DR. CÉLINE HINNEKENS (Orcid ID : 0000-0001-8728-3258)

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"I think you understand me."

Studying the associations between actual, assumed, and perceived understanding within couples.

The current study examined the associations between actual, assumed, and perceived understanding and partners' levels of dyadic adjustment. One hundred fifty two couples provided questionnaire data (assumed and perceived understanding), participated in a video-taped conflict interaction, and in a video-review task to assess actual understanding (empathic accuracy). The data were analyzed by means of the Actor-Partner Interdependence Model (APIM). The results suggest that (1) some aspects of how well someone assumes that (s)he has understood the partner during a preceding conflict interaction were positively associated with the own objective level of understanding (actor effect), (2) that someone's perception of how understood (s)he feels was not associated with the partner's objective level of understanding, but not actual understanding, was positively associated with dyadic adjustment.

Conflict of Interest: The authors formally state that there is null conflict of interest.

Correspondence: Céline Hinnekens, PhD Family Lab – Experimental-Clinical and Health Psychology Email: celine.hinnekens@ugent.be Adress: Henri Dunantlaan 2, 9000 Ghent – Belgium

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Theory and research suggest that partners in an intimate relationship must be relatively accurate when inferring the specific content of each other's thoughts and feelings if they want to effectively coordinate their individual and shared actions—a coordination that is needed to maintain a satisfying and stable relationship (Ickes & Hodges, 2013). Understanding the other partner refers to the ability to take the partner's perspective, and to hold knowledge of the partner's dispositions, thoughts, and feelings (Finkenauer & Righetti, 2009). Previous research supports the intuitive belief that mutual understanding plays a crucial role in intimate relationships, more specifically in relationship well-being (e.g., Neff & Karney, 2005b; Pollmann & Finkenauer, 2009) and adjustment (e.g., Laurenceau, Barrett, & Pietromonaco, 1998; Lemay, Clark, & Feeney, 2007; Noller & Ruzzene, 1991; Swann, 1984).

Not all studies support this conclusion, however. The results of some studies have revealed no significant association between understanding and relationship quality (e.g., Ickes & Simpson, 2001; Murray, Holmes, & Griffin, 1996; Pollmann & Finkenauer, 2009; Thomas & Fletcher, 2003). What accounts for these apparently contradictory results? First, as has been suggested by Pollmann and Finkenauer (2009), combining the results of these studies overlooks the important distinction between *feeling understood* and actually *being* *understood* by one's partner. More specifically, some studies have measured mutual understanding within couples by documenting partners' subjective self-reports whereas other researchers have relied on objective performance measures of actual understanding (e.g., empathic accuracy; Ickes, Bissonnette, Stella, & Stinson, 1990). Second, an additional but related issue concerns the fact that some studies analyzed understanding from the perceiver's point of view, whereas others focused on the target's point of view. Third, some studies focused on the global level of understanding within the relationship, whereas others focused on situation-specific and interaction-based understanding based upon actual couple interactions.

Taking this complexity into account, one can differentiate (see figure 1) between (a) the *perceiver's actual understanding*, referring to the perceiver's accuracy in inferring the specific content of their partner's (i.e., target's) thoughts and feelings, (b) the *perceiver's assumed understanding*, referring to the perceiver's subjective report on how well they assume they have understood their partner (i.e., target), and (c) the *target's perceived understanding*, referring to the target's subjective rating of the degree to which they feel understood by their partner (i.e., perceiver).

The present study sought to replicate and extend the findings of Pollmann & Finkenauer (2009) on understanding in couples by investigating the interrelations between three distinct dimensions of understanding (actual, assumed, perceived), and their association with dyadic adjustment. We measured understanding between partners in a *situational* and *interaction-based* context, rather than relying on *general* measures of understanding. The latter is a problem to the extent that cognitive and motivational processes bias general self-reports of partners who attempt to recall, interpret, and aggregate past experiences into current overall impressions (Schwarz, Groves, & Schuman, 1998). This level of analysis should be clearly differentiated from that applying to feelings of understanding during a

specific interaction, which is best captured through the use of observational research (Reis & Collins, 2000). Therefore, we relied on a multi-method approach combining self-report questionnaires and an observational paradigm including a laboratory based interaction task, video-review task, and a standardized coding system. In the sections that follow, we provide some background on the major features of the current study.

The perceiver's level of actual understanding

Over the last three decades, empirical research on actual understanding has been developing exponentially. More and more insight has been acquired into the complexity of the empathy process and empathic accuracy (EA) can be considered as the cognitive part of this process or, in other words, the accuracy with which one can understand someone's episodic thoughts and feelings as they spontaneously occur during the course of natural interactions (Ickes, 1993, p.588). Ickes and colleagues (1990) introduced the dyadic empathic accuracy paradigm as an objective and reliable design to measure empathic accuracy in a controlled but naturalistic environment. The empathic accuracy percentage, the outcome of this paradigm, can be seen as a performance measure that reflects the objective level of understanding. Understanding (and thus also the empathic accuracy score) is affected by situational influences (e.g., perceived threat of the interaction; Simpson, Oriña, & Ickes, 2003) and additionally also by relationship (e.g., acquaintanceship effect; Ickes & Hodges, 2013) and target characteristics (e.g., readability of someone's (non)verbal cues; Marangoni, Garcia, Ickes, & Teng, 1995).

A lot of research attention was also devoted to the examination of gender differences. Although some studies have found significant gender differences in empathic accuracy in favor of women, others have failed to find such differences (Hodges, Laurent, & Lewis, 2011). However, men have not performed better than women in any of the studies of gender

differences. A remarkable finding is that women generally seemed more accurate than men if the gender stereotype of women being more empathic was triggered or explicitly evaluated, suggesting that potential gender differences in actual understanding performances appear to be mainly motivational in nature (Ickes, Gesn, & Graham, 2000).

In sum, it seems valid to assume that a perceiver's level of actual understanding should be related to a target's level of perceived understanding, however, research linking interaction-based "mind-reading" abilities to a perceiver's interaction-based feelings of being understood is – to our knowledge – nonexistent.

The perceiver's level of assumed understanding

To what extent are partners aware of their own empathic performance? Previous studies have shown that people are not very proficient at estimating their own general capacity for perspective-taking, reflected in a lack of significant associations between perceivers' levels of actual understanding (i.e., empathic accuracy) and questionnaires assessing the perception of their *general* empathy capacity (e.g., Interpersonal Reactivity Index, Davis, 1980; Stinson & Ickes, 1992; Laurent & Hodges, 2009). These findings raise the question of whether people are equally bad at estimating how well they understand the *situational* thoughts and feelings of people with whom they interact, including their partners. The latter should be distinguished from measures of general and dispositional perspective-taking capacities used in previous research, which are more broadly based.

