contexts (Blanchard, Horan, & Brown, 2001). Based on research showing that depressive symptoms are more closely linked to destructive than constructive conflict (e.g.,

Papp et al., 2007), spousal depressive symptoms were anticipated to moderate empathic accuracy and assumed similarity in emotion ratings of anger, sadness, and fear, but not positivity, in marital conflict interactions. Individuals with depression show cognitive tendencies to focus on negativity (Beck, 1967) and demonstrate false recall of negative but not neutral or positive material (Joormann, Teachman, & Gotlib, 2009). Further, individuals with depression may be more likely than nondepressed people to focus on partner emotions such as sadness and fear that are related to their own depressive symptoms (Bower, 1981; Brown, 2000). Transmission of negative emotions occurs between close relational partners (Hatfield, Cacioppo, & Rapson, 1994) and depressed individuals transmit their negativity to partners through interpersonal interactions (Coyne, 1976). As such, our models tested implications of the depressive symptoms of one partner for both partners' assumed similarity and empathic accuracy.

Our first hypothesis was two-fold: We hypothesized that both self and spousal depression symptoms would moderate assumed similarity of negative emotion ratings such that husbands and wives with higher levels of depressive symptoms would evidence more assumed similarity than spouses with lower levels of depressive symptoms in rating partner negative emotions (i.e., anger, sadness, fear) (Hypothesis 1A). We also expected that partners of spouses with higher levels of depressive symptoms would evidence more assumed similarity when rating negative marital conflict emotions than partners of spouses with lower levels of depressive symptoms (Hypothesis 1B).

Our second hypothesis was also two-fold: We hypothesized that both self and spousal depression symptoms would moderate empathic accuracy of negative emotion ratings such that empathic accuracy ratings would be lower in the context of elevated depressive symptoms. That is, we expected that husbands and wives with higher levels of depressive symptoms would evidence less empathic accuracy than spouses with lower levels of depressive symptoms in rating partner negative emotions (i.e., anger, sadness, fear) (Hypothesis 2A). We also expected that partners of spouses with higher levels of depressive symptoms would evidence less empathic accuracy than partners with lower levels of depressive symptoms (Hypothesis 2B).

Method

Participants

Participants included 267 community-based couples from a small city in the Midwest who were part of a larger longitudinal study concerning family relationships and child development. Couples were recruited from the community through newspaper, television, and radio advertisements; postcards sent to families; fliers posted at community events; referrals from other participating families; and fliers sent home with students at local public and parochial schools. Interested couples called the laboratory for additional information about the study and were invited to participate if their family included two parents who had been living together for at least 2 years (whether married or not) with an 8- to 16-year-old child. Two hundred fifty-nine couples (97%) were married (M length of marriage = 12.78 years, SD = 6.36 years). The unmarried couples had been cohabiting for 4.89 years (SD = 4.02 years) on average. The couples were primarily middle class, with a modal yearly combined income between \$40,000 and \$65,000. Husbands averaged 40 years of age (SD = 7 years) and wives averaged 38 years of age (SD = 6 years). Ninety-one percent of the couples were Caucasian, 7% were African American, and 2% were biracial or of other ethnic background.

Procedures

Couples were invited to attend a laboratory session, during which they completed questionnaires about themselves and their relationships. Couples also engaged in a problem-solving discussion, following similar procedures used by others to elicit and examine marital conflict in laboratory settings (e.g., Sayers, Kohn, Fresco, Bellack, & Sarwer, 2001). Spouses were asked to separately list three topics they felt were most problematic for their relationship. Together, the spouses then chose which topic from either list they would both be comfortable discussing. Couples were instructed to discuss a specific issue within their chosen topic, either something that occurred often or recently that needed to still be worked out, and to work towards a resolution to the problem. The couples were asked to talk about the topic like they would at home for approximately seven and a half minutes. During this time the couples were videotaped with a hidden camera system, but were alone in the laboratory's home-like setting. The most commonly discussed topics in the problem-solving interactions were money, childrearing, and balancing demands of work and home life. Following the interaction task, spouses independently completed ratings of their own and their partners' emotions.

