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Co-Rumination in the Workplace: Adjustment Trade-offs for Men and Women Who Engage in Excessive Discussions of Workplace Problems

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Abstract
Purpose Developmental psychology research finds that when children and adolescents engage in excessive discussion of problems with friends, a phenomenon termed "co-rumination," they experience trade-offs between negative adjustment outcomes (e.g., depression), but better friendship quality. This study examines the possibility that adults in the workplace engage in co-rumination about workplace problems, and that co-rumination, gender, and the presence of abusive supervision influence both positive and negative individual outcomes.
Design/Methodology A sample of 147 adults ranging in age and occupation completed a questionnaire assessing co-rumination, abusive supervision, and workplace outcomes.
Findings Results suggested that women engage in more co-rumination than men, and that abusive supervision exacerbates its negative effects for women. In contrast, for men experiencing high abusive supervision, co-rumination was associated with reduced negative effects. However, under low abusive supervision, co-rumination had no significant effect on any outcome variable for women, but was related to negative outcomes for men.
Implications This study suggests that co-rumination is useful for understanding different types of social support in workplace contexts, and in particular, how men and women might differ in social support seeking. Co-rumination might prove useful for reconciling the somewhat mixed results regarding social support in helping individuals cope with workplace problems.
Originality/Value This study is the first to examine co-rumination in working adults. It provides insight into how the interaction among co-rumination, gender, and exposure to stress (e.g., abusive supervision) influence both positive and negative individual outcomes.

Keywords Co-rumination · Abusive supervision · Social support · Workplace adjustment · Emotional adjustment

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Economic trends and technological advances have altered the character of the workplace in many ways. However, the workplace has always been characterized by complex webs of social relationships, and it likely always will. Baron and Pfeffer (1994) maintain that individuals are preoccupied with social relationships at work, and Sandelands and Boudens (2000, p. 50) observe that "when people talk about work, they talk primarily about other people. They talk about the intrigues, conflicts, gossips, and innuendoes of group life."

The importance of relationships is reflected in two major themes in the organizational literature. First, researchers have long recognized that workers turn to others for support in coping with work stressors (Cohen and Wills 1985). Narayanan et al. (1999) found that talking to someone about problems was listed by most study participants as a coping mechanism. Second, researchers have demonstrated

that the behavior of coworkers and supervisors is a major *source* of workplace stress, as captured by constructs such as abusive supervision (e.g., Tepper 2000), toxic workplaces (e.g., Frost 2004), and sexual harassment (e.g., Bergman et al. 2002).

Although research has demonstrated that social support can have positive effects (e.g., Beehr et al. 1990; Carlson and Perrewé 1999), the literature hints at the possibility that talking about problems can sometimes have *negative* effects (Fenlason and Beehr 1994; Kaufman and Beehr 1986). Social support has been described as an "enigma" (Beehr et al. 2003) because of the complex set of variables that influence whether social support is adaptive. These mixed findings raise important questions about social support. For example, does the *manner* in which people discuss workplace problems matter? Can people focus too *intensely* on their problems when they discuss them? More generally, what are the potential cost/benefit trade-offs of discussing workplace problems?

The goal of this study is to consider why social support processes can sometimes increase, rather than decrease, risk for adjustment problems. Toward this end, we adopt the construct of "co-rumination," a new construct from the developmental psychology literature developed to help understand how excessive discussion of problems among children and adolescents can result in both positive and negative outcomes (Rose 2002). We examine whether co-rumination between coworkers impacts adjustment outcomes including the quality of their relationships, emotional adjustment (depression), and workplace outcomes. We also explore the potential moderating effects of workplace stress (i.e., abusive supervision) and gender.

Co-Rumination at Work

Social support is conceptualized as the tangible help and/or psychosocial empathy and sympathy individuals receive from interpersonal relationships (Beehr et al. 1990; Zellars and Perrewé 2001). It typically includes having people to talk with about problems and to provide instrumental aid (Cohen and Wills 1985). Not surprisingly, social support has been linked with positive adjustment outcomes (Beehr et al. 1990), including workplace outcomes.

However, several studies suggest that talking about workplace problems is not always adaptive (Beehr et al. 2000; Viswesvaran et al. 1999). For example, Zellars and Perrewé (2001) found greater exhaustion and burnout when the content of employees' conversations with coworkers was negative (e.g., about problems) rather than positive or non-job-related. In addition, Elfering et al. (2002) found that for employees who were experiencing lower back pain, social support had beneficial effects when supplied by one's supervisor or colleagues (e.g., shorter pain duration and less depression) but negative effects when supplied by one's closest colleague. In addition, the negative effects were exacerbated when one's supervisor provided low support. In this research, we present a new theoretical lens with which to view these unique findings. The construct of co-rumination, first defined in developmental psychology, provides a valuable framework for conceptualizing how discussing workplace problems might result in trade-offs between positive and negative outcomes.

Co-rumination is defined as excessively discussing personal problems within a dyadic relationship, and is characterized by frequently discussing problems, discussing the same problem repeatedly, mutual encouragement of discussing problems, speculating about problems, and focusing on negative feelings (Rose 2002; Rose et al. 2007). An example of co-rumination in youth might involve friends repeatedly discussing a fight one girl had with a boyfriend, including dissecting the exchange from every angle, dwelling on the negative implications and feelings triggered by the exchange, and actively encouraging one another to continue talking. Other examples include rehashing, speculating, and dwelling on a perceived slight from a peer, such as not being invited to a party.

The developmental literature indicates that co-rumination has both beneficial and detrimental effects. Co-rumination between friends in youth is linked with friendship closeness and perceptions of high relationship quality, likely due to the social sharing inherent in co-rumination (Rose 2002; Rose et al. 2007). However, co-rumination also is linked with heightened internalizing symptoms (Rose 2002; Rose et al. 2007), which is consistent with substantial research indicating that ruminating, or dwelling on one's problems is linked with emotional problems, including depression (Ciesla and Roberts 2007; Nolen-Hoeksema and Morrow 1991). Notably, the developmental literature also indicates that co-rumination is more common among girls than boys (Rose 2002; Rose et al. 2007), which fits with the broader literature indicating that self-disclosure is more common in friendships among girls than boys (Rose and Rudolph 2006).

It should be stressed that the construct of co-rumination is not redundant with the broader construct of social support. Social support includes a wide range of behaviors including instrumental support (e.g., providing tangible assistance), and emotional support such as distraction (e.g., engaging in a fun activity) or expressions of sympathy (Fenlason and Beehr 1994). In contrast, co-rumination is a much more focused construct, defined as a specific way of talking about problems. Co-rumination also can be differentiated from the related construct of more general or normative disclosure about problems. Measures of social

support typically include items relevant to disclosure about problems (e.g., "I can talk about my problems with my friends," Zimet et al. 1988). However, these items do not specify how extreme the disclosure is, or address *how* the problems are discussed. In contrast, co-rumination specifically involves discussing problems in a manner that is extreme, repetitive, and speculative (example scale items include "If one of us has a problem, we will spend our time together talking about it, no matter what else we could do instead" and "When we talk about a problem that one of us has we talk a lot about all the different bad things that might happen because of the problem"; see Appendix). Developmental research (Rose 2002; Waller and Rose in press) provides support for discriminant validity in regards to the constructs of co-rumination and more normative self-disclosure (i.e., disclosure that is not extreme, repetitive, or speculative). For example, whereas both co-rumination and normative self-disclosure in friendships are related to positive relationship quality, only co-rumination has adjustment trade-offs in that it also is related to depression and anxiety (Rose 2002).