The question of whether assumed understanding between partners who are interacting with each other–as opposed to perspective-taking towards others in general–is related to their actual abilities to mind-read has remained largely unanswered to date as few or no studies have assessed partners' meta-knowledge about the outcomes of their own perspective-taking efforts during a preceding interaction.

The target's level of perceived understanding

The concept of perceived understanding in the context of intimate relationships refers to one's feeling of being understood by the partner and can be defined as the *perception* that one's partner has an accurate understanding of one's own subjective experience (i.e., thoughts and feelings). Perceived understanding has been documented in the literature as a form of cognition that lies at the heart of relationships (see Finkenauer & Righetti, 2009). For instance, according to Reis, Clark, and Holmes (2004) the feeling of being understood by one's partner is one component of the partner's perceived responsiveness. In their formulation, perceived responsiveness refers to the belief that one's partner both understands and validates the thoughts, feelings, and perspectives of the other partner in a particular situation. Furthermore, perceived understanding has itself been identified as a key characteristic of perceived emotional support (Cramer, 1986; Rogers, 1959), and perceived emotional support in turn has been found to be one of the strongest correlates of relationship satisfaction (Cramer 2003; Cramer, 2006; Cutrona 1996). Furthermore, a recent study by Gordon and Chen (2015) showed that conflict in couples is particularly harmful to the relationship when the members believe that their partners have failed to understand their thoughts, feelings, and perspectives. Feeling understood can operate as a buffer against these harmful effects because it supports the belief that a partner is devoted, and it is also positively associated with conflict resolution.

Although these research results consistently demonstrate the importance of feeling understood by one's intimate partner, there are no studies examining if this perception is (at least partially) anchored in reality, i.e., associated with a partner's actual level of understanding. Indirect evidence can be derived from studies on perceived support and perceived responsiveness which demonstrate that partners' perceptions can be traced to

behavioral exchanges and are not merely social constructions (e.g., Collins & Feeney, 2000; Cutrona, Hessling, & Suhr, 1997; Reis et al., 2004). Applying this finding to perceived understanding leads us to assume that feeling understood, or one's level of perceived understanding, should be fostered by the actual efforts made to understand and corresponding accurate insights of the other partner.

(Perceived) understanding and dyadic adjustment

Previous research has shown that perceived understanding is related to beneficial relationship outcomes such as adjustment, intimacy, and trust (e.g., Pollmann & Finkenauer, 2009; Reid et al., 2004) and even is predictive of long-term relationship well-being (Pollman & Finkenauer, 2009).

Additionally, the level of actual understanding also seems important for various crucial relationship processes. Verhofstadt, Ickes, Buysse, Devoldre, and Davis (2008) found that an accurate understanding of one's partner's distress and needs and an ability to accurately judge which behaviors are helpful and appropriate given the situation, leads to better instrumental support provision. Furthermore, the conflict literature suggests that an accurate interpretation of a partner's thoughts and feelings during conflict leads to recognition that destructive reactions will evoke an escalating conflict (Bissonette, Rusbult, & Kilpatrick, 1997). Therefore, empathic accuracy is predictive of more accommodative behavior during conflicts as partners yield less hostile reactions and react more compassionately and responsively.

Consequently, complaints about a lack of mutual understanding and misreading by the partner are frequently noted in research on empathy. It may also play an important role in a lot of failing dyadic processes (e.g., support provision, conflict resolution, relationship commitment, intimacy) in distressed couples, as a lack of understanding is often mentioned as a reason for pursuing consultation by couples seeking couple therapy (Doss, Simpson, & Christensen, 2004).

Recently, the assumption that general perceived understanding is more important for relationship well-being than objective knowledge was tested in a study that measured understanding by using several questionnaires (Pollmann & Finkenauer, 2009). The results showed that feeling understood is indeed a feature present in well-functioning relationships; however, actual knowledge about each other in different domains was not. It is possible that an individual's own perception or interpretation of a certain behavior or situation is more predictive for future behavior and outcomes than the actual behavior or situation. However, there is no corroborating research exploring this assumption that simultaneously examines the role of actual and perceived understanding in dyadic adjustment. The limited amount of studies that examined a similar association focused on the concept of social support and demonstrated that partners' perceptions of received support are more predictive of stress reduction than the actor's actual support behavior (Abbey & Halman, 1995; Dunkel-Schetter & Bennett, 1990).

The theoretical and empirical precedents described above suggest that both accurate understanding of one's partner and perceived understanding are necessary for fundamental relationship processes such as support provision and conflict resolution; furthermore, perceived understanding predicts relationship well-being directly and indirectly by buffering the harmful effects of conflict. However, as no previous studies have simultaneously included all of these distinct aspects of interaction-based understanding within a single investigation, the relative importance of actual and perceived understanding during interactions for couples' relationship well-being is unknown.

The present study

In sum, the above-mentioned findings support the importance of (perceived) understanding in intimate relationships. However, no clear conclusions can be drawn due to a lack of conceptual and methodological differentiation between the different dimensions of understanding in existing research on this matter. This has resulted in a gap in our current knowledge about how a person's actual understanding relates to their partner's perceptions of being understood, and about how accurately people can estimate their degree of actual understanding. Further insight into these processes is needed in order to clarify whether people are aware of their own and their partner's capacities for perspective-taking and to specify the relative importance of both forms of understanding for dyadic adjustment.

Therefore, the aim of the present study was to complement and extend previous studies on understanding in intimate relationships by (a) distinguishing between the perceiver's level of actual understanding, the perceiver's level of assumed understanding, and the target's level of perceived understanding within the context of a concrete conflict interaction, (b) distinguishing between understanding of positive/neutral/negative thoughts and feelings, (c) studying the interrelations of the different forms of understanding, and (d) examining the associations between actual versus perceived understanding and dyadic adjustment.

Despite the fact that Pollmann and Finkenauer (2009) did not find gender differences between the scores of partners' self-reported (i.e., assumed) and perceived understanding, and the fact that the literature on actual understanding did not find consistent gender differences, the current study is still interested in examining potential gender differences. This because the literature on intimate relationships has identified gender as playing a role between understanding, and other relevant relationship characteristics such as support behavior,

relationship satisfaction and relationship stability (Acitelli, Douvan, & Veroff, 1993; Murstein & Beck, 1972; Neff & Karney, 2005a).

