When Couples Disagree: Predicting Informant Differences in Adults' Emotion Regulation

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Abstract:

Objectives Investigations of emotion regulation, which includes both subjective affect and observable behaviors, could benefit from widespread adoption of multi-informant approaches. Currently, informants are infrequently used when studying adults, due to the complexity of interpreting differences among multiple reports.

Method To identify factors that predict disagreement between informants, this study evaluated self-reported and partnerr-eported emotion regulation abilities for each member of 81 adult couples. Ratings of each partner's perceived stress, symptoms of psychopathology, couple satisfaction, and intimate partner victimization were collected as potential sources of discordance.

Results Intrapersonal characteristics appeared to contribute most to diverging reports: women and men experiencing higher stress (and marginally their psychopathology) reported worse emotion regulation abilities in comparison to their partners' ratings of their abilities, underscoring the value of having multiple reports. Additionally, women's reports about their partners corresponded with their partners' self-reports but men's reports about their partners did not. Men with higher couple satisfaction reported better emotion regulation abilities compared to their partner's reports.

Conclusions More work is needed to understand multi-informant differences in adult reports of psychological functioning.

Keywords: Multiple informants | Emotion regulation | Disagreement | Report bias | Couples

Article:

Emotion regulation is the process by which emotions are identified, monitored, managed, and modified (Thompson 1994). As a construct, emotion regulation is complex, incorporating both subjective experience and observable behaviors (Hourigan et al. 2011). Emotion regulation has been conceptualized as a general individual trait that is stable across situations (Eldesouky et al. 2017) and as a context-specific response tendency that is socially acquired and mutable (John

and Gross 2004). Emotion regulation abilities are vital across the life-span for dealing with various emotional states, although normative age changes and gender differences in strategy usage have been noted (Zimmermann and Iwanski 2014). Effectively regulating one's emotions contributes significantly to emotional experiences, social relationships, sense of well-being (Gross and John 2003), and even physical health outcomes such as cardiovascular risk (Trudel-Fitzgerald et al. 2017). In 2013 alone, over ten thousand studies were published on emotion regulation (Gross 2015), and more will certainly come. In light of the popularity of assessing emotion regulation in recent literature, researchers must increase our understanding of the nature of this construct.

Because emotion regulation is thought to include some observable behaviors that are noticeable to other people, researchers studying this construct could benefit from adopting a multi-informant approach. The typical multi-informant approach involves asking multiple people, or informants, about a target individual; generally, informants are relatives, peers, or teachers who know the target well (Kaurin et al. 2016). When couples are involved, a multiinformant approach could involve individuals rating themselves and their partners on a given variable, resulting in four parallel sets of data when both members of the couple dyad serve as respondents (Busby and Gardner 2008).

Although using parent informants to collect data on children and adolescents is considered the "gold standard" (Renk 2005), using partner informants is far less common when assessing adults, with the exception of adults whose self-reports are deemed questionable due to psychosis, cognitive limitations, substance use/abuse, forensic or legal issues, or serious mental illness (Achenbach et al. 2005). Self and partner ratings are most often gathered in studies of intimate couples to examine concordance or divergence in partners' behaviors or opinions, such as for alcohol and tobacco use (Machado et al. 2017), physical health status (Wolinsky et al. 2016), or sexual dysfunction and dissatisfaction (Gungor et al. 2015). Personality traits have also been widely evaluated using multiple informant reports (Costa et al. 2018). However, relying exclusively on adults' self-reports remains the dominant method of assessment in personality research and clinical assessment (van der Ende et al. 2012; Vazire 2006). Additionally, it remains unclear whether constructs that involve internal experiences, such as emotion regulation, can be adequately assessed via observer ratings.

Yet, researchers and clinicians alike recognize the limitations inherent to asking individuals to disclose about themselves. In the case of youth, many assume that children's self-reports are compromised because they may be developmentally unable or unwilling to provide accurate and meaningful data about themselves (Brener et al. 2003; Measelle et al. 2005). Similarly, adults are subject to selfreport biases that may result from selective recall, social desirability, or instrument choice (Möricke et al. 2016), or simply from limited cognitive capacities for attention and short-term memory (Avolio et al. 1991). Using an informant, such as a romantic partner, overcomes this singlesource bias. Informants can also capture behaviors that occur in different situations or settings (Dirks et al. 2012), which increases predictive ability (De Los Reyes et al. 2015) and clinical utility (Dirks et al. 2012). Lastly, using multiple informants is advantageous at a practical level, as it is more time-efficient, user-friendly, and cost-effective than other methods such as structured interviews or direct behavioral observations (Möricke et al. 2016). Given the many factors that could bias individuals' self-reports, and the potential for multi-informant approaches to broaden the available data on an individual, it is worth contemplating why multiple informants are not used more often when assessing adults.

One obstacle to using a multi-informant approach to study emotion regulation among adults is the strong likelihood of disagreement between self and informant reports, which is common (Achenbach 2006) and complicates theoretical and statistical interpretation of their reports (Kraemer et al. 2003). One must decide whose report will be relied upon in the event of disagreements, and in which situations (Rodriguez et al. 2016). Individuals' reports may differ in their predictive power (Loeber et al. 1990), complicating decision-making in clinical practice settings (De Los Reyes et al. 2013). Although clinical decisions for children rely more on parent-provided information than children's self-report, "best practices" have yet to be established for adults (De Los Reyes et al. 2015). Nonetheless, differences between adult reports are still meaningful in that they convey differences in informants' perspectives. Thus, in spite of potential complexities, the wealth of material gained from using multiple reporters makes this methodological approach worth exploring.