Measures

Ratings of Self and Partner Emotions in Marital Conflict—Immediately following the conflict resolution task, husbands and wives independently rated the intensity of four emotions (positivity, anger, sadness, and fear) that they themselves experienced from 0 (*not at all*) to 9 (*a whole lot*) on two scales, one for during the interaction and one for at the end of the interaction. Next, each spouse rated the perceived emotional intensity that their partner experienced both during and at the end of the same interaction on the same scales. Ratings of the same emotion during and at the end of the interaction were positively correlated for spouses' ratings of self ($r_M = .74$, range = .65-.82) and partner ($r_M = .78$, range = .71-.85) emotions, and, accordingly, were summed to create scores for self and partner ratings of positivity, anger, sadness, and fear experienced in the marital conflict interaction.

Depressive Symptoms—Husbands and wives rated their own depressive symptoms on the Center for Epidemiological Studies Depression Scale (CES-D, Radloff, 1977). The CES-D is a 20-item measure in which participants rated how many days in the past week they have experienced a list of depressive symptoms on a scale ranging from 0 (*less than a day*) to 3 (*5-7 days*). Responses were summed such that higher scores indicate higher levels of depressive symptoms. Research has shown that among community-based samples, scores of 16 or above reflect potentially diagnosable depression (Knight, Williams, McGee, & Olaman, 1997; Myers & Weissman, 1980). Husbands' and wives' respective mean scores were 8.83 ($SD = 7.53$, range = 0-44, $\alpha = .87$) and 9.94 ($SD = 9.01$, range = 0-53, $\alpha = .92$). Similar to rates documented in general community samples (e.g., Hsu & Marshall, 1987; Radloff, 1977), approximately 16% of husbands and 20% of wives in the present sample indicated potentially diagnosable depression.

Marital Adjustment—Spouses completed the 15-item Marital Adjustment Test (MAT; Locke & Wallace, 1959). Higher scores indicate better relationship adjustment, whereas scores below 100 indicate marital distress. Husbands' mean score on the MAT was 110.24 ($SD = 21.69$, range = 28-156), with 28.1% of husbands reporting marital distress. Wives' mean score was 112.67 ($SD = 24.19$; range = 34-154.59), with 26.2% of wives reporting marital distress. The average levels of marital adjustment in the present sample were nearly identical to those reported by other community-based samples (e.g., Crane, Allgood, Larson, & Griffin, 1990).

Observer-rated Marital Behavior—The videotaped conflict resolution task described above was coded using an adaptation of Mangelsdorf and colleagues' marital behavior coding system (Frosch, Mangelsdorf, & McHale, 1998, 2000). The global rating of interaction quality results in a summary score that assess couples' overall behavior throughout the interaction on a scale ranging from 1 (*very low*) to 7 (*very high*). Dimensions such as trust, engagement, emotional sharing and responsiveness, and ability to resolve conflict are captured in this scale. Couples at the low end of the scale were characterized by coders as indifferent or antagonistic and showed little positive behavior toward each other, whereas couples at the high end of the scale were clearly involved in the discussion, showed a commitment toward the relationship, responded to each other in a supportive and sensitive manner, and worked together to resolve their conflict. The average inter-rater reliability for this scale among the coders was .91 (range = .85-.94). The average rating of interaction quality was 4.86 ($SD = 0.97$, range = 2-7). The present study's APIMs include partner depression, both spouses' marital adjustment, and the observed rating of quality of marital behavior as covariates.

Results

Table 1 shows descriptive statistics for husbands' and wives' ratings of conflict emotions, self-reported depressive symptoms, and self-reported marital satisfaction. Results from dependent samples *t*-tests revealed significant differences in the mean levels of self- and partner-reported positivity, sadness, and fear. Specifically, wives' ratings of their husbands' sadness and fear were significantly lower than husbands' self-ratings, whereas husbands' ratings of their wives' sadness and fear were significantly higher than wives' self-ratings on these emotions. Wives' ratings of partner positivity were significantly higher than husbands' self-reported positivity. Examination of intercorrelations among the study variables revealed substantial correspondence between partners' ratings of self and partner emotions; also, the covariates of depression, marital satisfaction, and observed marital interaction were interrelated in the expected directions. The complete correlation table is available upon request from Lauren M. Papp.