We chose to test our hypotheses (see below) in the context of relationship conflict interactions because previous research suggests that both forms of understanding may have a greater impact in conflict situations, where the stakes (both individual and relational) are perceived to be higher than in routine, non-conflict situations (Gordon & Chen, 2015). In other words, we sought to test our hypotheses in a setting where the variables we are studying are likely to play a more significant role.

We collected data from a large sample of couples that provided questionnaire data and participated in a videotaped conflict interaction and video review task. More specifically, we collected (1) *an interaction-based measure of actual understanding* (i.e., participants' objective scores of how well they accurately inferred the content of each other's thoughts and feelings during the conflict interaction), (2) *a post-interaction self-report measure of assumed understanding* (i.e., participants' subjective reports on how well they assumed they had understood their partner during the conflict interaction, (3) *a post-interaction self-report measure of perceived understanding* (i.e., each participant's subjective report on how well understood they felt by their partner during the conflict interaction), and (4) *a global self-report measure of dyadic adjustment* (i.e., participants' subjective reports on their general level of dyadic adjustment). Data were collected from both partners within the interaction in order to assess our variables of interest from both the perceiver and target's perspectives within each dyad. The interdependence of their reports was taken into account statistically by using the actor-partner-interdependence model (APIM).

General hypotheses. First, we want to investigate the mutual influence between the perceiver's actual understanding and assumed understanding. Although previous research failed to find an association between these forms of understanding, we might find a significant association for some forms of understanding but not for others. Our first hypothesis is based on the rationale that the difficulty of inferring thoughts versus feelings varies, so that inferring feelings and evaluating these inferences might be somewhat easier as the number of feelings is *limited* (versus an endless number of thoughts), as they can be inferred from a lot of verbal plus *non-verbal cues* (e.g., facial expression, intonation, body language), and are less linguistic complex in contrast to thoughts (Ickes & Cheng, 2011). Therefore, our first hypothesis predicts a positive association between perceiver's subjective score of assumed understanding for feelings and their own objective score of actual understanding for feelings (i.e., empathic accuracy for feelings; Hypothesis 1). Second, we also expected to find a significant association between the perceiver's actual understanding and the target's perceived understanding. As previous studies have found that the perception of partners' responsiveness is based at least in part on the actual amount of responsiveness of their partner (cf. Murray, Holmes, & Griffin, 2000; Reis et al., 2004), the same tendency was expected for understanding as a part of the process of responsiveness, such that the perceiver's objective actual understanding score would be positively associated with the target's subjective perceived understanding score (Hypothesis 2). Third, we tested the hypothesis that both partners' levels of actual understanding and the levels of perceived understanding would be related to relationship functioning and satisfaction, such that their objective actual understanding score and their subjective perceived understanding score would be positively associated with the general level of dyadic adjustment (Hypothesis 3). Finally, we wanted to explore potential gender differences in the predicted associations. When analyzing the previous literature, we found no evidence that allowed us to make

specific predictions, but we nevertheless planned to examine the data for whether or not the processes under study are different for men and women (*Research Question 1*). Therefore, we conducted the APIM analyses with distinguishable dyad members based on gender.

Materials and Methods

The present data were collected within a broader observational study on conflict in couples; some results of this study—unrelated to the present research questions— already have been published (author's citation; more detailed information is available by e-mail request).

Ethics statement

The study was approved by the ethical committee of the Faculty of [the author's institution].

Participants

The sample consisted of the 310 members of 155 cohabiting/married heterosexual couples. This sample was recruited in the context of a large observational study called the "[the author's institution] Family Lab Couple Study." The recruitment strategy enlisted couples to volunteer for the study in two ways: (1) through posters and social media notices, and (2) by asking a group of 16 master's-level clinical psychology students to recruit couples with whom they were acquainted.

Couples who expressed interest in participating were contacted by the research assistants, informed in general terms about the project, and evaluated to determine whether they met the inclusion criteria, which required them to have been together in a heterosexual relationship for at least one year and to have been married/cohabiting for at least six months. Inadequate knowledge of the Dutch language was used as exclusion criterion. The data of three couples that were included in the original sample were later excluded from the analyses because for one couple a participant had left too many data fields blank on the self-report questionnaires and for the two other couples it was discovered upon analysis of the questionnaires that they had been together for less than a year.

The first set of measures on the online questionnaire included demographic items. The responses to these items revealed that the average reported relationship length was 12.06 years (SD = 1.16). The respondents' average age was 36.20 years for the men (SD = 14.06) and 34.26 years for the women (SD = 13.63) with a range of 19 to 76 years. By occupational category, the sample consisted of 37 laborers (11.9%), 138 office workers (44.5%), 17 executives (5.5%), 16 self-employed individuals (5.2%), 60 students (19.14%), three stay-athome moms or dads (1.0%), ten individuals who were unemployed (3.2%), 16 who were retired (5.2%), and seven who were currently unable to work (2.3%).

Procedure

Couples who expressed an interest in participating were visited at home by one of the research assistants, informed in general terms about the project, and evaluated to determine whether they met the inclusion criteria. The partners in each couple received instructions to independently complete an online set of questionnaires that assessed both individual and relationship variables. The questionnaires used in this study are discussed in more detail below.

After both partners had completed these questionnaires, they were contacted by telephone to schedule an appointment to either come to the laboratory or to have an observation session at home. The couples were asked to participate in a task in which they engaged in a video-recorded conflict interaction and a subsequent video-review task. Each couple received monetary compensation of \notin 20 for completing the questionnaire session and

an additional \notin 20 for participating in the observational study. Participants could withdraw from the investigation at any time.

The Online Questionnaire Session

Dyadic adjustment. Relationship functioning and well-being were assessed with the Dutch version (Buysse & Heene, 1997) of the Dyadic Adjustment Scale (DAS, Spanier, 1976). This questionnaire contains 32 items that are divided into four subscales. *Dyadic consensus* reflects the degree to which the partners perceive that they (dis)agree about important aspects of the relationship; this subscale consists of 13 items such as "To what extent do you and your partner agree or disagree on the handling of family finances?" ($0 = always \ disagree$ to $5 = always \ agree$). *Dyadic satisfaction* assesses the degree to which the partners are satisfied with their relationship; it consists of ten items such as "In general, how much of the time do you think that things between you and your partner are going well?" (0 = never to $5 = all \ the \ time$). *Dyadic cohesion* assesses the degree to which the partners report engaging in common activities and experiencing closeness; it consists of five items such as "How often do you and your partner have a stimulating exchange of ideas?" (0 = never to $5 = more \ often \ than \ once \ a \ day$). Finally, *affectional expression* assesses the extent to which the partners report that they express affection towards each other; it consists of four items such as "How often do you kiss your partner?" (0 = never to $5 = every \ day$).