To address this complexity of interpretation, researchers need to consider and test why self and partner reports about constructs such as emotion regulation might diverge (Costa et al. 2018). Low informant agreement may result in part from the differing abilities of individuals to perceive a target behavior (Loeber et al. 1990). In the case of emotion regulation, one's thoughts or internal emotional states are not visible to others; even some mood regulation behaviors may not be readily observed by others (Hourigan et al. 2011). Furthermore, sociocultural factors such as traditional gender norms may also influence how women and men perceive and report about behaviors and attitudes, such as sexual activity and satisfaction (Gungor et al. 2015); this may also apply to the gender-stereotyped domain of emotional expression and regulation (Zimmermann and Iwanski 2014). Additionally, studies that have examined intimate partners find that couples exhibit signs of bias, wherein one member assumes similarity to their partner, particularly for constructs that pertain to their relationship (Kenny and Acitelli 2001). Thus, couples may be motivated to perceive their partners in a certain light due to the intimate nature of their relationship.

Differences in opinion also appear to relate to individuals' unique perspectives and differences in their perceptions and goals (De Los Reyes and Kazdin 2005; Dirks et al. 2012), as well as informants' own traits (De Los Reyes et al. 2008). Characteristics such as perceived stress and psychopathology may be particularly impactful, as depression is thought to distort the depressed individual's perceptions, as proposed by the depression-distortion hypothesis (De Los Reyes and Kazdin 2005; Richters and Pellegrini 1989). Alternatively, depressed individuals are hypothesized to reflect upon themselves more accurately than non-depressed individuals, who are thought to exhibit a self-affirmation bias (Moore et al. 2016)—a phenomenon termed the depressive realism hypothesis. Perceptual differences due to the presence or absence of depressive symptoms may therefore widen the gap between self- and informant-reports about one's own or one's partner's abilities to regulate negative emotions.

In addition to intrapersonal traits, qualities of the relationship between informants and the target individual may affect informants' reports, which is particularly relevant in intimate partner relationships (cf. Keeny and Acitelli 2001). For instance, relationship qualities such as satisfaction may shape informants' perceptions of and reports about the individual due to leniency bias or halo effects, in which one's ratings about an individual's specific attributes are based on one's general judgment of that individual (Hoyt 2000). Romantically-involved couples in particular may be susceptible to sentiment override, the global affection or disaffection for one's partner or relationship that creates a perceptual filter (Weiss 1980). Whereas high relationship satisfaction may contribute to a positive sentiment that biases informants to rate their

partner more positively on specific dimensions, a detrimental relationship factor such as experiencing domestic violence victimization might negatively affect informants' ratings of their partner. Thus, global impressions based on broad relationship factors may impair accurate ratings of one's partner on specific dimensions. Given that women, but not men, appear to be influenced by their global marital sentiments when evaluating partners' affective expressions (Hawkins et al. 2002), gender differences in sentiment override should be examined. By examining these qualities in relation to informant reports, researchers can learn about intrapersonal and interpersonal factors that may affect individuals' ratings of themselves and their partners, which may ultimately help professionals decide whose report to rely on, and when, in research and clinical settings.

The present study aimed to investigate factors that contribute to differences between self-reported and partnerreported emotion regulation among adult heterosexual couples. Each member of the couple reported on their own and their partner's emotion regulation abilities. Each partner's personal characteristics, as well as qualities about the couple relationship, were hypothesized to contribute to differences in adult couples' opinions of their emotion regulation abilities. Specifically, the current study examined the influence of perceived stress, endorsement of symptoms of psychopathology, relationship satisfaction, and intimate partner victimization on individuals' reports of their own and their partner's emotion regulation abilities. A number of hypotheses were proposed. First, with regard to intrapersonal qualities, higher perceived personal stress and more symptoms of psychopathology were expected to be associated with greater discordance between self-reported and partner-reported emotion regulation abilities. Second, with regard to couple-related characteristics, higher intimate partner victimization and lower relationship satisfaction were expected to be associated with greater discordance between self-reported and partner-reported emotion regulation abilities. Third, concerning the direction of discordance, self-reports of higher perceived personal stress, greater symptoms of psychopathology, higher intimate partner victimization, and lower relationship satisfaction were expected to be associated with lower self-reports of emotion regulation abilities relative to partners' reports of those abilities. Fourth, given the strong gendered norms in emotional expression and emotion regulation strategies (Zimmermann and Iwanski 2014), gender differences in these associations were explored.

Method

Participants

The sample included 81 male-female dyads recruited for a parenting study of couples raising preschoolers in the Southeast, U.S. Women's mean age was 33.85 years (SD = 5.20) and men's mean age was 35.99 years (SD = 7.35). Participants self-identified as primarily Caucasian (women, 76.5%; men, 80.2%), followed by African-American (women, 19.8%; men 18.5%) or Asian (1.2% of both women and men); in addition, some respondents also identified as Hispanic/Latino (women, 6.2%; men, 1.2%). Couples had been in a relationship for 10.40 years (SD = 4.65) on average. For both parents, median educational level was a 4-year college degree. Parents were raising an average of two children on a median annual family income of \$65,000. A sensitivity power analysis using APIM Power (Ackerman and Kenny 2016) conducted after data were collected revealed that the final sample size should have provided adequate power (>.80) to detect small-to-medium-sized effects (r = .21).