APIM Analyses

We used a structural equation modeling framework to examine empathic accuracy and assumed similarity in APIMs for each of the four specific emotions assessed in this study, following guidelines presented in Cook and Kenny (2005) and Kenny and Acitelli (2001). APIM models were fit using Analysis of Moment Structures (AMOS, v. 16.0; Arbuckle & Wothke, 1999). An advantage to using structural equation modeling is that maximum likelihood estimation is generally considered robust to violations of non-normally distributed variables (Meehan & Stuart, 2007), as are some of the emotion variables in the present study. Traditional model-fit statistics are not presented because APIMs are recursive (Cook & Kenny, 2005). APIMs also model correlated residual parameters (i.e., error terms). Wife and husband depressive symptoms were examined as separate moderators of empathic accuracy and assumed similarity in models that controlled for level of partner symptoms, both partners' marital satisfaction, and observed marital conflict behavior, which were modeled as interrelated covariates. Spouses' depressive symptoms were tested as moderators of empathic accuracy and assumed similarity effects by including the interaction terms among these manifest variables in the APIM model, along with the main effects of depressive symptoms and other control variables (see Figure 2). Consistent with Aiken and West's (1991) recommendations, self-reported depressive symptoms and husbands' and wives' ratings of their own emotion in marital conflict were mean-centered before the interaction terms were computed.

Moderator: Wife Depressive Symptoms

Results examining husband's and wives' empathic accuracy and assumed similarity effects in the moderating context of wife depressive symptoms are presented in Table 2. Husbands demonstrated both empathic accuracy and assumed similarity main effects in rating their wives' *positivity* in marital conflict. Although we had hypothesized that depression would not moderate ratings of partners' positivity, results indicated that wife depressive symptoms moderated wives' empathic accuracy and assumed similarity in rating their husbands' positivity. That is, higher levels of wife depressive symptoms were associated with decreased empathic accuracy and decreased assumed similarity in rating husband's positivity.

The APIM examining husbands' and wives' reports of *anger* indicated that both husbands' and wives' exhibited assumed similarity in their ratings of their spouses' anger, such that their self-reported ratings of anger were positively related to their ratings of partner anger. Wives also demonstrated a significant main effect of empathic accuracy in their ratings of partner anger. Consistent with Hypothesis 2B, husbands' empathic accuracy was moderated by wife depressive symptoms: Specifically, husbands' empathic accuracy was lower at higher levels of wives' depressive symptoms (Table 2).

With regard to rating partner *sadness* in marital conflict, APIM results presented in Table 2 indicate significant main effects for wives' empathic accuracy and husbands' assumed similarity. That is, wives' ratings of husband sadness were positively related to their husbands' self-reported sadness, and husbands' ratings of wife sadness were positively related to husbands' own ratings of sadness. Consistent with Hypothesis 1A, ratings of partner sadness in marital conflict were moderated by wife depressive symptoms such that wives' assumed similarity was higher at higher levels of wives' symptoms. In addition, ratings of partner sadness in marital conflict were moderated by wife depressive symptoms such that husbands' empathic accuracy was higher at higher levels of wife depressive symptoms, which is the opposite direction of the effect predicted by Hypothesis 2B.

The APIM examining husband and wife ratings of their partner's *fear* indicated that wife depression moderated both empathic accuracy and assumed similarity effects (see Table 2). Consistent with predictions, both wives' (Hypothesis 1A) and husbands' (Hypothesis 1B) assumed similarity were higher at higher levels of wives' depressive symptoms, while wives' empathic accuracy of husband fear was lower (Hypothesis 2A). Husbands' empathic accuracy effect was not moderated by wife depression; however, there was a significant main effect of husband empathic accuracy such that husbands' ratings of wives' fear were positively linked to wives' self-reported fear in marital conflict.

Moderator: Husband Depression

Results examining husband's and wives' empathic accuracy and assumed similarity effects in the moderating context of husband depressive symptoms are presented in Table 3. Both husbands and wives demonstrated significant assumed similarity in their ratings of partner *positivity*. That is, both husbands' and wives' ratings of their partners' positive emotion were positively related to their own ratings of positive emotion in marital conflict. Husbands' and wives' empathic accuracy and assumed similarity in rating partner positivity were not moderated by husband depressive symptoms.