This study extends the co-rumination construct by examining it in adults and by examining outcomes relevant to the workplace. In particular, we examine co-rumination between workplace friends about work problems. An example of workplace co-rumination might involve an employee whose supervisor yells at her for missing a recent deadline. The employee might speculate repeatedly and in great detail with a coworker friend about what led to the missed deadline, potential negative repercussions, and other possible causes of the supervisor's anger. Encouraged by the friend, the employee might dwell on her negative affect. The friends might continue to discuss the issue even after agreeing to stop talking about it. Other examples could involve coworkers dwelling excessively on an embarrassing moment at a meeting or on a micromanaging boss. The commonality in these examples is the repeated and extensive focus on problem talk that is encouraged by both conversation participants. In addition, research indicates that women use emotional expression as a coping strategy (Bekker et al. 2001), seek social support in times of stress (Taylor et al. 2000), and talk to others in response to stress (Narayanan et al. 1999) more than men. Therefore, we expect women to co-ruminate with a workplace friend more than men.

Co-Rumination and Adjustment Outcomes

First, we consider the potential positive effects of co-rumination in the workplace. Because discussing problems is thought to increase intimacy, closeness, and satisfaction with one's relationship (Laurenceau et al. 1998), we predict co-rumination with a friend at work will be associated with greater relationship satisfaction. This is consistent with developmental psychology findings that co-rumination between friends in youth is associated with friendship quality, despite the intense focus on problems (Rose 2002; Rose et al. 2007).

Another predicted outcome of co-rumination, specific to adults in the workplace, is increased job satisfaction. Positive social relationships with coworkers are a critical aspect of peoples' judgments of work meaning and job satisfaction (Sandelands and Boudens 2000; Wrzesniewski et al. 2003). For example, Hackman and Lawler (1971) observed that friendships at work satisfied employees' social needs and that this likely contributed to overall job satisfaction. Later work by Winstead et al. (1995) also showed that the quality of friendships contributes to overall job satisfaction. Co-rumination takes place within the context of a close, personal relationship and the level and depth of the discussions involved are expected to make people feel closer and more positively about the co-rumination partner. Because the close friend is part of the work environment, we predict that co-rumination has the potential to influence job satisfaction by virtue of its influence on one of its key components, the perception of quality relationships with others in the workplace. This is somewhat contrary to Beehr et al.'s (2003) study on workplace communication which found that negative discussions about the workplace were positively related to job dissatisfaction. However, their study did not examine the nature of the relationship (i.e., close versus casual) between the parties, which we believe to be an important aspect of the relation between co-rumination and job satisfaction.

Hypothesis 1 Co-rumination about work problems with a workplace friend will be positively related to relationship satisfaction with that friend and to job satisfaction.

We shift now to co-rumination's expected negative effects. First, because co-rumination involves constantly revisiting negative events and feelings, work problems might become particularly salient and brought into sharper focus. Consistent with previous developmental research (Rose 2002; Rose et al. 2007), the inability to escape the problem and its attendant negative emotions, is expected to result in the depressive symptoms. This is a key finding in the developmental research on co-rumination, and we expect it to replicate in adults.

Hypothesis 2 Co-rumination about work problems with a workplace friend will be related positively to depression.

A second predicted negative outcome of co-rumination unique to adults is increased work-to-family conflict. Work-to-family conflict is defined as, "a form of interrole conflict in which the general demands of, time devoted to,

and strain created by the job interfere with performing family-related responsibilities" (Netemeyer et al. 1996, p. 401). Specifically, co-rumination is likely to result in what Greenhaus and Beutell (1985) describe as "strain-based conflict" which involves strains caused by negative characteristics of work or family roles. Consistent with this conceptualization, Bartolomé and Evans (1980) state that what separates executives with successful private lives from those without is the ability to prevent negative affect spillover. One example of such negative spillover they discuss is worrying, which may render the executive psychologically unavailable for those in their private lives. By bringing work problems into sharper focus and exacerbating negative feelings, co-rumination might cause the wounds inflicted by workplace problems to stay open and to fester after the work day is done, creating a strain which could impinge on individuals' ability to function in their families.

Hypothesis 3 Co-rumination about work problems with a workplace friend will be related positively to work-to-family conflict.

Gender and Abusive Supervision as Moderators of the Associations Between Co-Rumination and Adjustment Outcomes

Although research indicates that workplace stress is related to adjustment problems (Kahn and Byosiere 1992), we know little about how stressors interact with coping styles, or how these effects might differ by gender. This study examines how the interaction of a specific workplace stressor (abusive supervision) and a specific approach to coping with stressors (co-ruminating) affects adjustment, and how their interaction might be further moderated by gender.

Research on stress at work has traditionally focused on structural (e.g., shift work, Thierry and Meijman 1994; e.g., role conflict, role ambiguity, Viswesvaran et al. 1999) or environmental stressors (e.g., noise, Sundstrom et al. 1994). However, research on dysfunctional behaviors suggests that interpersonal interactions can be important workplace stressors (Tepper 2000). In particular, research on abusive supervision, defined as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and non-verbal behaviors, excluding physical contact" (Tepper 2000, p. 178), indicates that abusive supervision is related to negative outcomes such as depression, anxiety, and decreased life satisfaction as well as greater work-to-family conflict, decreased job satisfaction, and lower organizational commitment (Tepper et al. 2004).

We propose that both the positive and negative effects of co-rumination will be amplified when the employee experiences abusive supervision, particularly for women. We suggest that under high levels of abusive supervision, co-rumination will be especially strongly related to satisfaction with the co-ruminating relationship, because the intimacy elicited by co-rumination is likely especially comforting in times of stress, and to job satisfaction, because of the quality of this friendship within the workplace. Research also indicates that women are especially sensitive to interpersonal stress at work (Narayanan et al. 1999), and the stress of abusive supervision might have a differential impact on the relationship between co-rumination and adjustment for men and women. This would be consistent with previous research in which gender, stress, and social support interacted to predict physical health (Wohlgemuth and Betz 1991).

However, workers who co-ruminate and experience abusive supervision might also be at especially high risk for depression, and for work stress to spill over into other life domains. Abusive supervision can be complicated, ambiguous, and multi-faceted. As such, it can provide considerable grist for the co-rumination mill. Abusive supervision is a powerful interpersonal stressor, and when workplace problems are severe, excessively rehashing the details of those problems is likely to contribute to depression and to spillover to home. In contrast, co-ruminators under less stress might focus on relatively trivial problems that do not have the power to affect their well-being.