Procedure

Couples were recruited for a larger parenting study, the "Couples Parenting Preschoolers Study," with flyers distributed at relevant locations in the local community, including day care centers, and through newspaper advertisements. To be eligible to participate in the larger study, couples had to be married and/or cohabitating parents of a 3–6-year-old child. Couples interested in participating phoned the lab to schedule a 90-min in-home session. All measures were presented electronically on individual laptop computers and each member of the couple completed their assessments in separate, private rooms. Participants' individual item responses were automatically entered into a database with a randomly assigned family identification number to assure parents anonymity in their responding. Each member reported on their own emotion regulation abilities first, followed by four unrelated measures, before reporting on their partner's emotion regulation abilities Each member of the couple received \$30 for study participation. All procedures in the larger study were approved by the university institutional review board.

Measures

Emotion regulation

The *Negative Mood Regulation Scale* (NMRS; Catanzaro and Mearns 1990) consists of 30 items measuring how participants believe they manage negative emotions. The NMRS presents 30 items in which respondents indicate how well they believe they regulate their distress using mood regulation strategies. Items are scored on a 5-point Likert scale, from (1) strongly disagree to (5) strongly agree. Items are then summed and oriented so that higher total scores suggest better regulation of negative emotions. The NMRS demonstrates internal consistency, stability, and concurrent and predictive validity with negative affect (Catanzaro and Mearns 1990) and evidences convergent validity with other emotion regulation measures (Bardeen et al. 2016). In the current study, good internal consistency was observed for both members of the couple (women's $\alpha = .89$; men's $\alpha = .88$).

A second informant version of the NMRS (Rodriguez et al. 2016), which presents the NMRS with modified language in the items and instructions, was also administered to each member of the couple. Before each of the 30 items, each participant was instructed to report on how well they believe their partner can regulate their distress using mood regulation strategies; thus, instructions and all items in this version parallel those on the self-report version using the same 5-point scale. Higher scores on this Partner NMRS suggest perception of better emotion regulation ability in their partner. A similar adaptation for parents to report on their emerging adult child's emotion regulation ability (Rodriguez et al. 2016) also demonstrated internal consistency for the emerging adults ($\alpha = .90$) and their mothers ($\alpha = .88$) and fathers ($\alpha = .89$). The current study also observed strong reliability for this Partner NMRS version for both women ($\alpha = .94$) and men ($\alpha = .92$).

Intrapersonal functioning

The *Perceived Stress Scale* (PSS; Cohen et al. 1983) was administered to assess participants' sense that their lives have been overwhelming, uncontrollable, or unpredictable in the past

month. Ten items are presented using a 5-point Likert scale from (1) never to (5) very often. Total scores are averaged across items, with higher scores indicating greater perceived stress. The current sample demonstrated acceptable internal reliability for both women ($\alpha = .84$) and men ($\alpha = .83$).

The *Revised Symptom Checklist-90* (SCL-90-R; Derogatis 1994) is a measure of a range of mental health symptoms: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. Respondents indicated on a 5-point Likert scale how frequently they have been bothered by 90 symptoms in the past week, from (0) not at all to (4) extremely. General symptom distress is the total sum across symptoms, with higher scores indicative of greater distress. The SCL-90-R demonstrated strong internal consistency in this study for both women ($\alpha = .93$) and men ($\alpha = .92$).

Relationship functioning

The *Couple Satisfaction Index* (CSI; Funk and Rogge 2007) presents items measuring overall relationship satisfaction; in the current study, 16 items were rated on a 6-point scale, with higher scores indicative of greater satisfaction. The CSI can discriminate between distressed and non-distressed relationships. Scores on the CSI are related to alternative measures of dyadic adjustment and marital satisfaction (Funk and Rogge 2007). Internal consistency was high in the current sample for both women ($\alpha = .98$) and men ($\alpha = .97$).

The *Revised Conflict Tactics Scale Short Form* (CTS2S; Straus and Douglas 2004) is an abbreviated version of the Revised Conflict Tactics Scales (Straus et al. 1996), a frequently used measure of intimate partner violence. The CTS-2S provides a weighted frequency count of how the couple addresses a wide range of conflict strategies including negotiation, psychological aggression, physical assault, sexual coercion, and injury. Half of the items involve perpetration with parallel items addressing victimization. For the present study, the eight items involving victimization with either psychological or physical aggression were selected, with higher scores indicative of greater frequency of psychological and/or physical victimization. The test authors provide evidence of concurrent validity as well as concordance with the longer version.