Total DAS scale scores were obtained by summing the scores of the 32 scaled items. Theoretically, these global dyadic adjustment scores can range from 0 to 151. In the present sample, men and women reported average marital satisfaction scores of 119.33 (SD = 12.91) and 117.90 (SD = 13.47), respectively. DAS norms (Spanier, 1976) indicate an average satisfaction score of 114-115 for a typical sample of married couples, a normative benchmark that suggests that our sample is comparable to an average sample of North American married

couples with respect to their typical levels of relationship satisfaction. The internal consistency of the DAS in our Dutch-speaking sample was high (Cronbach's $\alpha = .90$ for both men and women).

The Conflict Interaction Task

In the observational part of the study, the couples were asked to participate in a conflict discussion task that was similar to those used in previous laboratory studies on marital conflict (e.g., Fletcher & Thomas, 2000; Simpson et al., 2003). Each couple was escorted into a laboratory that was furnished to look like a living room or their own living room at home, and it was equipped so that the couple's interaction could be video-recorded with their prior knowledge. Both partners gave permission for this recording by means of a written consent form.

Before commencing their conflict discussion, both partners were separately asked to identify a problem or issue (from a list of common conflict topics in intimate relationships), of which the source was either the partner or the relationship and which they recognized as causing them relationship distress or recurring disagreement. After this problem selection had occurred, the partners were assigned randomly to be either the initiator or not the initiator. Operationally, this variable meant that the conflict issue the designated initiator had selected would be the one that the partners would discuss during their subsequent video-recorded interaction. The initiator in each dyad was instructed to introduce the issue to the other partner so that they could discuss this problem together for a period of eleven minutes. Both partners were instructed to act, as far as possible, as they would do when discussing a similar problem with each other at home. Immediately after the 11-minute conflict interaction had been recorded, both partners completed post-interaction questionnaires.

Reporting assumed understanding. A new post-interaction self-report measure was created to assess the dyad members' perceptions of their own understanding during the preceding interaction (see appendix A). The five items on this measure were based on the literature about understanding and responsiveness (e.g., Maisel, Gable, & Strachman, 2008; Reis et al., 2004), adapted to the purpose of this study. Participants were asked to respond on 7-point Likert scales ($1 = not \ at \ all$ to 7 = completely) about how well they believed they managed to understand their partner's thoughts and feelings (e.g., "To what extent do you think you accurately understood your partner's thoughts and feelings during the interaction?"). The internal consistency of the self-reported understanding measure was moderate to high in this sample (Cronbach's $\alpha_{Men} = .85$; $\alpha_{Women} = .75$).

Reporting perceived understanding. Analogous to the previous questionnaire, five items were developed to measure the extent to which the respondents felt understood by their partner during the preceding interaction (see appendix A). These five items had parallel content to the post-interaction questionnaire about self-reported understanding except that they were formulated from the partner's perspective (e.g., "To what extent do you think your partner understood the ways in which this interaction was distressing for you?"). The internal consistency of the perceived understanding measure was high in this sample (Cronbach's $\alpha_{\text{Men}} = .87$; $\alpha_{\text{Women}} = .88$).

Immediately after the post-interaction task both partners individually completed a video review task similar to that used in previous studies of empathic accuracy (e.g., Ickes et al., 1990; Verhofstadt et al., 2016). The partners were separated and asked to re-experience and re-live their interaction while they viewed a video of the interaction they had just completed on a laptop computer. The video presentation was controlled by an interactive software package (Hinnekens & Kimpe, 2014) specifically developed to facilitate the data collection for the purpose of the current study. Every 90 seconds, the video was paused and the same set of instructions appeared on the screen. First, each partner was asked to type the specific thoughts and feelings that he or she had at that point in the interaction into a blank box on an online questionnaire. Next, each member of the couple was asked to infer the specific content of each of their partner's thoughts and feelings, and to type each inference into a blank box that appeared on the interactive online survey form.¹ The instructions emphasized that the reported thoughts and feelings should be based on the 10-second segment of interaction that immediately preceded the pause in the video. To help ensure that both partners based their reports on the same 10-second segment of the interaction, our custom software program gave the participants the option to re-observe the 10-seconds of tape that occurred immediately before the pause before providing their requested answers.

Actual understanding

Four independent judges rated the degree of similarity between the content of each actual thought or feeling that one partner recorded and the content of the corresponding inferred thought or feeling that the other partner recorded. Following the recommendations of Ickes and colleagues (1990), the degree of similarity was rated in each case using a 3-point

¹ The questionnaire of the video-review task included additional multiple choice items that are not relevant to, nor represented in, the current study.

scale on which 0 = different content from the actual thought or feeling; 1 = similar but not the same content as the actual thought or feeling; and 2 = essentially the same content as the actual thought or feeling. Overall actual understanding (i.e., empathic accuracy) scores were then computed as a simple percentage measure of the number of "accuracy points" earned divided by the total number of "accuracy points" available and multiplied by $100.^2$ The empathic accuracy coding was acceptably reliable for both the men (ICC = .69) and the women (ICC = .71) in the sample. Therefore the scores of the four raters were averaged.

Readability

The concept of readability refers to how "readable" or transparent the target's thoughts and feelings are in comparison to other targets. This readability index has been found to significantly correlate with empathic accuracy, suggesting that some targets are less/more transparent than others and is therefore a relevant control variable (Marangoni et al, 1995). Four independent judges rated the degree of readability based on the information available in his or her words and actions (inferential difficulty measure; Marangoni et al, 1995). The raters watched each tape twice, once observing the male partner and once observing the female partner. They were instructed to empathize with the target partner and to make inferences about the target's thoughts and feelings at each pause in the video review task. The raters were provided with copies of the target's reported thoughts and feelings, to which they could refer after making these inferences. They could then compare their own inferences with the target's actual reported thoughts or feelings and rate how transparent or readable they thought each of the target's thoughts and feelings were at each tape stop. These readability ratings were made for each of the target's individual thoughts and feelings separately on a 3-point scale ranging from 1 (*very difficult to infer given the immediate*

 $^{^{2}}$ The theoretical range of this percentage-correct accuracy measure was 0 (none of the possible accuracy points was earned) to 100 (all of the possible accuracy points were earned).

context) through 2 (*somewhat difficult to infer given the immediate context*) to 3 (*easy to infer given the immediate context*). The readability measure was acceptably reliable for both the men (ICC = .64) and the women (ICC = .65) in the sample. Therefore, the readability ratings were averaged across the four raters.