Moreover, the detrimental-combined effect of co-rumination and abusive supervision might be especially strong for women. Longitudinal work with youth indicated that for girls, but not boys, co-rumination predicted internalizing symptoms over time (Rose et al. 2007). This fits with our prediction that, because women are more sensitive to interpersonal stress at work, the strongest negative effects on emotional adjustment and spillover would be expected for women who co-ruminate with workplace friends and have abusive supervisors.

Hypothesis 4 Gender and abusive supervision moderate the relationships between co-rumination and the outcome variables of interest such that the positive and negative effects of co-rumination are exacerbated for women with highly abusive supervisors.

Notably, in regard to our final hypothesis, we acknowledge that our assessment of co-rumination involves workers reporting the degree to which they co-ruminate with a workplace friend about workplace problems in general, and not about abusive supervision in particular. This means that we cannot know that co-ruminators subjected to abusive supervision are co-ruminating about the abusive supervision. However, given its salience, it is reasonable to suspect

that workers who experience and report abusive supervision and report co-ruminating about work problems focus at least some on the abuse. Moreover, the co-rumination of workers experiencing abusive supervision might be especially damaging even when they are co-ruminating about other work problems. In particular, the deleterious effects of co-rumination might be especially strong for individuals who are under high levels of stress regardless of the topic of co-rumination. This prediction fits with general adaptation theory, which posits that exposure to stress lowers a person's ability to deal with adversity (Rowe 2006; Selye 1946).

Method

Participants and Procedure

Anonymous surveys were mailed to business school alumni of a large Midwestern University who were at least 5 years post-graduation. Respondents were offered a nominal gift with a $5 value for participation. Follow-up postcards were sent at 4 and 8 weeks.

Completed surveys were returned by 247 alumni (approximate response rate of 10%). Although our response rate was low, it is not surprising considering the personal nature of some of the questions, the survey length, the fact that we could not target employed alumni, incorrect addresses, and the likelihood that a significant number of alumni were retired. Respondents who reported co-ruminating with an individual from outside of work ($n = 73$) were not included in our analyses.

Analyses were conducted using participants with complete data, and sample sizes for our analyses ranged from 146 to 148. Participants ranged in age from 27 to 78 (M age $= 47.9$, SD $= 8.78$) were predominately white (94.6%) and female (60%), and had work experience in a wide variety of industries (manufacturing, services, retail, banking, government, and education).

Measures

Participants completed a questionnaire assessing co-rumination, relationship, emotional, and work-related adjustment, and a measure of abusive supervision. The survey instructed participants to answer all friend-related questions with regard to the same close friend. In analyses, age was included as a control variable. In the developmental literature, age effects have been found for co-rumination (Rose 2002; Rose et al. 2007). Although co-rumination has not previously been examined in an adult sample with a broad age range, age effects might be expected given that age differences have been found for other types of coping strategies in adulthood (Diehl et al. 1996). In addition, age effects were possible for the adjustment variables considered (e.g., job satisfaction, Pond and Geyer 1991; depression, Trouillet and Gana 2008) as well as work-to-family conflict (Matthews et al. in press). As such, the decision was made to control for age when considering relations among these variables.

Co-Rumination

Rose's (2002) measure of co-rumination was revised for this study. The original measure included 27 items with 3 items assessing each of 9 content areas: (a) frequently discussing problems, (b) discussing problems instead of engaging in other activities, (c) encouragement by the focal individual of the friend discussing problems, (d) encouragement by the friend of the focal individual discussing problems, (e) discussing the same problem repeatedly, (f) speculation about problem causes, (g) speculation about problem consequences, (h) speculation about parts of the problem that are not understood, and (i) focusing on negative feelings. Factor analysis of the original 27-item scale indicated a single factor (Rose 2002).

For this study, the item with the highest factor loading from each content area was retained based on the factor analysis conducted by Rose (2002), resulting in a 9-item measure (see Appendix). The items were revised so that they focused specifically on problems at work rather than problems in general. Respondents were instructed to, "think of a particular person at work that you feel a close friendship with. If you do not have a close friend at work, think of a close friend with whom you discuss work." Respondents were then asked to indicate whether the friend was a coworker or friend outside of work. Data only were used for participants who reported on a coworker. A sample item is "When we talk about a problem that I have at work we spend a long time talking about how sad or mad I feel." Participants responded using a 5-point scale to indicate how true each item was for them (1 = not at all true, 5 = really true).

Relationship Satisfaction with Friend

Relationship satisfaction with a close friend was measured by adapting Hendrick's (1988) 7-item, general relationship satisfaction scale. Participants rated each item on a 5-point scale. A sample item is "How good is your relationship compared to most?" (1 = poor, 5 = excellent)."

Depression

Depression was measured using the 20-item Center for Epidemiologic Studies Depression Scale (Radloff 1977).

Respondents were asked to indicate how often they have felt specific depressive symptoms over the past week. Items included, "I was bothered by things that usually do not bother me," and "I did not enjoy life." Participants rated each item on a 4-point scale (0 = rarely or none of the time, <1 day, 3 = Most or all of the time, 5–7 days).

Job Satisfaction

Job satisfaction was measured with a 16-item scale developed by Spector (1997). A sample item is "I like doing the things I do at work." Participants rated each item on a 5-point scale (1 = strongly disagree, 5 = strongly agree).

Work-to-Family Conflict

Work-to-family conflict was measured with a 5-item scale developed by Netemeyer et al. (1996). A sample item is "The demands of my work interfere with my home and family life." Participants rated each item on a 5-point scale (1 = not at all true, 5 = really true).

Abusive Supervision

Abusive supervision was measured with Tepper's (2000) 15-item scale. Participants rated each item on a 5-point scale (1 = never, 5 = very often) regarding how frequently their supervisors engaged in behaviors such as "ridicules me," and "is rude to me."

Results

Descriptive Statistics

For descriptive purposes, correlations among all study variables and scale reliabilities are presented in Table 1. Scale reliabilities were satisfactory (i.e., between alpha = .85 and .93). Consistent with previous work on co-rumination, the mean level of co-rumination reported by women ($n = 88$, $m = 2.90$) was significantly higher than that of reported by men ($n = 59$, $m = 2.39$, $F(1, 145) = 13.47$, $p < .05$).

Because this was the first study to examine co-rumination in the workplace, we briefly describe additional descriptive statistics that help speak to the degree to which participants reported co-ruminative behavior. The median for co-rumination was 2.56 (on a 5-point scale). An examination of the frequency distribution indicated that 10.2% of respondents had a mean of 4 or higher on the scale describing how accurately each co-rumination item described them (4 = "mostly true"), 36.7% of respondents were at or above the mid-point of the scale (3 = "somewhat true"), and 78.9% were at or above 2 (2 = "a little true").