Data Analyses

To address the primary research question regarding the factors that predict differences between self-reported and partner-reported emotion regulation, the following two-level model that nested individuals within couples using HLM 7.01 was estimated following the recommendations of Kenny et al. (2006):

 Y_{ij} (Emotional Regulation Discrepancy) =

 $\beta_{0ij} + \beta_{1ij}$ (Perceived Stress) + β_{2ij} (Mental Health Symptoms)

+ β_{3ii} (Victimization) + β_{4ii} (Relationship Satisfaction)

+ β_{5ii} (Partners' Perceived Stress)

+ β_{6ii} (Partners' Mental Health Symptoms)

+ β_{7ij} (Partners' Victimization)

+ β_{8ii} (Partners' Relationship Satisfaction) + r_{ii}

In this model, emotion regulation discrepancy scores were simultaneously regressed onto participants' self-reported perceived stress scores, mental health symptoms scores, victimization scores, and relationship satisfaction scores, as well as their partner's self-reported perceived stress scores, mental health symptoms scores, victimization scores, and relationship satisfaction scores, victimization scores, and relationship satisfaction scores in the first level of the model. The non-independence of couples' data was controlled in the second level of the model with a randomly varying intercept.

Given that traditional difference scores—in which in which each person's score is subtracted from their partner's score-have long been associated with measurement error and can lead to erroneous conclusions (Cronbach and Furby 1970; Griffin et al. 1999), the current study did not adopt that approach. Instead, emotion regulation discrepancy scores were created from a separate analysis that regressed participants' self-reported emotion regulation ability scores onto partners' reports of participants' emotion regulation ability scores. The unstandardized residuals from this analysis served as the index of the discrepancy between self-reported and partner-reported emotion regulation, and this approach is not subject to the same erroneous conclusions that plague traditional difference score approaches (see Castro-Schilo and Grimm 2018; Laird and De Los Reyes 2013; Laird and Weems 2011). Such discrepancy scores may be interpreted in a manner similar to traditional difference scores, however. Specifically, higher discrepancy values indicate that participants' reports of their own emotion regulation abilities were greater than their partners' reports of participants' abilities; lower values indicate that partners' reports of participants' emotion regulation abilities were greater than participants' own reports of their abilities. Significant positive associations would indicate that a given predictor is associated with greater self-reported emotion regulation abilities, whereas significant negative associations would indicate that the predictor is associated with greater partner-reported emotion regulation abilities.

Results

Preliminary Analyses

Descriptive statistics and correlations among all variables appear in Table 1. Mean discrepancies between participants' self-reports and partners' reports of their emotion regulation abilities were 10.99 for women (SD = 19.26) and 6.86 for men (SD = 19.04). No mean gender differences across any measures were observed (all p > .05). Note that both women and men viewed their own negative emotion regulation abilities as stronger than how their emotion regulation abilities were perceived by their partners (women, t(80) = 3.76, p < .001; men, t(80) = 4.73, p < .001). Also note in Table 1, men's self-reported better emotion regulation was associated with lower perceived stress, fewer symptoms of psychopathology, less intimate partner victimization, and greater relationship satisfaction; women's self-reported better emotion regulation abilities were also associated with lower perceived stress and psychopathology but were not significantly

related to their IPV victimization or couple satisfaction. Also shown in Table 1, women's self-reported emotion regulation abilities about themselves were only

	Women M (SD)	Men M(SD)	1.	2.	3.	4.	5.	6.
1. PSS	2.34 (.51)	2.26 (.51)		.43***	.21	36***	61***	18*
2.SCL-90-R	24.78 (20.37)	22.77 (24.14)	.58***		.51***	58***	56***	23*
3. CTS-2S	5.75 (8.71)	5.26 (7.24)	.36***	.18		71***	29**	32**
4. CSI	79.37 (17.06)	80.69 (14.41)	42***	24*	47***		.49***	.50***
5. Self NMRS	115.41 (13.56)	113.26 (12.75)	44***	29**	17	07		.38***
6. Partner NMRS	106.24 (19.59)	104.43 (16.85)	22*	13	24	.44***	.21	

Table 1 Means, standard deviations, and correlations among measures

Women's scores below the diagonal; Men's scores above the diagonal

I Perceived Stress Scale, *2* Revised Symptom Checklist, *3* Conflict Tactics Scale-2 Short Form, *4* Couple Satisfaction Index, *5* Negative Mood Regulation Scale on self emotion regulation abilities, *6* Negative Mood Regulation Scale on their partner's emotion regulation abilities $*p \le .05$; $**p \le .01$; $**p \le .001$

marginally related to their reports of their partner's emotion regulation abilities (r = .21), but men's self-reported emotion regulation about themselves were significantly related to their reports of their partner's emotion regulation abilities (r = .38). Not depicted in the table, women's reports of their partner's emotion regulation abilities were significantly related to men's self-reported emotion regulation (r = .37, p < .001), reflecting cross-informant concordance, but men's reports of their partner's emotion regulation abilities were only marginally related to women's self-reported emotion regulation (r = .21, p = .057).