As shown in Table 3, the APIM examining husbands' and wives' ratings of their partner's *anger* in marital conflict revealed significant positive main effects for wives' empathic accuracy and husbands' assumed similarity. As predicted, empathic accuracy and assumed similarity were also moderated by husband depressive symptoms such that wives' assumed

similarity was higher (Hypothesis 1B), while husbands' empathic accuracy was lower (Hypothesis 2A), at higher levels of husband depressive symptoms.

Husband depressive symptoms moderated all empathic accuracy and assumed similarity paths with regard to husbands' and wives' ratings of their partners' *sadness* in marital conflict interactions (see Table 3). Consistent with predictions, at higher levels of husbands' depressive symptoms, wives' assumed similarity was also higher (Hypothesis 1B), while their empathic accuracy was lower (Hypothesis 2B). Contrary to the directions predicted by Hypothesis 1A and Hypothesis 2A, respectively, husband depressive symptoms moderated effects such that husbands' assumed similarity in rating sadness was lower, and their empathic accuracy in rating sadness was higher, in the context of elevated depressive symptoms.

Finally, results presented in Table 3 indicate that there were significant main effects for husbands' empathic accuracy and assumed similarity in rating their partners' *fear* in marital conflict, such that husbands' ratings of wives' fear were positively related to both their own ratings of fear and positively related to wives' self-rating of fear in marital conflict. There was also a significant wife empathic accuracy main effect, such that wives' ratings of their husbands' fear was positively related to husbands' self-reported fear. Consistent with predictions, wives' assumed similarity in rating fear in marital conflict was moderated by husband depression such that wives' assumed similarity in rating husband fear was higher in the context of elevated husband depressive symptomatology (Hypothesis 1B).

Discussion

The present study assessed spouses' empathic accuracy and assumed similarity in rating partners' emotions in marital conflict and tested whether husbands' and wives' depression moderated these effects. The APIM framework, widely encouraged for capitalizing on relational information provided by dyadic data (Cook & Snyder, 2005), was extended into research on the interplay between close relationships and mental health. The APIM framework facilitated investigation of previously unexplored constructs in the process linking partners' psychological distress and marital dysfunction, namely empathic accuracy and assumed similarity in rating self and partner conflict emotions in contexts of spouses' depressive symptomatology.

The significant main effects for empathic accuracy and assumed similarity in husbands' and wives' ratings across the different emotions in marital conflict highlight the interconnectedness between spouses' affectivity during marital conflict. That is, husbands and wives use not only information from their spouse but also information about themselves to infer how their spouse is feeling during marital conflict interactions. Both partners were also able to accurately understand the emotions expressed by their spouse in marital conflict, although the empathic accuracy results were more consistent for the negative emotions than for positivity.

Consistent with our hypotheses, spousal depressive symptomatology moderated empathic accuracy and assumed similarity paths in partners' ratings of negative emotion. Moreover, these results were mostly in the expected directions. With regard to anger, wives' depressive symptoms were associated with lower empathic accuracy ratings by husbands. Similarly, husbands' depressive symptoms were associated with both lower empathic accuracy in rating their wives' anger, and higher assumed similarity in wives' ratings of their partner's anger. Taken together, these results suggest that partners of spouses with elevated depressive symptoms have particular difficulty in assessing partner anger in marital conflict. Anger, and hostility more generally, is a particularly salient emotion in interpersonal relationships,

and has implications for long-term marital functioning. Hostility is related to lower marital satisfaction and impairs couples' efforts at resolving conflicts (Gottman & Levenson, 1999, Johnson, 2002; Rogge, Bradbury, Hahlweg, Engl, & Thurmaier, 2006). An avenue for future research is to examine whether this emotional disconnect concerning angry affect contributes to a cycle of feeling misunderstood on the part of the spouse with elevated depression, which could lead to greater frustration, thereby increasing anger in marital conflict over time.