Measurement Model

Exploratory factor analyses (EFA) on the six scales used to test our primary hypotheses (i.e., co-rumination, abusive supervision, depression, work-to-family conflict, relationship satisfaction with a friend, and job satisfaction) were conducted to verify unidimensionality. Examination of eigenvalues and scree plots demonstrated that all six scales exhibited substantial unidimensionality. Of particular note, EFA on the 9-item co-rumination scale adapted for this study demonstrated strong unidimensionality as exhibited by the classic elbow pattern in the scree plot, and with a first eigenvalue accounting for 62% of the variance. In addition, all items loaded strongly and uniformly on the latent factor. A series of confirmatory factor analyses were then conducted using LISREL 8 (Jöreskog and Sörbom 1993) to test the measurement model. Models were fit after first combining items into four multi-item parcels per measure, in order to increase indicator reliability (Bagozzi and Edwards 1998; Bandalos 2002). The proposed six-factor model fit the data well ($\chi^2 = 486$, df = 237,

Table 1 Correlation matrix, descriptive statistics, and reliabilities

Variables	*n*	*M*	SD	1	2	3	4	5	6	7	8
1. Age	146	47.88	8.78	–							
2. Gender (0 = male)	148	–	−.11	–							
3. Co-rumination	147	2.69	.86	−.03	.29**	(.91)					
4. Relationship satisfaction	148	4.07	.58	.06	.22**	.29**	(.84)				
5. Job satisfaction	147	4.16	.68	.01	.03	.01	.22**	(.84)			
6. Depression	148	.32	.35	−.02	−.01	.02	−.28**	−.30**	(.89)		
7. Work-to-family conflict	148	2.43	.96	−.17*	.00	.26**	−.20*	−.17*	.19*	(.93)	
8. Abusive supervision	148	1.37	.58	−.00	.15	.15	−.06	−.47**	.11	.09	(.92)

* $p \leq .05$; ** $p \leq .01$

RMSEA = .082, CFI = .91, NNFI = .90), and significantly better than both a single-factor model ($\chi^2 = 2313$, df = 252, RMSEA = .27, CFI = .26, NNFI = .19), and a four-factor model that combined relationship satisfaction and job satisfaction into a single-factor, and depression and work-to-family conflict into a single-factor ($\chi^2 = 1097$, df = 246, RMSEA = .17, CFI = .69, NNFI = .66).

Correlation Patterns for Co-Rumination and Workplace Outcomes

Hypotheses 1 and 2 addressed co-rumination's expected adjustment trade-offs. Hypothesis 1 proposed that co-rumination would be positively related to relationship satisfaction with a friend and to job satisfaction. As predicted, co-rumination with friends about work problems was related to higher satisfaction with the friendship ($r = .29$, $p < .05$). However, the zero-order correlation between co-rumination and job-satisfaction was not significant. Hypothesis 2 stated that co-rumination would be related positively to depression, but the correlation was not significant. Hypothesis 3, that co-rumination would be related positively to work-to-family conflict, was supported ($r = .26$, $p < .05$).

Three-Way Interactions: Gender, Abusive Supervision, and Co-Rumination

Hypothesis 4 proposed that gender and abusive supervision together moderate the associations between the co-rumination and the outcome variables such that the effects of co-rumination are exacerbated for women with highly abusive supervisors. Co-rumination and abusive supervision were entered and used in hierarchical regression analyses for each outcome variable (see Table 2). In step one, gender, co-rumination, and abusive supervision were entered simultaneously, along with age (as a control variable). In step two, all two-way interactions among gender, co-rumination, and abusive supervision were entered. In step three, the three-way interaction among gender, co-rumination, and abusive supervision was entered.

The three-way interaction terms were significant for three of the four dependent variables: job satisfaction, $F(1, 135) = 9.24$, depression, $F(1, 136) = 9.01$, and work-to-family conflict, $F(1, 136) = 3.95$. Neither the interaction term nor the overall equation for relationship satisfaction was significant, $F(1,136) = .27$. Unlike the equations for the remaining variables, the overall equation for depression did not reach significance ($p = .06$). However, given that the overall regression equation for depression approached significance, and the pattern of results was consistent with the patterns for other dependent variables, we further examined the three-way interaction for depression.

We used simple slope analyses (Aiken and West 1991) to examine the associations between co-rumination and each outcome variable for men and women at high and low levels of abusive supervision (±1 SD from the mean). The interactions are presented graphically for job satisfaction (Fig. 1), depression (Fig. 2), and work-to-family conflict (Fig. 3). In each figure, the results for women are presented in the top panel and results for men in the bottom panel.

Table 2 Regressions results for significant three-way interaction of co-rumination, gender, abusive supervision

	Relationship satisfaction $N = 145$	Job satisfaction $N = 144$	Depression $N = 145$	Work-to-family conflict $N = 145$
Step 1				
Age	.11	.00	−.05	−.18*
Co-rumination	.22	.01	.04	.18
Gender (0 = male)	.20	.16	−.10	−.12
Abusive supervision	−.16	−.37**	.20	−.04
R^2	.13**	.23**	.01	.10**
Step 2				
Co-rumination × gender	.06	.06	−.06	.10
Co-rumination × abusive supervision	.15	.57**	−.57**	−.30
Abusive supervision × gender	.03	−.10	−.15	.08
ΔR^2	.01	.04	.03	.01
Step 3				
Co-rumination × abusive supervision × gender	−.09	−.50**	.51**	.34*
ΔR^2	.00	.05**	.06**	.03*
Equation R^2	.14	.32**	.10†	.13*

* $p < .05$; ** $p < .01$, † $p < .10$

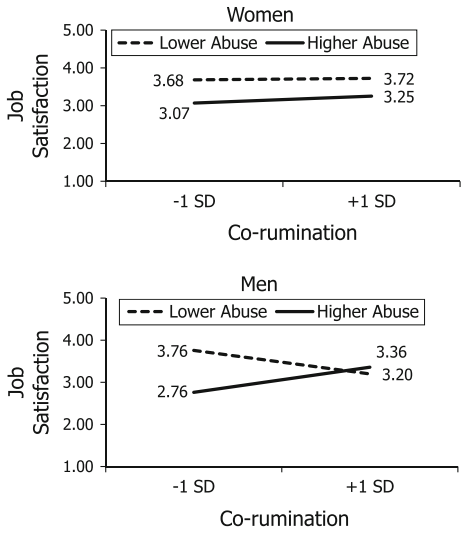

Fig. 1 Three-way interaction of gender, abusive supervision, and co-rumination on job satisfaction