Predictor Analyses

Results from the primary analyses are presented in Table 2. As indicated, greater discordance between participants' self-reports and their partners' reports of their emotion regulation abilities was significantly associated with participants' own perceived personal stress and marginally related to their own mental health symptoms, in support of the first hypothesis. An additional supplemental analysis indicated that participants' personal stress remained significant, B = -11.02, SE = 2.17, t(69) = -5.08, p < .001, r = .52, even when controlling for participants' age and minority status and couples' relationship duration and combined household income. However, participants' personal mental health symptoms were no longer marginally significant when those additional variables were included, B = -0.10, SE = 0.06, t(69) = -1.56, p = .123, r = .18. With regard to the second hypothesis, couple-related variables were not significantly associated with discordance between self-reported and partner-reported emotion regulation abilities. With regard to the direction of effects proposed in the third hypothesis, when participants reported higher perceived personal stress,

	В	t	Effect size r
Personal PSS	-10.57**	-4.64	.48
Personal SCL-90R	-0.11†	-1.72	.20
Personal CTS-2S	0.00	0.03	.00
Personal CSI	0.02	0.21	.02
Partners' PSS	3.02	1.17	.14
Partners' SCL-90R	-0.06	-1.22	.14
Partners' CTS-2S	-0.08	-0.63	.07
Partners' CSI	-0.14	-1.62	.19

Table 2. Effects of perceived stress, mental health symptoms, partner victimization, and relationship satisfaction on the difference between personal and partner-reported emotion regulation

PSS Perceived Stress Scale, SCL-90R Revised Symptom Checklist, CTS-2S Conflict Tactics Scale-2 Short Form, CSI Couple Satisfaction Index. $\dagger p < .10$, *p < .05, **p < .01

they rated their own emotion regulation abilities as significantly lower in comparison to their partners' ratings of their abilities. Additionally, when participants reported more mental health symptoms, they rated their own emotion regulation abilities as marginally lower in comparison to their partners' ratings of their abilities.

Gender Analyses

Finally, for the fourth research question, further supplemental analyses indicated that gender did not moderate the association between either stress, B = -1.82, SE = 4.09, t(66) = -0.45, p = .657, r = .05, or mental health symptoms, B = 0.09, SE = 0.11, t(66) = 0.83, p = .411, r = .10, and the difference between self- and partner-reports of emotion regulation abilities. Similarly, gender did not moderate any of the null effects with one notable exception —relationship satisfaction, B =-0.41, SE = 0.16, t(66) = -2.68, p = .009, r = .31. Specifically, men who reported being more satisfied with their relationship also rated their own emotion regulation abilities as better, in comparison to their partners' reports of their abilities, B = 0.33, SE = 0.13, t(66) = 2.52, p = .014, r = .30. This association was not observed among women, B = -0.09, SE = 0.10, t(66) = -0.89, p = .377, r = .11.

Discussion

In order to consider the value of utilizing couples' assessment of their partner, the current investigation evaluated factors that may influence adult couples' reports of each other's emotion regulation abilities—namely, whether each partner's personal qualities, as well as characteristics about their relationship, predict discordance between informants. Results partially supported the hypotheses, demonstrating that disagreement between partners' reports was largely attributable to personal characteristics, such as self-reported stress, and to a lesser extent, endorsement of mental health symptoms. Although gender differences were observed for couple satisfaction, disagreement between partners' reports did not appear to be attributable to other qualities pertaining to the informants' relationship, such as intimate partner victimization.

Participants' higher self-reported stress was associated with lower self-reported emotion regulation abilities in comparison to their abilities as rated by their partner, for both women and men. A similar pattern was suggested by the trends observed for personal reports of greater psychopathology, which was considered simultaneously with perceived stress, thereby reducing that effect. These findings suggest that experiencing stress or distress may skew one's self-perceptions negatively, consistent with the depression distortion hypothesis (De Los Reyes and Kazdin 2005; Richters and Pellegrini 1989). Alternatively, these results may indicate a generalized response bias, reflecting a tendency to self-report more negative experiences, rather than actual negative self-perceptions.

In addition, results indicated that men, but not women, who expressed higher couple satisfaction believed that their own emotion regulation abilities were better in comparison to how

their emotion regulation abilities were perceived by their partners. For men only, being satisfied with their couple relationship was associated with more positive selfperceptions of emotion regulation. These results are consistent with prior research suggesting that men may have a somewhat stronger positive self-serving bias than women (Mezulis et al. 2004) and that men's, but not women's, stronger emotion regulation abilities can buffer their perceived stress to improve their subjective well-being (Extremera and Rey 2015). Further, high relationship satisfaction has previously been associated with low emotional reactivity among men but not women (Peleg 2008). Thus, men reporting higher satisfaction with their relationship may perceive their own emotion regulation abilities to be better due to their generalized positive internal emotional experience. Perhaps future research studies that include men's relationship satisfaction should include an evaluation of their emotion regulation abilities.

This study contributes to the literature in considering whether adults can serve as informants regarding their partners' abilities to regulate their negative emotions. Results indicated that women's ratings of their partners corresponded more highly with their partners' self-reports than did men's ratings of their partners. If higher correspondence between partners reflects greater accuracy on the part of the informant, perhaps women are more experienced in perceiving others' internal states or emotion regulation strategies due to gendered expectations about emotional attunement or gender differences in emotion socialization (Zimmermann and Iwanski 2014). Alternatively, men's emotion regulation behaviors might be more observable to their partners than women's choice of strategies, allowing women to report about their partners more readily. Past research indicates that women reported engaging in more social support seeking and dysfunctional rumination whereas men engaged more in passivity, avoidance, and suppression (Zimmermann and Iwanski 2014). Replication is needed to elucidate these gender differences. Future studies could investigate why women's ratings of their partners are more similar to their partners' self-reports than are men's ratings of their partners, and whether this gender difference also exists when couples report on other intrapersonal qualities. This could help inform future researchers on whether women might be more accurate informants about their partners in comparison to men.