Depressive symptoms also moderated partner ratings of sadness, and notable differences emerged in the moderating effect of spousal depression for husbands' ratings of partner sadness as compared to wives' ratings. Findings for the effect of spousal depressive symptomatology on wives' empathic accuracy and assumed similarity in rating partners' sadness were in the expected directions, such that higher levels of wife depressive symptoms were linked with wives' higher levels of assumed similarity in rating their partners' sadness. Similarly, husband depressive symptoms also related to wives' higher levels of assumed similarity and lower levels of empathic accuracy in rating their partner's sadness in marital conflict. However, findings for the moderating role of depressive symptoms on husbands' empathic accuracy and assumed similarity in rating partner emotions in marital conflict were not in the expected direction. Specifically, husbands' empathic accuracy in rating their wives' sadness was higher in the context of elevated wife depressive symptoms. Also, in rating wives' sadness, husbands' empathic accuracy was higher and assumed similarity was lower in the context of elevated husband depressive symptoms.

The results for the moderating role of spousal depressive symptomatology on husbands' and wives' empathic accuracy and assumed similarity in rating partner sadness indicated that, when either spouse reported higher levels of depressive symptoms (husband or wife), wives' assumed similarity in rating their husbands' sadness was higher, whereas husbands' empathic accuracy was higher. One potential explanation for this finding is that perhaps women are more expressive with their sadness so that husbands are better able to observe and detect it. Men, on the other hand, may be less likely to overtly express their sadness, so wives become more interdependent reporters, needing to infer their partners' sadness from how they felt, and therefore assuming greater similarity between their own and their partners' feelings of sadness in marital conflict. This explanation, however, does not address why husbands with higher levels of depressive symptoms would demonstrate lower levels of assumed similarity and higher levels of empathic accuracy in rating their partners' sadness as compared to husbands' with lower levels of symptoms. Although this finding was contrary to our hypotheses, it is consistent with Alloy and Abramson's (1979) "sadder but wiser" hypothesis, which posits that individuals with depression may have a more realistic or accurate view of others and their environment. These results underscore the importance of further examining whether the processes by which depression is related to marital functioning differs for husbands compared to wives.

Although less commonly examined in marital conflict research, spousal depressive symptoms moderated husbands' and wives' empathic accuracy and assumed similarity in rating partners' fear in marital conflict (similar to the findings on partner ratings' of anger) such that spouses' depressive symptoms related to higher assumed similarity among husbands and wives and to lower empathic accuracy among wives in rating their partners' fear. It should be noted that the levels of fear expressed by this sample of community-based couples were lower than the other conflict emotions, and additional research is needed to examine fear-related affective processes and mental health among couples in higher-stress relationships, such as those recovering from traumatic events (e.g., infidelity).

Taken together, these findings suggest that, among couples with higher depressive symptoms (husband or wife), wife assumed similarity in rating partner negative emotion (i.e., anger, sadness, fear) was particularly consistent. That is, in the context of higher spousal depression, the emotional transmission of wives' negative emotions in marital conflict was stronger than in lower spousal depression. Furthermore, although levels of depressive symptoms did not moderate empathic accuracy effects quite as consistently, contexts of spousal depression was related to less accuracy among husbands and wives in rating partner emotions in marital conflict (i.e., anger, fear), perhaps due to strain placed by depressive symptoms on resources that facilitate partner emotional closeness and attunement. The present results align with past findings that *negative* conflict expressions are particularly implicated in the mental health-close relationships connection and, more broadly, that negative emotions show stronger spillover between partners than happiness (Matjasko & Feldman, 2006).

We had hypothesized that spousal depressive symptoms would not moderate husbands' and wives' empathic accuracy and assumed similarity in rating partners' positivity in marital conflict and this was partially supported. Two moderating effects were found such that wives with higher levels of depressive symptoms demonstrated lower levels of assumed similarity and higher levels of empathic accuracy compared to wives with lower levels of depressive symptoms. Interestingly, in rating negative emotions, spousal depressive symptoms weakened wives' abilities to rate their partners' emotions; however, in rating positivity, the results suggest that elevated wife depressive symptoms strengthened their ratings of their partners' emotion. Additional research is needed to explore the role and mechanisms of positive versus negative emotions in the linkage between interpersonal processes and mental health.