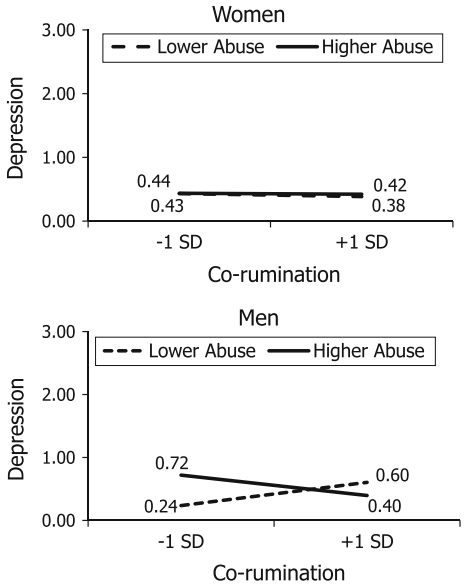

Fig. 2 Three-way interaction of gender, abusive supervision, and co-rumination on depression

Contrary to expectations, simple slope analyses indicated that co-rumination did not predict job satisfaction for women at either higher or lower levels of abusive supervision [job satisfaction, +1 SD, $B = .11$, $t(136) = 1.40$, ns; −1 SD, $B = .02$, $t(135) = .26$, ns]. However, the findings for men were consistent with the idea that experiencing stress in the form of abusive supervision amplifies the positive relationship between co-rumination and job satisfaction. Among men who experienced higher levels of abusive supervision, co-ruminating was related to greater job satisfaction [$B = .34$, $t(135) = 3.10$, $p < .05$]. On the other hand, co-rumination was negatively related to job satisfaction for men experiencing lower levels of abusive supervision [$B = -.33$, $t(135) = -2.89$, $p < .05$].

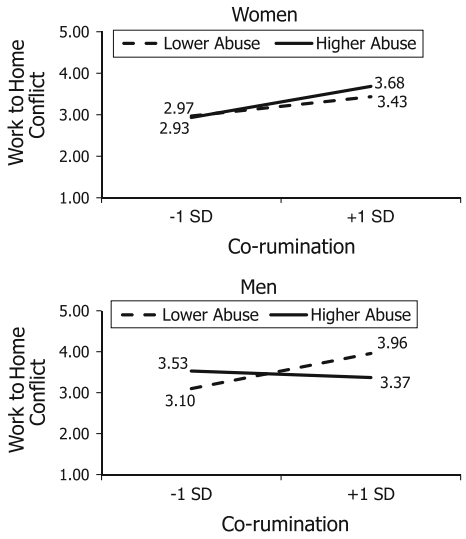

Fig. 3 Three-way interaction of gender, abusive supervision, and co-rumination on work-to-family conflict

The findings regarding depression were not consistent with the hypothesis that the negative effects of co-rumination would be the strongest under higher levels of stress. Simple slope analyses indicated that co-rumination did not predict depression for women at either higher or lower levels of abusive supervision [depression, +1 SD, $B = -.01$, $t(135) = -.17$, ns; −1 SD, $B = -.03$, $t(135) = -.46$, ns]. For men, however, we found the opposite pattern. Co-rumination was related to *greater* depression for the men who experienced *lower* levels of abusive supervision [depression, $B = .22$, $t(136) = 2.62$, $p < .05$]. For men who experienced higher levels of abusive supervision, co-rumination actually predicted *lower* levels of depression [depression, $B = -.19$, $t(136) = -2.32$, $p < .05$].

The findings for work-to-family conflict for women were consistent with our hypothesis that co-rumination would be related most strongly to negative adjustment outcomes under high levels of abusive supervision. Simple slope analyses indicated that co-rumination was associated with more work-to-family conflict for women under high levels of abusive supervision [$B = .44$, $t(136) = 2.93$, $p < .05$], but not for women under low levels of abusive supervision [$B = .27$, $t(136) = 1.60$, ns]. Results for work-to-family conflict also indicated that co-rumination was a risk factor for men, but for those men experiencing *lower* levels of abusive supervision. For these men, co-rumination was related to greater work-to-family conflict [$B = .50$, $t(136) = 2.24$, $p < .05$]. Co-rumination was not related to work-to-family conflict for men who experienced higher levels of abusive supervision [$B = -.09$, $t(136) = -.42$, ns].

Table 3 presents a schematic highlighting the contrasting results for men and women under differing levels of abusive supervision. For women experiencing high levels of abusive supervision, co-rumination was associated with greater work-to-family conflict. In contrast, for men experiencing high abusive supervision, co-rumination was associated with lower levels of depression and higher job satisfaction. However, the most striking differences between men and women were found under low abusive supervision, where co-rumination had no significant effect on any outcome variable for women, but had a significant negative effect on every outcome variable for men. Taken collectively these results provide little support for the a priori predictions of Hypothesis 4. However, we consider the significant but opposite findings for men particularly intriguing and worthy of future research.

Discussion

Negative workplace events can have significant effects on the well-being of employees and their families. The coping literature suggests support from one's coworkers might mitigate such effects (e.g., Beehr et al. 2000). However, the literature also suggests that talking about one's problems as a form of social support can be risky (e.g., Zellars and Perrewé 2001) especially if this type of social support is provided by one's closest colleague (Elfering et al. 2002). This study took a novel approach to the study of social support by exploring whether the construct of co-rumination, adopted from the developmental psychology literature (Rose 2002; Rose et al. 2007), might provide useful theoretical guidance for understanding how intensive discussion of workplace problems with a friend at work can have both positive and negative effects on workers. In particular, we tested whether co-rumination with a workplace friend about workplace problems carried similar risks and benefits as co-rumination between friends in childhood and adolescence. Moreover, we tested possible trade-offs of co-rumination unique to the workplace; namely, whether co-rumination was associated with greater job satisfaction as well as increased work-to-family conflict.

Table 3 Summary of results for relationships between outcome variables of interest and co-rumination at varying level of abusive supervision

Outcome variables of interest	Level of abusive supervision			
	Women		Men	
	Hi	Lo	Hi	Lo
Job satisfaction	□	□	+	−
Depression	□	□	−	+
Work-to-family conflict	+	□	□	+

+, relationship between co-rumination and outcome variable was positive; −, relationship between co-rumination and outcome variable was negative; □, no significant relationship between co-rumination and outcome variable

In addition, this study tested whether the impact of co-rumination on adjustment was affected by the degree to which workers experienced stress at work, namely, abusive supervision. Given that co-rumination involves a focus on problems, considering the degree to which the co-ruminator is experiencing stress is important. We chose abusive supervision as an important indicator of stress at work because research indicates that experiencing such abuse is quite stressful and has an impact on functioning in and out of the workplace (Tepper 2000). In fact, the results indicated that abusive supervision was a crucial moderator. Had abusive supervision and gender not been included as moderators, our understanding of the impact of co-rumination at work would have been severely limited.

Recall that our hypothesis was that the effects of co-rumination would be magnified in response to high levels of abusive supervision, particularly for women. That is, when workers experience high levels of stress and, presumably have very real troubles about which to co-ruminate, they might have the most to gain in regards to the hypothesized benefits of co-rumination (relationship quality and job satisfaction). However, they also might experience the greatest risk in terms of the hypothesized costs of co-rumination (depression, work-to-family conflict). These effects were expected to be exaggerated for women because they are more sensitive to interpersonal stress at work and talk to others more in response to stress (Narayanan et al. 1999).