Limitations

Several limitations are worth noting. First, this study considered negative mood regulation broadly and did not consider regulation of positive emotions. This focus on negative affect states may have influenced participants' reporting tendencies. In addition, one limitation inherent to the use of informants is that this data collection strategy still uses only a single method (Holmbeck et al. 2002). Informants face many of the same reporting issues (i.e., biases related to attention, memory, social desirability, etc.) that are present when one person provides a self-report (Avolio et al. 1991; Möricke et al. 2016). This problem is especially true for the subjective, often retrospective data gathered from questionnaires. Additionally, consensus does not necessarily denote accuracy (McCrae and Costa 2013); two raters might agree about a particular behavior if

both endorse a faulty stereotype, such as perceived gender differences (Löckenhoff et al. 2014). Ideally, future studies should consider using multiple informants to evaluate bias (cf. Stern and West 2018) in conjunction with employing a variety of methodologies for assessing emotion regulation. Using more objective measures, such as direct behavioral observations, experience sampling methods, or analog tasks, would be advantageous. Nonetheless, assessing individuals' thoughts, feelings, and sense of well-being is still important to understand subjective experiences and clarify what contributes to differences of opinion.

Other limitations relate to the current study's sample characteristics. Participants were largely well-educated with moderate income levels on average, with lower socioeconomic status backgrounds somewhat less wellrepresented. Future studies could draw samples from different socioeconomic status and cultural backgrounds, which could shed light on the relative effect of intrapersonal versus relational influences among various groups. Additionally, the sample did not include same-sex couples, a population which could be examined in future research to further untangle the role of partner gender. Likewise, the current sample was recruited from the community; current findings may not generalize to couples experiencing challenges with clinical levels of psychopathology or documented domestic violence. Replication with clinical populations could prove interesting to determine the degree to which stress and mental health symptoms impact selfreported emotion regulation abilities among individuals with documented psychopathology, who might display more observable emotion regulation strategies. Finally, other intrapersonal or interpersonal characteristics that were not included in the current study might also influence concordance between adult informants. Future research might consider analyzing factors such as self-esteem or relationship communication. Similarly, conducting longitudinal studies could provide insight into changes in informant concordance over time, perhaps as predicted by changes in relationship qualities or intrapersonal factors.

Overall, the aim of the study was to identify intrapersonal and/or interpersonal qualities that contribute to differences between adults' self-reported and partnerreported emotion regulation in an effort to consider whether partners can provide an alternative perspective for research or clinical purposes. Perceived stress appears to be most critical in explaining discordance in couples' reports. To some, this finding might suggest that stress itself distorts self-perceptions regarding emotion regulation abilities, or that adults' perceptions of stress are conflated with their poor ability to cope with distress, such that adults may be unable to provide accurate data about themselves when distressed. However, others may interpret this to mean that partners cannot be accurate reporters on others' emotion regulation abilities due to the subjective nature of less observable emotion regulation strategies-although this latter concern does not hamper the assessment of children's emotion regulation abilities. Needless to say, no one has direct access to another individual's subjectively experienced emotions or internal sensations. Yet observers' perceptions and perspectives are still valuable by providing alternative information that individuals perhaps cannot or will not offer about themselves. Using multiple informants to assess adult emotion regulation could prove more effective if measures of emotion regulation purposefully rely more heavily on concrete, observable behaviors and less on internal cognitions

or subjective feelings that are difficult or even impossible for others to detect. In this manner, researchers and clinicians will be able to formulate a more comprehensive picture of adults' adaptive emotion regulation abilities.

In addition, emotion regulation has clear implications for personal coping and interpersonal relationships. Using certain coping strategies to regulate negative emotions may open or close communication with others (Folkman and Lazarus 1988), meaning that emotion regulation abilities may not simply affect one's own well-being, but also the quality of one's intimate relationships. Additionally, agreement or disagreement between couples' perceptions of each other's emotion regulation abilities could possibly serve as an indicator of the couple's ability to communicate effectively. Thus, improving adults' understanding about their own emotion regulation abilities, as well as those of their partners, could be useful in enriching the couple relationship in a therapeutic context.

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Author Contributions DP led the writing of the paper; CR designed and oversaw the study and writing; LBR analyzed the data.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Ethical approval for this study was granted by the University of North Carolina at Greensboro.

Informed Consent Informed consent was obtained from all study participants.

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References

- Achenbach, T. M. (2006). As others see us: Clinical and research implications of cross-informant correlations for psychopathology. *Current Directions in Psychological Science*, *15*, 94–98.
- Achenbach, T. M., Krukowski, R. A., Dumenci, L., & Ivanova, M. Y. (2005). Assessment of adult psychopathology: Meta-analyses and implications of cross-informant correlations. *Psychological Bulletin*, 131, 361–382.