Results

Descriptive statistics

The sample-based means, standard deviations, observed ranges and paired sample *t*-tests for all study variables are presented in Table 1. According to the paired sample *t*-tests, the men in the sample reported higher scores for assumed and perceived understanding. The analysis did not reveal gender differences in either actual understanding or in dyadic adjustment. The independent raters found it was slightly easier to infer thoughts/feelings from the (non)verbal cues of the male participants than it was for the women.

Data-analytic strategy

In the current study, the dyad members were partners within an intimate relationship. This means that the partners' scores on a given variable are statistically interdependent, i.e., they should correlate to some degree (see appendix B for the correlation matrix). To test our first three hypotheses, we used Actor-Partner Interdependent Models using Structural Equation Modeling (see figure 2 for an example). In an APIM two effects might be of interest (1) the effect of the predictor on the own outcome (i.e., actor effect), and (2) the effect of the own predictor on the partner's outcome (i.e., partner effect), while controlling for the statistical interdependence that exists between the partners. Note that separate actor and partner effects are estimated for men and women (cfr. a1, a2, p12 and p21). The double headed arrow between the actual understanding of men and women represents the residual non-independence in these outcome scores, which is represented by the covariance between their corresponding two error terms.

In each of the three APIM analyses, the dyad members were treated as being distinguishable by gender (results of each model's indistinguishability test are reported below), so the dummy-coded variables *men* and *women* were recoded to -1 and 1 for the current study. The predictor variables were grand-mean centered and the dependent variable was unstandardized.

Test of the research hypotheses

Is the perceiver's assumed understanding based on their own actual understanding (hypothesis 1)? Our first analysis examined whether the perceiver's post-interaction selfrating of having understood their partner during the interaction was positively related to their actual understanding performance, as measured by the perceiver's actual understanding score (an actor effect). The dependent variable in this analysis was each perceiver's self-reported assumed understanding score. The predictor variable was the perceiver's actual understanding score for positive, neutral, and negative thoughts, and feelings, and the covariates were the target's readability score and relationship length.

The indistinguishability test of the full model was (marginally) not significant ($c^2(16)$ = 23.69, p = 0.10), therefore one could opt to use an indistinguishable APIM in order to increase the power within the model. However, we decided to keep gender included as the design of the study implies the acknowledgment of this factor within the analyses. We expect this power not to change much due to the large amount of dyads in the data set. Readability was not a significant covariate in this model for either the men (b = 1.06, p = .51) or the women (b = 1.99, p = .14), and was therefore excluded from the final model. Relationship length was a significant covariate for women (b = 0.08, p < .01), and marginally significant

for men (b = 0.05, p = .10). The results of the final APIM indicated three significant actor effects (see figure 3). For men, actual understanding of their partner's negative thoughts and neutral feelings was associated with his self-reported level of assumed understanding. For women, actual understanding of their partner's positive feelings was associated with her selfreported level of assumed understanding. These findings suggest that perceivers' perceptions of how well they understood their partner during a recent conflict interaction is associated with the accuracy of some aspects of the perceivers' actual understanding.

Is the target's perceived understanding based on the perceiver's actual understanding (hypothesis 2)? The second analysis was similar to the first, but instead of focusing on the perceiver's level of assumed understanding, it examined whether the target's perceived understanding was positively associated with the perceiver's level of actual understanding for positive, neutral, and negative thoughts, and feelings (a partner effect). In this analysis, the dependent variable was each target's perceived understanding score. The predictor variable was the perceiver's actual understanding score and the covariates were each target's readability score and relationship length. For the same reasons as mentioned in hypothesis 1, we decided to keep gender into the model although the indistinguishability test showed a (marginally) not-significant p-value ($c^2(16) = 22.45$, p = 0.13). Again, readability was not a significant covariate in this model for either the men (b = 1.61, p = .24) or for the women (b = 2.01, p = .22), and was therefore excluded from the final model. Relationship length was a significant covariate for women (b = 0.09, p < .05), but not for men (b = 0.05, p= .17). The results of the final APIM showed no significant effects of the perceiver's actual understanding score on the target's level of perceived understanding for either men or women (see figure 4). Contrary to our hypothesis, this finding indicates that a perceiver's level of actual understanding is not related to their target's impression of being understood.

Are partners' actual understanding and perceived understanding both important for their dyadic adjustment (hypothesis 3)? To address this question, an APIM analysis was conducted to test the hypothesis that both partners' scores on the measures of perceived understanding and their level of actual understanding would be positively associated with (i.e., would "postdict") their scores on the Dyadic Adjustment Scale that was administered prior to the observational part of this study (looking at both actor and partner effects). The partners' scores on the DAS questionnaire served as the outcome variable. Both partners' scores on perceived understanding and their levels of actual understanding were entered as predictors (testing both actor and partner effects; see figure 5).

The correlation between the partners' scores on the Dyadic Adjustment Scale was .56. The final APIM explained 37.97% of the total non-independence. Although one might argue that it is still theoretically meaningful to make a distinction between the roles of the dyad members, we believe that in this case, the empirical evidence of the test cannot be discarded as the indistinguishable test cannot be considered as borderline significant ($c^2(16) = 13.66$, p = 0.62), in contrast to the first two hypothesis. So, we decided to exclude gender from the analysis. The results showed a significant actor effect, indicating that a participant's own level of perceived understanding was significantly associated with his or her own self-reported dyadic adjustment (b = 1.09, p < .001). Furthermore, the partner effect was also significant (b = .41 p < .01), suggesting that the partner's perceived understanding is positively associated with the own dyadic adjustment. These findings indicate that an individual's level of perceived understanding is associated with both the own and the partner's self-reported dyadic adjustment. Neither actor's nor partner's actual understanding scores were associated with self-reported dyadic adjustment.

For which aspect(s) of dyadic adjustment is perceived understanding a predictor? To gain a more detailed understanding of the role of both partners' level of perceived understanding in postdicting dyadic adjustment, the four subscales of the Dyadic Adjustment Scale were examined. An additional APIM analysis considering the interdependence.between partners was conducted with each partner's score on the subscales of the DAS as the dependent variables. Each participant's own and their partner's levels of perceived understanding were entered as predictors. The indistinguishability test of the full model was (marginally) not significant ($c^2(16) = 24.61$, p = 0.08). However, similar as in hypothesis 1 and 2, we decided to keep gender into the model.