For women experiencing high abusive supervision, co-rumination was associated with greater work-to-family conflict. Co-rumination is thought to make salient the details and negative feelings associated with problems, which could have an especially detrimental impact on well-being and workplace adjustment when those problems are severe. Also consistent with co-rumination theory, there were positive adjustment outcomes for these women. Co-rumination was related to high-quality relationship with the friend with whom problems were discussed for the entire sample. This relationship was not moderated by abusive supervision or gender, meaning that these women experienced the benefit of friendship satisfaction despite the costs of co-rumination. In fact, it is plausible that women find this positive relationship outcome quite reinforcing, thus solidifying their tendency to co-ruminate.

Interestingly, the effects of experiencing high levels of abusive supervision for men were the exact opposite of our expectations. For men experiencing high levels of abusive supervision, co-rumination was related to *lower* depression and *greater* job satisfaction. Although co-ruminating and

experiencing high abusive supervision was expected to predict poor adjustment, the results reveal that men who co-ruminated and experienced high levels of abusive supervision were relatively well-adjusted compared to other men. Moreover, given the bivariate link with relationship satisfaction, these men also experienced a positive relationship with their friend.

A potential explanation for the differing effects between men and women involves the content of co-ruminative conversations, which was not assessed in this study. Following the definition of co-rumination, the measure of co-rumination assessed the degree to which individuals talk frequently about problems, speculate about problems, and dwell on negative affect. What the measure does not assess is the degree to which individuals focus on problem solving. Given men's greater tendency to interpret statements of problems as an invitation to solve them (Tannen 1994), it is reasonable to suspect that men are more likely than women to include a focus on solutions when they co-ruminate, which could help them deal with problems and help protect them from the negative effects of co-rumination. Men might be especially likely to focus on solutions when faced with serious problems, such as abusive supervision. A related possibility is that men are more likely to spend at least some time during co-ruminative conversations re-framing problems in a constructive manner. This would be consistent with the idea proposed by LaRocco et al. (1980) that social support has positive effects when friends convince us that problems might not be as bad as they seem and negative effects when friends convince us that the problems are even worse.

The effects of co-rumination also differed between women and men experiencing low levels of abusive supervision. We hypothesized that the effects of co-rumination would be weaker for workers experiencing low levels of abusive supervision. In fact, for women who experienced low abusive supervision, co-rumination about work problems was not related to any emotional or work-related adjustment problems. Individuals experiencing low levels of abusive supervision might have a generally positive work environment, so the work problems they discuss might be relatively trivial. This could be important in combination with the fact that, from childhood, co-rumination is a relatively common female response to problems. If women are accustomed to co-ruminating, they might have developed an immunity of sorts to these perseverative conversations.

However, this was not the case for men experiencing low abusive supervision. For such men, co-rumination predicted poorer emotional adjustment (depression) and each workplace adjustment variable (work-to-family conflict, job satisfaction). In fact, inspection of the means in the figures indicates that these men were characterized by the poorest adjustment relative to other men in regards to depression, and job satisfaction.

Why are men who co-ruminate at risk for adjustment problems when they are experiencing low levels of abusive supervision? The developmental trajectories of co-rumination again might provide an answer. Research with children ranging from age 9 to 14 indicates that the difference in girls' and boys' tendency to co-ruminate becomes stronger with age (Rose 2002; Rose et al. 2007). Even in relatively early childhood, girls report greater co-rumination than boys. Then, as youth move into adolescence, girls' co-rumination scores tend to increase, whereas boys' co-rumination scores decrease to very low levels (Rose 2002). It is reasonable to suspect that, by adulthood, men have very little experience with co-rumination. It might be, though, that some men do develop a more co-ruminative style in adulthood either through their experiences interacting with women or because their interactions with men have become more conversation-based and less activity-based with age.

Consider the possible effects of co-rumination on men if they are less accustomed to co-ruminating and their problems are relatively minor. We hypothesized that men experiencing high levels of abusive supervision might have a lot to gain from the social support inherent in co-rumination because they are grappling with significant problems. In contrast, the social support associated with co-rumination should be less beneficial to men who are under less stress. However, there is a significant risk that co-rumination about relatively small problems can make them especially salient and magnify their impact. Moreover, this risk might be especially strong if men do not have much experience with how co-ruminative conversations unfold and the feelings they induce. In this regard, when men are experiencing low levels of stress, co-rumination might make "mountains out of molehills." As a result, men might find themselves distressed about problems that typically would not upset them. Nevertheless, recall that, even for these men, co-rumination is related to satisfaction with their friend with whom they co-ruminate. As noted, this relationship benefit might reinforce a co-ruminative style that, for these men, is generally maladaptive.

Limitations

Limitations of this study can be addressed in future research. First, the study was based on self-reports, which raises the possibility of inferential problems caused by a mono-method bias. However, there are factors that mitigate this concern. A mono-method bias implies that correlations between variables would be artificially inflated, and would be manifest in a pattern of artificially high positive

correlations between all measured variables (Spector 2006), However, our correlation table (Table 1) reflects a mix of positive, negative, and non-significant relationships, and the fit of the measurement model provides some degree of confidence that participants appeared to make clear conceptual distinctions between the measures of our key variables. Moreover, shared method variance tends to attenuate one's ability to detect true interactions rather than create artificial interaction patterns (Evans 1985), suggesting that the interactions patterns we observed are robust. In addition, the size of our sample required the use of a parceling strategy to test the measurement model, and we note that such a strategy potentially obscures weaknesses in individual items. However, given that the scales used in this study have been well-validated, we believe that this represents only a minor threat.

Additionally, the cross-sectional design limits our ability to infer causality unambiguously. The hypotheses of the study were driven by the idea that co-rumination and abusive supervision (and their interplay) impact adjustment outcomes. This is supported by previous longitudinal research, indicating that co-rumination predicts changes in adjustment outcomes over time (Rose et al. 2007) and that abusive supervision affects job satisfaction and organizational commitment over time (Tepper et al. 2004). However, with regard to co-rumination, it is plausible that having a high-quality friendship at work could lead to greater co-rumination over time. Similarly, it is plausible that adjustment problems might lead to co-rumination. The issue calls for future longitudinal research in order to tease out the temporal ordering of the variables. In addition, the use of longitudinal research designs could examine both the proximal effects of co-rumination (positive interpersonal relationships) as well as unfolding processes such as co-rumination's effect on work–family conflict, and the subsequent effect of work–family conflict on other outcomes such as depression and/or family dysfunction.