- Ackerman, R. A., & Kenny, D. A. (2016). APIMPower: An interactive tool for Actor-Partner Interdependence Model power analysis [Computer software]. Available from <u>https://robert-a-ackerman.shinyapps.io/apimpower/</u>.
- Avolio, B. J., Yammarino, F. J., & Bass, B. M. (1991). Identifying common methods variance with data collected from a single source: An unresolved sticky issue. *Journal of Management*, 17, 571–587.
- Bardeen, J. R., Fergus, T. A., Hanna, S. M., & Orcutt, H. K. (2016). Addressing psychometric limitations of the Difficulties in Emotion Regulation Scale through item modification. *Journal of Personality Assessment*, 98, 298–309.
- Brener, N. D., Billy, J. O., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health*, 33, 436–457.
- Busby, D. M., & Gardner, B. C. (2008). How do I analyze thee? Let me count the ways: Considering empathy in couple relationships using self and partner ratings. *Family Process*, 47, 229–242.
- Castro-Schilo, L., & Grimm, K. J. (2018). Using residualized change versus difference scores for longitudinal research. *Journal of Social and Personal Relationships*, 35, 32–58.
- Catanzaro, S. J., & Mearns, J. (1990). Measuring generalized expectancies for negative mood regulation: Initial scale development and implications. *Journal of Personality Assessment*, 54, 546–563.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385–396.
- Costa, Jr, P. T., McCrae, R. R., & Löckenhoff, C. E. (2018). *Personality across the life span*. *Annual Review of Psychology*, *70*, 423–448.
- Cronbach, L. J., & Furby, L. (1970). How we should measure" change": Or should we? *Psychological Bulletin*, *74*, 68–80.
- De Los Reyes, A., Augenstein, T. M., Wang, M., Thomas, S. A., Drabick, D. A., Burgers, D. E., & Rabinowitz, J. (2015). The validity of the multi-informant approach to assessing child and adolescent mental health. *Psychological Bulletin*, 141, 858–900.

- De Los Reyes, A., Goodman, K. L., Kliewer, W., & Reid-Quinones, K. (2008). Whose depression relates to discrepancies? Testing relations between informant characteristics and informant discrepancies from both informants' perspectives. *Psychological Assessment, 20,* 139–149.
- De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin*, 131, 483–509.
- De Los Reyes, A., Thomas, S. A., Goodman, K. L., & Kundey, S. M. (2013). Principles underlying the use of multiple informants' reports. *Annual Review of Clinical Psychology*, *9*, 123–149.
- Derogatis, L. R. (1994). SCL-90-R: *Administration scoring and procedures manual*. Minneapolis: National Computer Systems.
- Dirks, M. A., De Los Reyes, A., Briggs-Gowan, M., Cella, D., & Wakschlag, L. S. (2012). Annual research review: Embracing not erasing contextual variability in children's behavior–Theory and utility in the selection and use of methods and informants in developmental psychopathology. *Journal of Child Psychology and Psychiatry*, 53, 558–574.
- Eldesouky, L., English, T., & Gross, J. J. (2017). Out of sight, out of mind? Accuracy and bias in emotion regulation trait judgments. *Journal of Personality*, *85*, 543–552.
- Extremera, N., & Rey, L. (2015). The moderator role of emotion regulation ability in the link between stress and well-being. *Frontiers in Psychology*, *6*, 1632.
- Folkman, S., & Lazarus, R. S. (1988). The relationship between coping and emotion: Implications for theory and research. *Social Science & Medicine, 26*, 309–317.
- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision measurement for relationship satisfaction with the Couple Satisfaction Index. *Journal of Family Psychology*, 21, 572–583.
- Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships*, *6*, 505–518.
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*, 1–26.

- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348–362.
- Gungor, S., Keskin, U., Gülsün, M., Erdem, M., Ceyhan, S. T., & Ergün, A. (2015). Concordance of sexual dysfunction and dissatisfaction by self-report and those by partner's perception in young adult couples. *International Journal of Impotence Research*, 27, 133–139.
- Hawkins, M. W., Carrère, S., & Gottman, J. M. (2002). Marital sentiment override: Does it influence couples' perceptions? *Journal of Marriage and Family, 64*, 193–201.
- Holmbeck, G. N., Li, S. T., Schurman, J. V., Friedman, D., & Coakley, R. M. (2002). Collecting and managing multisource and multimethod data in studies of pediatric populations. *Journal of Pediatric Psychology*, 27, 5–18.
- Hourigan, S. E., Goodman, K. L., & Southam-Gerow, M. A. (2011). Discrepancies in parents' and children's reports of child emotion regulation. *Journal of Experimental Child Psychology*, 110, 198–212.
- Hoyt, W. T. (2000). Rater bias in psychological research: When is it a problem and what can we do about it? *Psychological Methods*, *5*, 64–86.
- John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, *72*, 1301–1334.
- Kaurin, A., Egloff, B., Stringaris, A., & Wessa, M. (2016). Only complementary voices tell the truth: A reevaluation of validity in multi-informant approaches of child and adolescent clinical assessments. *Journal of Neural Transmission*, 123, 981–990.
- Kenny, D. A., & Acitelli, L. K. (2001). Accuracy and bias in the perception of the partner in a close relationship. *Journal of Personality and Social Psychology*, *80*, 439–448.

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). Dyadic Data Analysis. New York: Guilford.