Using Pillai's trace, a significant association between the participants' own perceived understanding (men: F(4, 146) = 10.59, p < .01; women: F(4, 146) = 4.92, p < .01) and their partner's perceived understanding (men: F(4, 146) = 2.56, p < .05; women: F(4, 146) = 2.82, p < .05) with the subscales of the DAS emerged. However, because the two-way interaction between both partners' perceived understanding was not significant (men: F(4, 145) = 1.78, p = .14; women: F(4, 145) = 1.33, p = .26), this term was omitted from the final model. Table 2 reports the parameter estimates, standard errors, and the effect sizes for men and women.

The results show that each participant's own perceived understanding score correlated with all the aspects of dyadic adjustment, both for men and women. These findings indicate that feeling understood by one's partner during a conflict interaction is associated with higher levels of relationship functioning and satisfaction (i.e., dyadic adjustment). Specifically, each participant's level of perceived understanding was positively associated with (1) their own level of perceived consensus within the relationship, (2) their own perception of expressing affection towards each other, (3) their own feelings of connectedness, and (4) their own level of overall relationship satisfaction. Their partner's perceived understanding was also

positively associated with some of the subscales of the own dyadic adjustment. For men, their female partner's perceived understanding was positively associated with their own level of dyadic consensus and thus their experience of a high level of consensus on daily topics. For women, we found the same result and additionally, their male partner's perceived understanding was also positively associated with (1) their own level of overall relationship satisfaction, and (2) their own perception of expressing affection towards each other.

Discussion

Summary of Results

The present study sought to answer an empirically and clinically relevant question about how partners' objective abilities to understand each other during a conflict and their subsequent feelings of assumed as well as perceived understanding are related, and whether their actual and/or perceived understanding are related to their levels of dyadic adjustment.

Assumed, perceived, and actual understanding

Concerning our first hypothesis, we found some mixed results. Some aspects of perceivers' actual understanding (i.e., objective empathic accuracy score) –for men actual understanding of their partner's negative thoughts and neutral feelings, and for women actual understanding of their partner's positive feelings– were positively associated with their assumed understanding (i.e., self-reported level of situation-specific understanding; *Hypothesis 1*). However, because of the lack of clear pattern in these findings, it is not possible to conclude what these results indicate. Furthermore, and also contrary to our hypothesis, we found that the perceiver's actual understanding was not associated with their partner's level of perceived understanding (i.e., self-reported level of situation-specific perceived understanding; *Hypothesis 2*). This finding indicates that a target's perception of

being understood during the interaction is not based on the actual empathic performance of his or her partner. These findings applied equally to the men and the women who took part in this study.

On the one hand, these results are somewhat surprising considering that the measures of assumed understanding and perceived understanding were filled out immediately after the interaction task and concerned the dyad members' perceptions of their own and their partner's level of understanding as experienced in the preceding interaction. On the other hand, previous studies have reported evidence showing that people are not good at judging their own empathic abilities on self-report measures. Several studies have explored the association between participants' actual understanding scores and their scores on the perspective-taking subscales of the Interpersonal Reactivity Index (IRI; Davis, 1980), but these have failed to find any positive association (Ickes, et al.,1990; Stinson & Ickes, 1992; Laurent & Hodges, 2009). In addition, an unpublished master's thesis study by Mortimer (1996) found evidence that most perceivers are also unable to track variation in their level of empathic accuracy across the set of inferences that they make during an online measurement.

If an individual's own score on the self-report measure of how well he or she feels understood by the partner is not based on the actual performance of that partner, then what does affect his or her perceived understanding score? One possibility is that partners base these post-interaction ratings on their general feeling of (dis)satisfaction with the level of mutual understanding within their relationship, irrespective of the actual level of understanding in the specific conflict interaction This general feeling of being understood is probably based on many other previous conflicts on the same and other topics. This explanation is based on the concept of 'sentiment override' during interactions, which refers to the observation that partners' behavior during interactions is determined to a greater extent by a global sentiment about the relationship than by the valence of the immediately preceding

stimulus, which in this case is the behavior displayed by a participant's intimate partner (e.g., Fincham, Garnier, Gano-Phillips, & Osborne, 1995; Verhofstadt, et al., 2005; Weiss, 1980). One lab-based interaction might not affect a cognitive schema that has developed over time; indeed there is abundant empirical evidence confirming that these relational schemas are relatively stable over time and situations (Fiske & Taylor, 2013). Also, in the current study, a partner's level of perceived understanding was associated with their level of relationship satisfaction, providing evidence for this potential explanation. These findings suggests that attention is generally drawn to schema-consistent information whereas schema-inconsistent information might receive less attention or might even be neglected. Regarding our results, the partners might have based their perceived understanding ratings on the schema-confirming clues present in the observed interaction (e.g., verbal or nonverbal behavioral cues such as the partner's verbal acknowledgments and nonverbal head nods), even though these clues were not necessarily indicative of the partner's accurate understanding.

Actual understanding and dyadic adjustment

The results did not confirm the first part of our main hypothesis as no general association was found between actual understanding and relationship functioning and satisfaction as measured with the Dyadic Adjustment Scale.

These findings are in line with a study by Cohen, Schulz, Weiss, & Waldinger (2012) in which they also differentiated by valence –distinguishing between empathic accuracy for positive emotions, which have no potential to threaten the perceiver, and empathic accuracy for negative emotions, which may be relationship threatening, in line with the Ickes and Simpson's model (1997)– but also found that empathic accuracy was not a very strong predictor of relationship satisfaction. Perceived empathic effort by the partner was found to be a much stronger predictor of relationship satisfaction, however, especially for women.

This indicates that women may place greater value on their partners' willingness and investment of energy to understand them, reflected in their empathic effort. Furthermore, although previous research found some evidence for the relevance of empathic accuracy for important relationship outcomes, it is possible that accurately inferring one's partner's unspoken and moment-by-moment thoughts and feelings is not actually as important as attending to some other aspects of one's partner or the relationship (e.g., global emotional state, overall point of view about the topic of interaction, ...).

Another factor that might moderate the effect of empathic accuracy on both perceived understanding and dyadic adjustment, is so-called empathy communication. To be useful, empathic inferences must be effectively communicated, both verbally and nonverbally, so that an individual experiences the feeling of being understood by his or her partner. Empathy is a multi-dimensional skill that involves multiple components, including motivational (e.g., intrinsic motivation for empathic behavior; Ickes, 2011), affective (e.g., sharing others' emotions; Davis, 1994; Eisenberg & Strayer, 1987), cognitive (e.g., understanding others' emotions; Ickes, 1990), social-contextual (e.g., context of support provision; Verhofstadt et al., 2008), and behavioral ones (e.g., responsiveness; Reis & Clark, 2013; Reis & Gable, 2015). The interaction of (a subset of) these components recently gained more research attention, for example, one study demonstrated that empathic accuracy facilitates responsiveness, but only when empathic concern of the perceiver was high (Winczewski, Bowen, & Collins; 2016). This issue raises the importance of future research examining the role of potential moderators of the association between the cognitive component of empathy and relationship outcomes.