An additional set of concerns involves the small sample and response rate. Although the response rate was low, the exact rate is impossible to calculate due to the unknown number of sampled individuals who were retired, self-employed, had no supervisor, no longer lived at the given address, or were not currently employed. Certainly, the fact that limited compensation was given for completing the lengthy survey accounts for some portion of non-responders as well. In addition, given the focus on co-rumination with a workplace friend, individuals who reported co-ruminating with someone outside of work were excluded. Future research might investigate how co-rumination about problems in the workplace with an outside friend or spouse influences adjustment.

Another concern usually associated with low response rates is self-selection of particular types of people into the study. In this study, it is plausible that individuals who were interested in workplace relationships were more likely to complete the survey. However, if there was selection bias in this study, this would have likely caused restriction of range in the responses, making it more difficult to detect interaction patterns. Nevertheless, future studies might benefit from taking steps to obtain higher response rates not only to investigate new questions, but also to replicate the current findings. Replication is encouraged given the novelty of this construct to the organizational literature.

Because the co-rumination literature is careful to define co-rumination as narrow in focus, and because our purpose was to examine its specific effects on individuals in the workplace, we did not incorporate a broader social support measure. However, including additional social support measures in future studies could establish the incremental contribution of co-rumination beyond other social support constructs. In particular, we believe that co-rumination will be particularly useful for predicting trade-offs between good and bad outcomes.

Future Research

In addition to the future research opportunities already mentioned, we think that studying individual antecedents and situational antecedents of co-rumination would be particularly interesting. With regard to individual antecedents, it is possible that there are personality characteristics that make individuals especially likely to co-ruminate or to be especially vulnerable to its harmful effects. For example, agreeableness, neuroticism, and affinity seeking might predispose some individuals to engage in co-rumination, while positive core-self evaluations might mitigate its harmful effects. In addition, life stage might influence the topics and impact of co-ruminative conversations as the sources and types of stress change over the course of a lifetime.

An examination of the descriptive statistics of our co-rumination measure also suggests that while relatively few people might be engaging in substantial co-ruminative behavior at any given time, when salient workplace problems arise, many individuals might engage in co-rumination. Perhaps as levels of anxiety and uncertainty increase in response to environmental issues such as problems in the economy and concerns about job security, people who have tendencies toward co-rumination might engage in co-ruminative behaviors more and more frequently.

Also in regards to future research, associations with other processes could reveal additional trade-offs of co-rumination. On the positive side, co-rumination may be related to sensemaking in the workplace. Sensemaking

involves attempts by organizational members to construct meaning from the complex environments in which they find themselves (Weick et al. 2005). The detailed conversations that are inherent in co-rumination may help clarify and integrate some of the nuances and complexities of the workplace, which could be valuable and adaptive. In addition, research focused on the sensemaking value of co-rumination could also provide more information about the topics that are the frequent focus of men's and women's workplace co-rumination.

On the negative side, though, co-rumination may also contribute to the contagion of negative emotions or internalizing symptoms across individuals. Previous research on emotion contagion indicates that emotions can be transmitted across individuals who interact (Hatfield et al. 1993). Recent research with adolescents indicates that co-rumination helps to account for the contagion of depressive and anxiety symptoms across friends (Schwartz-Mette and Rose, under review). It may be that when a distressed youth co-ruminates with a friend, that friend's distress increases as a result of engaging in repetitive, negatively focused co-ruminative discussions. In future research in the workplace, studies could consider the adjustment outcomes not only for people who do co-ruminate, but also for the friends who are drawn into these conversations and for others in the workplace who are exposed to the friends' co-rumination.

This study represents an intriguing first step in the application and examination of a new construct in the workplace and provides a foundation for future study. As such it not only answers questions, but also provokes them. For example, does the severity of the problem being discussed influence the effects of co-rumination? Do men and women differ in the topics about which they co-ruminate? Do people have different motivations for co-rumination? What personality characteristics might influence the topics of co-rumination or the effects of co-rumination for individuals? While these questions cannot be addressed in a single study, we suggest that our results clearly indicate that co-rumination has significant potential as an explanatory construct for important organizational phenomena.

Conclusions

This study extended our knowledge regarding the impact of social support at work by adapting a particularly nuanced assessment of social support from the developmental psychology literature. Previous studies might have produced conflicting results about the effects of social support, in part because social support can be assessed in many different ways. However, this study underscores the notion that the type and quality of social support might contribute substantially to individual outcomes. Moreover, our study is the first to consider exposure to stress (experiencing abusive supervision) as a moderator of the effects of co-rumination, which proved to be critical. By assessing a specific form of social support and considering both abusive supervision and gender as moderators, our study provided an interesting picture of how the interplay among social support, stress, and gender can affect well-being and workplace adjustment. Hopefully, the current research will stimulate interest in the study of co-rumination in the workplace.

Appendix

Co-Rumination at Work Scale

1. When I have a problem at work, we talk to each other about it for a long time.
2. If I have a problem at work, we will spend our time together talking about it, no matter what else we could do instead.
3. When my friend has a problem, I always try really hard to keep my friend talking about it.
4. When I have a problem, my friend always tries to get me to tell every detail about what happened.
5. When we talk about a problem that I have at work we will talk about every part of the problem over and over.
6. When we talk about a problem that I have at work we talk a lot about the problem in order to understand why it happened.
7. When we talk about a problem that I have at work we talk a lot about all the different bad things that might happen because of the problem.
8. When we talk about a problem that I have at work, we try to figure out everything about the problem, even if there are parts that we might never understand.
9. When we talk about a problem that I have at work we spend a long time talking about how sad or mad I feel.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.

Bagozzi, R. P., & Edwards, J. R. (1998). A general approach for representing constructs in organizational research. *Organizational Research Methods, 1*, 45–87.

Bandalos, D. L. (2002). The effects of item parceling on goodness-of-fit and parameter estimates bias in structural equation modeling. *Structural Equation Modeling, 9*, 78–102.

Baron, J. N., & Pfeffer, J. (1994). The social psychology of organizations and inequality. *Social Psychology Quarterly, 57*, 190–209.

Bartolomé, F., & Evans, P. A. L. (1980). Must success cost so much? *Harvard Business Review, 58*, 137–148.

Beehr, T. A., Farmer, S. J., Glazer, S., Gudanowski, D. M., & Nair, V. N. (2003). The enigma of social support and occupational stress: Source congruence and gender role effects. *Journal of Occupational Health Psychology, 8*, 220–231.

Beehr, T. A., Jex, S. M., Stacy, B. A., & Murray, M. A. (2000). Work stressors and coworker support as predictors of individual strain and job performance. *Journal of Organizational Behavior, 21*, 391–405.

Beehr, T. A., King, L. A., & King, D. W. (1990). Social support and occupational stress: Talking to supervisors. *Journal of Vocational Behavior, 36*, 61–81.

Bekker, M. H. J., Nijssen, A., & Hens, G. (2001). Stress prevention training: Sex differences in types of stressors, coping, and training effects. *Stress and Health, 17*, 207–218.