Kraemer, H. C., Measelle, J. R., Ablow, J. C., Essex, M. J., Boyce, W. T., & Kupfer, D. J. (2003). A new approach to integrating data from multiple informants in psychiatric assessment and research: Mixing and matching contexts and perspectives. *American Journal of Psychiatry*, 160, 1566–1577.

- Laird, R. D., & De Los Reyes, A. (2013). Testing informant discrepancies as predictors of adolescent psychopathology. *Journal of Abnormal Child Psychology*, *41*, 1–14.
- Laird, R. D., & Weems, C. F. (2011). The equivalence of regression models using difference scores and models using separate scores for each informant: implications for the study of informant discrepancies. *Psychological Assessment*, 23, 388–397.
- Löckenhoff, C. E., Chan, W., McCrae, R. R., De Fruyt, F., Jussim, L., De Bolle, M., & Nakazato, K. (2014). Gender stereotypes of personality: Universal and accurate? *Journal of Cross-Cultural Psychology*, 45, 675–694.
- Loeber, R., Green, S. M., & Lahey, B. B. (1990). Mental health professionals' perception of the utility of children, mothers, and teachers as informants on childhood psychopathology. *Journal of Clinical Child Psychology*, 19, 136–143.
- Machado, M. P. A., Opaleye, D. C., Pereira, T. V., Padilla, I., Noto, A. R., Prince, M., & Ferri, C. P. (2017). Alcohol and tobacco consumption concordance and its correlates in older couples in Latin America. *Geriatrics & Gerontology International*, 17, 1849–1857.
- McCrae, R. R., & Costa, Jr, P. T. (2013). Introduction to the empirical and theoretical status of the five-factor model of personality traits. In T. A. Widiger & P. T. Costa, Jr. (Eds), *Personality disorders and the five-factor model of personality* (pp. 15–27). Washington, D.C.: American Psychological Association.
- Measelle, J. R., John, O. P., Ablow, J. C., Cowan, P. A., & Cowan, C. P. (2005). Can children provide coherent, stable, and valid selfreports on the big five dimensions? A longitudinal study from ages 5 to 7. *Journal of Personality and Social Psychology*, *89*, 90–106.
- Mezulis, A. H., Abramson, L. Y., Hyde, J. S., & Hankin, B. L. (2004). Is there a universal positive bias in attributions? A meta-analytic review of individual, developmental, and cultural differences in the self-serving attributional bias. *Psychological Bulletin*, 130, 711–747.
- Moore, M. T., Dawkins, Jr, M. R., Fisher, J. W., & Fresco, D. M. (2016). Depressive realism and attributional style: Replication and extension. *International Journal of Cognitive Therapy*, 9, 1–12.
- Möricke, E., Buitelaar, J. K., & Rommelse, N. N. (2016). Do we need multiple informants when assessing autistic traits? The degree of report bias on offspring, self, and spouse ratings.

Journal of Autism and Developmental Disorders, 46, 164–175. Peleg, O. (2008). The relation between differentiation of self and marital satisfaction: What can be learned from married people over the course of life? *The American Journal of Family Therapy, 36*, 388–401.

- Renk, K. (2005). Cross-informant ratings of the behavior of children and adolescents: The "gold standard". *Journal of Child and Family Studies*, *14*, 457–468.
- Richters, J., & Pellegrini, D. (1989). Depressed mothers' judgments about their children: An examination of the depression-distortion hypothesis. *Child Development*, *60*, 1068–1075.
- Rodriguez, C. M., Tucker, M. C., & Palmer, K. (2016). Emotion regulation in relation to emerging adults' mental health and delinquency: A multi-informant approach. *Journal of Child and Family Studies*, 25, 1916–1925.
- Stern, C., & West, T. V. (2018). Assessing accuracy in close relationships: A truth and bias approach. *Journal of Social and Personal Relationships, 35*, 89–111.
- Straus, M. A., & Douglas, E. M. (2004). A short form of the Revised Conflict Tactics Scales, and typologies for severity and mutuality. *Violence and Victims*, *19*, 507–520.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The Revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal* of Family Issues, 17, 283–316.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of a definition. *Monographs of the Society for Research in Child Development, 59*, 25–52.
- Trudel-Fitzgerald, C., Qureshi, F., Appleton, A. A., & Kubzansky, L. D. (2017). A healthy mix of emotions: Underlying biological pathways linking emotions to physical health. *Current Opinion in Behavioral Sciences*, 15, 16–21.
- van der Ende, J., Verhulst, F. C., & Tiemeier, H. (2012). Agreement of informants on emotional and behavioral problems from childhood to adulthood. *Psychological Assessment*, 24, 293–300.
- Vazire, S. (2006). Informant reports: A cheap, fast, and easy method for personality assessment. *Journal of Research in Personality, 40*, 472–481.

- Weiss, R. L. (1980). Strategic behavioral marital therapy: Toward a model for assessment and intervention. In J. P. Vincent (Ed.), *Advances in family intervention, assessment, and theory* (pp. 229–271). Greenwich, CT: JAI Press.
- Wolinsky, F. D., Ayres, L., Jones, M. P., Lou, Y., Wehby, G. L., & Ullrich, F. A. (2016). A pilot study among older adults of the concordance between their self-reports to a health survey and spousal proxy reports on their behalf. *BMC Health Services Research*, 16, 485–492.
- Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development, 38*, 182–194.