Perceived understanding and dyadic adjustment

The second part of the main analysis revealed that an actor's situation-specific perceived understanding is associated with his or her relationship functioning and satisfaction as measured with the Dyadic Adjustment Scale. The partner effect was also significant, when one partner reported higher levels of perceived understanding, the other partner reported higher levels of dyadic adjustment. Again, causality cannot be inferred from this result as it might be that it is important for a partner's level of relationship well-being that the other partner feels understood; however, for this causal interpretation to be correct, one would need meta-knowledge about their partners' perceived understanding. It is also reasonable to assume that partners who are satisfied with their relationship put more effort in making the other feels understood (e.g., nod, saying 'I understand', agree with the partner).

The additional explanatory analysis revealed that each participant's own level of perceived understanding is associated with all aspects of their own dyadic adjustment: dyadic consensus, dyadic satisfaction, affectional expression, and dyadic cohesion. Furthermore, the partner's level of perceived understanding was also associated with one aspect of men's score on dyadic adjustment: dyadic consensus, and for women, the partner's level of perceived understanding was associated with three aspects of their dyadic adjustment: dyadic consensus, satisfaction, and affectional expression.

These findings are in line with previous work by Pollmann and Finkenauer (2009) who found that partners' general feelings of understanding each other are predictive of several indicators of relationship well-being (dyadic adjustment, intimacy, and trust) but that accurate knowledge about a partner was not. This finding may also confirm the clinical experience of many couple therapists that perceived understanding plays a major role in relationship well-being and satisfaction, because a common complaint of partners seeking marital help is a lack of (mutual) understanding in their relationship (Laing, Phillipson, &

Lee, 1966). Our findings suggest that a combination of strengthening empathic efforts and encouraging responsive behavior might help to enhance the feeling of perceived understanding.

Strengths and limitations of the present study

The use of an observational design allowed us to collect an overall measure of empathic accuracy (one that was aggregated across all of the perceiver's inferences) along with post-interaction measures of assumed and perceived understanding. This enabled us to compare an objective measure of understanding (i.e., empathic accuracy) with the perception of each participant's own and their partner's understanding, a comparison that had not been conducted in research so far. In addition, a dyadic approach was used that included data from both the actor and partner in the process of understanding in couples and this enabled us to assess the influence of both actor and partner effects on relationship outcomes. Finally, given the time-consuming and labor-intensive realities of observational research, the large sample size is definitely an advantage of this study.

With regard to the study's limitations, it should be noted that method-variance might have played a role in the (lack of) associations in the current study. The dyadic-interaction paradigm used in the present study has been demonstrated to be a reliable measure of couples' interactions and strives to optimize ecological validity of interaction-based understanding which implies that not all variables can be controlled and thus possible noise occurs. It will be important for future research to minimalize confounding variables to strengthen the validity of our findings by replicating them and by combining different types of measurement. Also, the generalizability of the results may be limited because the sample consisted of white, middle-class couples that were generally satisfied with their relationships. It would be useful to examine a sample that is more heterogeneous and consists of at least a

subsample of couples who are currently experiencing high levels of relationship distress. Furthermore, the self-reports of dyadic adjustment levels were measured before the interaction task and thus reflected a general perception of the relationship whereas actual understanding and perceived understanding were measured during and after a conflict and thus reflected situation-specific understanding, which can be considered as a weakness in our operationalization. Future research should include a post-interaction measure of relationship well-being, and satisfaction and should also consider the role of possible moderators of the association between actual understanding and relationship outcomes, such as empathy communication, and empathic concern. Finally, the usual recommended caution should be exercised in inferring causality from our results, as the cross-sectional design means that the hypothesized temporal ordering of the variables could not be established conclusively.

Conclusion

The aim of the present study was to replicate earlier findings demonstrating that although understanding is at the heart of all relationships, subjectively feeling that one is understood by the partner appears to be more important to relationship well-being than actually understanding and being understood by one's partner. Earlier studies mainly relied on self-report and therefore measured general feelings of knowing and understanding the other. The present study tried to expand this line of research by using an objective situational measure of understanding during couples' interactions in combination with subjective measures of understanding and feeling understood. Our findings confirm the fact that perceived understanding, but not actual understanding, is important for couples' dyadic adjustment. Overall, this paper is unique in its methodology and therefore provides a first step in answering an important question about the importance of cognitive understanding in intimate relationships. However, given the limitation that this study used only one type of

measurement for each aspect of understanding, caution needs to be exercised in interpreting these results as indicative of the interplay between different aspects of understanding in relationships. Further replication is needed and should focus on embedding cognitive forms of understanding in the full picture of interactive factors that seem to moderate and mediate the effect of objective understanding on relational outcomes.

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Tables

	Men							
	М	SD	Range	М	SD	Range	Diff	
Dyadic adjustment	119.31	12.8 7	86-149	117.9 1	13.3 4	69-148	1.39	
Dyadic consensus	51.75	6.38	31-65	50.95	7.40	14-64	1.36	
Dyadic satisfaction	41.66	4.25	28-49	41.03	4.46	24-49	1.94	
Affectional expression	9.22	1.86	2-12	8.99	2.12	1-12	1.23	
Dyadic cohesion	16.69	3.45	7-23	16.95	3.40	8-24	-0.83	
Assumed understanding	27.77	4.42	10-35	26.78	3.99	10-35	2.70*	
Perceived understanding	27.43	4.59	14-35	26.18	5.02	10-35	3.00*	
Actual understanding								
Negative thoughts ^a	0.43	0.38	0-2	0.44	0.48	0-2	-0.82	
Neutral thoughts ^a	0.39	0.35	0-2	0.37	0.34	0-1.5	0.09	
Positive thoughts ^a	0.45	0.39	0-1.75	0.41	0.35	0-1.75	0.94	
Negative feelings ^a	0.43	0.42	0-1.88	0.42	0.41	0-1.75	-0.31	
Neutral feelings ^a	0.39	0.42	0-1.75	0.42	0.47	0-2	-0.22	
Positive feelings ^a	0.47	0.41	0-2	0.45	0.41	0-2	-0.55	
Readability	1.75	0.28	1.16-2.59	1.69	0.25	1.05-2.34	2.85	

Table 1 – Descriptive Statistics for the Study Variables and the Results of Paired Sample t-tests Comparing Men and Women.