Several limitations merit consideration when interpreting and generalizing the results of the present study. First, the present study relied on a sample of mostly European-American couples in relatively well-adjusted relationships. As noted above, replication of these APIMs is needed among couples experiencing higher levels of distress and among more ethnically-diverse couples. Second, the present design does not allow us to assess causal pathways among the APIM effects and spouses' depressive symptoms. Future work is needed to elucidate whether depression predicts empathic accuracy and assumed similarity ratings of self and partner conflict emotions over time or vice versa. Third, consistent with other community-based research (e.g., NICHD Early Child Care Research Network, 1999), the present study utilized a self-report measure of depressive symptoms. However, investigation of the current questions in samples of partners with diagnosed depression or other affective disorders awaits replication. We also relied on partners' retrospective ratings of emotions in conflicts to establish empathic accuracy, rather than utilizing typical approaches with trained coders (Verhofstadt et al., 2008) or momentary assessments of emotions (Waldinger & Schulz, 2006). As such, the present findings need to be replicated across multiple research paradigms for assessing partners' emotions in relational contexts. Fourth, affect and emotions in marital conflict comprise one component of broader conflict processes. Although the current study controlled for marital conflict behavior, additional work should consider, for example, dimensions such as topics and attributions in conflict to fully elucidate relationship processes that are linked to partners' psychological distress.

The present study's findings are relevant both to broader research on emotions in close relationships (Mirgain & Cordova, 2007) and to therapeutic approaches that target partners' emotional dysregulation to treat and manage relational distress and/or individual problems such as depression (Baucom, Shoham, Mueser, Daiuto, & Stickle, 1998; Johnson & Greenman, 2006). Recent research documents linkages between emotional accuracy and support processes in marriage such that partners who were higher in empathic accuracy

provided more instrumental support (e.g., giving helpful advice) and less problematic support (e.g., giving useless advice) to their support-seeking partner (Verhofstadt et al., 2008). In terms of therapeutic implications, the emotions studied here (i.e., positivity, anger, sadness, fear), are among the core emotions focused on during emotionally-focused couple therapy, which argues that couples' emotional experiences are a central pathway to relationship change and aims to reduce negative interactional cycles (Johnson & Greenman, 2006). Targeting the emotional regulation and understanding of couples has been recommended as a process through which individual well-being and relationship adjustment are improved (Kirby & Baucom, 2007). In summary, the present results implicate husbands' and wives' ratings of their own and their partners' emotions in marital conflict as important processes in the close relationships-mental health linkage, and encourage future research to continue exploring partner and relational characteristics that place couples at heightened risk for a problematic relationship-mental health cycle.

Acknowledgments

This research was supported in part by grants from the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development to E. Mark Cummings (R01 HD36261) and Lauren M. Papp (R03 HD57346).

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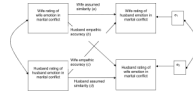


Figure 1. Example of APIM used to assess empathic accuracy and assumed similarity estimates in spouses' ratings of self and partner emotions (i.e., positivity, anger, sadness, fear) in marital conflict.

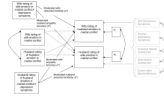


Figure 2.

Example of APIM model examining depressive symptoms as a moderator of depressive symptoms on empathic accuracy and assumed similarity estimates in spouses' ratings of self and partner emotions (i.e., positivity, anger, sadness, fear) in marital conflict. Empathic accuracy and assumed similarity estimates are denoted by dashed lines. Covariates include self and partner depressive symptoms, both partners' marital satisfaction, and coder-rated marital behavior.

Descriptive Statistics of Husbands' and Wives' Ratings of Self and Partner Emotions in Marital Conflict, Depressive Symptoms, and Marital Satisfaction

Table 1

Emotion Ratings	Husband Report		Wife Report		Test of H-W difference	
	M	SD	M	SD	t-value	df
W Positivity	11.73	4.44	12.51	4.69	-2.71**	262
H Positivity	12.16	4.17	12.36	4.77	-0.70	262
W Anger	2.20	3.57	1.79	3.34	1.95 [†]	261
H Anger	1.77	2.96	1.80	3.41	-0.20	261
W Sadness	2.50	3.78	1.91	3.37	2.66**	261
H Sadness	2.07	3.45	1.08	2.51	4.94**	261
W Fear	1.35	2.58	0.89	2.51	2.71**	261
H Fear	1.22	2.48	0.60	1.93	3.78**	261
Self-Reported Depressive Symptoms	8.83	7.53	9.94	9.01	-1.75 [†]	266
Self-Reported Marital Satisfaction	110.24	21.69	112.68	24.19	-1.69 [†]	266

Note. N = 267 couples. H = husband report; W = wife report.