Bergman, M. E., Langhout, R. D., Palmieri, P., Cortina, L. M., & Fitzgerald, L. F. (2002). The (un)reasonableness of reporting: Antecedents and consequences of reporting sexual harassment. *Journal of Applied Psychology, 87*, 230–242.

Carlson, D. S., & Perrewé, P. L. (1999). The role of social support in the stressor-strain relationship: An examination of work-family conflict. *Journal of Management, 25*, 513–540.

Ciesla, J. A., & Roberts, J. E. (2007). Rumination, negative cognition, and their interactive effects on depressed mood. *Emotion, 7*, 555–565.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357.

Diehl, M., Coyle, N., & Labouvie-Vief, G. (1996). Age and sex differences in strategies of coping and defense across the life span. *Psychology and Aging, 11*, 127–139.

Elfering, A., Semmer, N. K., Schade, V., Grund, S., & Boos, N. (2002). Supportive colleague, unsupportive supervisor: The role of provider-specific constellations of social support at work in the development of low back pain. *Journal of Occupational Health Psychology, 7*, 130–140.

Evans, M. G. (1985). A Monte Carlo study of the effects of correlated method variance in moderated multiple regression analysis. *Organizational Behavior and Human Decision Processes, 36*, 305–323.

Fenlason, K. J., & Beehr, T. A. (1994). Social support and occupational stress: Effects of talking to others. *Journal of Organizational Behavior, 15*, 157–175.

Frost, P. J. (2004). Handling toxic emotions: New challenges for leaders and their organizations. *Organizational Dynamics, 33*, 111–127.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review, 10*, 76–88.

Hackman, J. R., & Lawler, E. E, I. I. I. (1971). Employee reactions to job characteristics. *Journal of Applied Psychology, 55*, 259–286.

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotion contagion. *Current Directions in Psychological Science, 2*, 96–99.

Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family, 50*(1), 93–98.

Jöreskog, K., & Sörbom, D. (1993). *LISERAL 8: Structural equation modeling with the SIMPLIS command language*. Hillsdale, NJ: Lawrence Erlbaum.

Kahn, R. L., & Byosiere, P. (Eds.). (1992). *Stress in organizations* (2nd ed., Vol. 3). Palo Alto, CA: Consulting Psychologists Press.

Kaufman, G. M., & Beehr, T. A. (1986). Interactions between job stressors and social support: Some counterintuitive results. *Journal of Applied Psychology, 71*, 522–526.

LaRocco, J. M., House, J. S., & French, J. R. P, Jr. (1980). Social support, occupational stress, and health. *Journal of Health and Social Behavior, 21*, 202–218.

Laurenceau, J.-P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*, 1238–1251.

Matthews, R. A., Bulger, C. A., & Barnes-Farrell, J. L. (in press). Work social supports, role stressors, and work-family conflict: The moderating effect of age. *Journal of Vocational Behavior*. doi:10.1016/j.jvb.2009.06.011.

Narayanan, L., Menon, S., & Spector, P. E. (1999). Stress in the workplace: A comparison of gender and occupations. *Journal of Organizational Behavior, 20*, 63–73.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology, 81*(4), 400–410.

Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. *Journal of Personality and Social Psychology, 61*, 115–121.

Pond, S. B., & Geyer, P. D. (1991). Differences in the relation between job satisfaction and perceived work alternatives among older and younger blue-collar workers. *Journal of Vocational Behavior, 39*, 251–262.

Radloff, L. S. (1977). The CES-D scale: A self report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.

Rose, A. J. (2002). Co-rumination in the friendships of girls and boys. *Child Development, 73*, 1830–1843.

Rose, A. J., Carlson, W., & Waller, E. M. (2007). Prospective associations of co-rumination with friendship and emotional adjustment: Considering the socioemotional trade-offs of co-rumination. *Developmental Psychology, 43*, 1019–1031.

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*, 98–131.

Rowe, M. M. (2006). Four-year longitudinal study of behavioral changes in coping with stress. *American Journal of Health Behavior, 30*, 602–612.

Sandelands, L. E., & Boudens, C. J. (2000). Feeling at work. In S. Fineman (Ed.), *Emotion in organizations* (pp. 46–63). London: Sage.

Schwartz-Mette, R. A., & Rose, A. J. (under review). Co-rumination mediates contagion of internalizing symptoms with youths' friendships.

Selye, H. (1946). The general adaptation syndrome and the diseases of adaptation. *The Journal of Clinical Endocrinology, 6*(2), 117–230.

Spector, P. E. (1997). *Job satisfaction: Application, assessment, cause, and consequences*. Thousand Oaks, CA: Sage.

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend? *Organizational Research Methods, 9*(2), 221–232.

Sundstrom, E., Town, J. P., Rice, R. W., & Osborn, D. P. (1994). Office noise, satisfaction, and performance. *Environment & Behavior, 26*, 195–222.

Tannen, D. (1994). *Talking from 9 to 5: How women's and men's conversational styles affect who gets heard, who gets credit, and what gets done at work*. New York: William Morrow and Company, Inc.

Taylor, S. E., Klein, L. C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A. R., & Updegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review, 107*, 411–429.

Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal, 43*, 178–190.

Tepper, B. J., Duffy, M. K., Hoobler, J., & Ensley, M. D. (2004). Moderators of the relationship between coworkers' organizational citizenship behavior and fellow employees' attitudes. *Journal of Applied Psychology, 89*, 455–465.

Thierry, H., & Meijman, T. (1994). Time and behavior at work. In H. C. Triandis, M. D. Dunnette, & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 4, pp. 341–413). Palo Alto, CA: Consulting Psychologists Press.

Trouillet, R., & Gana, K. (2008). Age differences in temperament, character and depressive mood: A cross-sectional study. *Clinical Psychology & Psychotherapy, 15*, 266–275.

Viswesvaran, C., Sanchez, J. J., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior, 54*, 314–334.

Waller, E. M., & Rose, A. J. (in press). Adjustment trade-offs of co-rumination in mother-adolescent relationships. *Journal of Adolescence*. doi:10.1016/j.adolescence.2009.06.002.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science, 16*, 409–421.

Winstead, B. A., Derlega, V. J., & Montgomery, M. J. (1995). The quality of friendships at work and job satisfaction. *Journal of Social and Personal Relationships, 12*, 199–215.

Wohlgemuth, E., & Betz, N. E. (1991). Gender as a moderator of the relationship of stress and social support to physical health in college students. *Journal of Counseling Psychology, 38*, 367–374.

Wrzesniewski, A., Dutton, J. E., & Debebe, G. (2003). Interpersonal sensemaking and the meaning of work. In R. M. Kramer & B. M. Staw (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews* (Vol. 25, pp. 93–135). Oxford, England: Elsevier Science Ltd.

Zellars, K. L., & Perrewé, P. L. (2001). Affective personality and the content of emotional social support: Coping in organizations. *Journal of Applied Psychology, 86*, 459–467.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52*, 30–41.