Note. * $p \le .05$ ** $p \le .01$; N = 152; ^aThis variable is centered in the analysis.

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		Estimate	SE
Perceived unde	rstanding		
	Actor	1.09***	0.14
	Partner	0.41**	0.14
Actual understa	anding		
Thoughts			
	Actor		
	Positive	-0.48	2.02
	Neutral	1.54	2.06
	Negative	2.75	1.99
(Partner		
1	Positive	-0.95	2.01
	Neutral	-2.58	2.08
	Negative	-0.76	2.01
Feelings			
4	Actor		
	Positive	1.34	1.77
	Neutral	-0.70	1.75
	Negative	1.03	2.14
	Partner		
	Positive	1.18	1.79
	Neutral	-0.65	1.78
	Negative	0.21	2.22

Table 2 - Actor and Partner Effects of Perceived Understanding and Actual Understanding on Dyadic Adjustment.

Note.⁺ $p \le .10, * p \le .05, ** p \le .01, *** p \le .001$

		Me	n	Women		
Predictors	Outcome variables	Estimate	SE	Estimate	SE	
Actors' perceived understanding						
-	Dyadic consensus	0.57***	0.11	0.30**	0.12	
	Dyadic satisfaction	0.43***	0.07	0.30***	0.07	
	Affectional expression	0.15***	0.03	0.09*	0.04	
	Dyadic cohesion	0.22***	0.07	0.16**	0.06	
Partners' perceived understanding						
	Dyadic consensus	0.21*	0.10	0.36**	0.14	
	Dyadic satisfaction	0.09	0.07	0.17*	0.08	
	Affectional expression	-0.02	0.03	0.09*	0.04	
	Dyadic cohesion	-0.03	0.06	-0.02	0.07	

Table 3 – Actor and Partner Effects of Perceived Understanding on the Subscales of Dyadic Adjustment.

Note. * $p \le .05$, ** $p \le .01$, *** $p \le .001$

Figure legends

Figure 1

Figure 2 - Example of an Actor-Partner Interdependence Model

Figure 3 - *A Visual Representation of the APIM including Actual Understanding as Predictor for Assumed Understanding and Relationship Length as Covariate.*

Note. $*p \le .05$, $**p \le .01$

Figure 4 - *A Visual Representation of the APIM including Actual Understanding as Predictor for Perceived Understanding and Relationship Length as Covariate.*

Note. $* p \leq .05$, $** p \leq .01$

Figure 5 - A Visual Representation of the APIM including Actual Understanding and Perceived Understanding as Predictors for Dyadic Adjustment.

Note. $* p \le .05$, $** p \le .01$

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

The authors will not make the data publicly available due to institutional regulations and due to the nature of the data gathered.

Appendix A

Please score the following statements regarding the interaction you just had with your partner.

1	2	3	4	5	6	7
Not at all	Hardly at all	A little bit	Somewhat	Quite a bit	Very much	Completely

(Assumed understanding)

- 1. To what extent do you think you "missed the key meaning' of this interaction for your partner?
- 2. To what extent do you think you made an effort to understand your partner's thoughts and feelings during this interaction (e.g., put yourself in "his/her shoes", tried to see the situation "through his/her eyes")?
- 3. To what extent do you think you accurately understood your partner's thoughts and feelings during the interaction?
- 4. To what extent do you think you understood the importance of this interaction as experienced by your partner
- 5. To what extent do you think you understood the ways in which this interaction was distressful for your partner?

(Perceived understanding)

- 1. To what extent do you think your partner "missed the key meaning" of this interaction for you?
- 2. To what extent do you think your partner made an effort to understand your thoughts and feelings during the interaction (e.g. put him/herself in "your shoes", tried to see the situation "through your eyes")?
- 3. To what extend do you think your partner accurately understood your thoughts and feelings during the interaction?
- 4. To what extent do you think your partner understood the importance of this interactions as you experienced it?
- 5. To what extent do you think your partner understood the ways in which this interaction was distressful for you?

Correlation Matrix														
 Measure	1	2	3	4	5	6	7	8.1	8.2	8.3	8.4	8.5	8.6	9
1. Dyadic adjustment total	.56***	.85***	.77***	.76***	.60***	.28***	.41***	.12	.00	.05	.10	01	.20*	$.14^{+}$
2. Dyadic consensus	.89***	.43***	.40***	.63***	.24**	.19*	.31***	.17	07	.05	.09	04	.12	.05
3. Dyadic satisfaction	.86***	.65***	.58***	.51***	.51***	.27**	.41***	.02	.03	04	03	.09	.18*	.12
4. Affectional expression	.66***	.50***	.55***	.41***	.30***	.23**	.29***	.14	.08	.01	.07	05	.13+	.08
5. Dyadic cohesion	.67***	.40***	.47***	.34***	.33***	.18*	.22**	01	.09	.15*	.18+	03	.19*	.23**
6. Assumed understanding	.43***	.41***	.44***	.22**	.19*	.42***	.75***	16	.03	.00	.04	.08	$.16^{+}$.08
7. Perceived understanding	.53***	.49**	.52***	.34***	.27**	.77***	.45***	10	04	.03	.02	.02	.20*	.08
8. Actual understanding														
8.1. Negative thoughts	.07	.13	.04	07	.03	.13	.07	.19	.10	.15	.29**	12	03	.16
8.2. Neutral thoughts	.09	.08	.05	.01	.09	.06	.04	.11	.10	.11	.14	.15+	.08	.15+
8.3. Positive thoughts	02	02	02	15	.06	02	.01	.06	.15	.04	.13	11	.10	.17*
8.4. Negative feelings	08	08	14	05	.05	16	19*	.05	.01	.09	12	.02	10	.20*
8.5. Neutral feelings	.20*	.19*	.21*	.11	.09	.24**	.26**	10	.24*	.07	13	.03	06	07
8.6. Positive feelings	.01	.00	.03	01	.02	.05	.06	.10	04	.19*	.11	05	.03	.19*
9. Readability	-0.08	11	16+	12	.16+	01	.01	. 06	05	.23*	.28**	.02	04	.43***

Note.⁺ < .10; * p <.05; ** p <.01;*** p < .001; Correlation coefficients between the men's score on the predictor variables (regular), correlation coefficients between the women's score on the predictor variables (*italic*), and correlation coefficients between the men and women's scores on the predictor variables (*bold*).

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Appendix B