[†] $p < .10$.

* $p < .05$.

** $p < .01$.

Table 2

APIM Results: Empathic Accuracy and Assumed Similarity in Rating Emotions in Marital Conflict in the Moderating Context of Wife Depressive Symptoms

Main Effects	Positive			Anger			Sadness			Fear		
	b	SE	t	b	SE	t	b	SE	t	b	SE	t
Wife Assumed Similarity (a)	.88	.03	28.61**	.71	.04	17.31**	.44	.03	13.94**	.40	.03	12.63**
Husband Assumed Similarity (d)	.90	.04	24.92**	.84	.05	17.79**	.70	.05	14.61**	.62	.04	14.16**
Wife Empathic Accuracy (c)	.02	.04	0.52	.20	.05	4.21**	.14	.03	4.42**	.12	.03	3.63**
Husband Empathic Accuracy (b)	.07	.03	2.02*	.23	.04	5.61**	.21	.05	4.25**	.29	.04	6.81**
Moderated Paths												
Wife Assumed Sim. × Symptoms (a*)	-.01	.003	-2.08*	.00	.04	0.13	.02	.003	5.53**	.02	.00	8.21**
Husb Assumed Sim. × Symptoms (d*)	-.001	.003	-0.33	-.001	.004	-0.10	-.01	.01	-1.40	.01	.004	2.04*
Wife Emp. Accuracy × Symptoms (c*)	-.01	.003	-1.97*	-.02	.01	-1.14	-.004	.003	-1.33	-.01	.003	-2.69**
Husb Emp. Accuracy × Symptoms (b*)	.00	.004	0.03	-.01	.004	-3.25**	.01	.004	2.32*	.001	.003	0.20

Note. N = 267 couples. Covariates include self and partner depressive symptoms, both partners' marital satisfaction, and coder-rated marital behavior (all variables correlated). Letters in parentheses correspond to pathways in Figure 1 and Figure 2.

* p < .05.

** p < .01.

Table 3
 APIM Results: Empathic Accuracy and Assumed Similarity in Rating Emotions in Marital Conflict in the Moderating Context of Husband Depressive Symptoms

Main Effects	Positive			Anger			Sadness			Fear		
	b	SE	t	b	SE	t	b	SE	t	b	SE	t
Wife Assumed Similarity (a)	.89	.03	28.47**	.70	.04	17.12**	.46	.03	14.27**	.43	.03	13.90**
Husband Assumed Similarity (d)	.90	.04	25.01**	.84	.05	17.63**	.74	.05	15.51**	.63	.04	14.52**
Wife Empathic Accuracy (c)	.01	.04	0.18	.23	.05	4.97**	.16	.03	5.09**	.14	.03	4.45**
Husband Empathic Accuracy (b)	.06	.03	1.93	.22	.04	5.19**	.21	.05	4.32**	.31	.04	7.28**
Moderated Paths												
Wife Assumed Sim. × Symptoms (a *)	-.004	.003	-1.26	.01	.004	2.77**	.01	.003	3.51**	.03	.003	9.11**
Husb Assumed Sim. × Symptoms (d *)	-.01	.004	-1.67	-.003	.004	-0.69	-.02	.004	-3.58**	-.003	.004	-0.80
Wife Emp. Accuracy × Symptoms (c *)	.0032	.004	0.70	-.01	.004	-1.35	-.01	.003	-3.83**	-.01	.003	-1.93
Husb Emp. Accuracy × Symptoms (b *)	.001	.003	0.37	-.01	.01	-2.44*	.01	.004	2.30*	-.01	.004	-1.67

Note. N = 267 couples. Covariates include self and partner depressive symptoms, both partners' marital satisfaction, and coder-rated marital behavior (all variables correlated). Letters in parentheses correspond to pathways in Figure 1 and Figure 2.

* p < .05.

** p < .01.