

Distributive Justice, Procedural Justice, and Psychological Distress: The Moderating Effect of Coworker Support and Work Autonomy

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Recent research has demonstrated that the perception of injustice at work may increase psychological health-related problems. The purpose of this study is to examine the moderating effect of coworker support and work autonomy on the relationships between both distributive and procedural justice and psychological distress. Results, on the basis of responses to questionnaires given to 248 prison employees, show that coworker support moderates the relationships between both forms of justice and psychological distress. Specifically, these relationships are weakened when employees benefit from a high level of coworker support. Furthermore, work autonomy moderates the relationship between procedural justice and psychological distress but not the relationship between distributive justice and psychological distress. Thus, procedural injustice is less likely to increase psychological distress when the level of work autonomy is high.

Keywords: distributive justice, procedural justice, psychological distress, coworker support, work autonomy

Many studies in organizational settings show an alarming rate of psychological health-related problems, such as depression, burnout, and anxiety (for a review, see Gabriel & Liimatainen, 2000). To design appropriate interventions to improve employees' psychological health, it is important to develop a fine-grained understanding of the antecedents of psychological health and the contingent factors. Recent research has shown that the perception of injustice in organizational settings is likely to harm employees' psychological health (e.g., Elovainio, Kivimäki, Vahtera, Keltikangas-Järvinen, & Virtanen, 2003; Francis & Barling, 2005; Judge & Colquitt, 2004; Tepper, 2001). Several authors, who are interested in the relationships between perceived injustice and psychological health outcomes, consider lack of justice as a stressor (Fox, Spector, & Miles, 2001; Greenberg, 2004, 2006; Judge & Colquitt, 2004; Lam-

bert, Hogan, & Griffin, 2007; Vermunt & Steensma, 2001). The occupational stress literature indicates that not all individuals react in the same way to stressors (Marmot, Siegrist, Theorell, & Feeney, 1999; Quick, Cooper, Nelson, Quick, & Gavin, 2003; Sonnentag & Frese, 2003). Specifically, the same stressor can affect different individuals to different degrees, which suggests that some factors may contribute to protecting employees from the negative effects generated by stressors. According to the demand-control-support model (Johnson & Hall, 1988; Karasek, 1979; Karasek & Theorell, 1990), job control and social support are two key environmental factors at work that could buffer the effects of adverse conditions on health outcomes. In this study, job control is operationalized in terms of work autonomy,¹ and the source of social support considered is coworkers. Thus, these two environmental factors at work may help individuals overcome the stress imposed

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¹ Work autonomy represents a more focused conception of job control than the conception of Karasek (Karasek, 1979; Karasek & Theorell, 1990), which includes both decision authority (i.e., freedom to make decisions about one's work) and skill discretion (i.e., the breadth of skills usable on the job and the opportunity to learn new things). Indeed, many authors have argued that skill discretion does not reflect job control (e.g., de Jonge, Dollard, Dormann, Le Blanc, & Houtman, 2000; Smith, Tisak, Hahn, & Schmieder, 1997; Wall, Jackson, Mullarkey, & Parker, 1996). The expression *work autonomy* is used instead of *decision authority* because it is more common in the industrial and organizational psychology literature.

by the perception of injustice in their organizational setting.

The goal of this study is to test the moderating effect of coworker support and work autonomy on the relationship between the perception of fairness in terms of both distributive and procedural justice and psychological distress. In pursuing this goal, we contribute to a more complete understanding of the conditions that influence the justice–health relationship, which represents a departure from previous studies examining main effects of justice (see the review of Nowakowski & Conlon, 2005). In other words, by testing moderating effects, this study helps to explain conditions under which the strength of relationships between justice perceptions and psychological health outcomes reported in previous studies may vary (e.g., Elovainio et al., 2003; Francis & Barling, 2005; Judge & Colquitt, 2004; Tepper, 2001).

This study was conducted in a prison setting. In this setting, the level of psychological distress is recognized to be high (Dowden & Tellier, 2004; Johnson et al., 2005; Schaufeli & Peeters, 2000). Moreover, correctional employees may be particularly sensitive to the question of organizational justice because “correctional staff, as agents of the criminal justice system, are aware of the concerns of justice and fairness” (Lambert, 2003, p. 155). These employees have to apply the principles of justice in their daily work. For instance, when inmates break prison rules, correctional officers must apply sanctions according to the gravity of their conduct. Thus, we expect that the effect of the perception of fairness on psychological health outcomes may be more salient in a correctional context. In this way, considering that the detrimental effects of perceived injustice on employees in prison settings remain unclear at the empirical level, the present research extends previous findings by testing moderating effects of coworker support and work autonomy in this particular context.

The Effect of Distributive and Procedural Justice on Psychological Distress

According to McDonough (2000), psychological distress “is an unpleasant subjective state” (p. 459). It encompasses many negative symptoms related to anxiety, depression, irritability, self-depreciation, and social disengagement (Massé et al., 1998). This health outcome refers to a general negative mental state rather than a specific mental disorder, such as generalized anxiety, depression, or burnout (Ilfeld, 1976; Kessler et al., 2002). It is worth noting that

psychological distress constitutes a precursor of many serious health problems, such as psychosomatic illnesses, severe depression, arterial hypertension, and cardiovascular diseases (Manninen, Heliövaara, Riihimäki, & Mäkelä, 1997; Rutledge & Hogan, 2002; Stansfeld, Fuhrer, Shipley, & Marmot, 2002).

Employees’ psychological distress may be increased when they perceive injustice in their workplace. In this study, the focus is on employees’ perception of fairness with regard to the organization as a whole. As stated by Rupp and Cropanzano (2002), “individuals often think of their employing organizations as independent social actors capable of justice or injustice” (p. 926). Treatment fairness can be conceptualized in terms of distributive justice and procedural justice. Distributive justice refers to individuals’ perceptions of the fairness of outcomes they receive relative to the contributions they make to the employing organization (Adams, 1965; Colquitt, 2001). These outcomes include, for instance, pay, promotions, and special awards (Lambert, 2003). Employees’ contributions encompass, for example, effort, education, and experience. When individuals perceive that the outcomes they receive are insufficient on the basis of the contributions they have made, they consider their treatment by the organization as unfair (Gilliland & Chan, 2001; Roch & Shanock, 2006). A lack of distributive justice may decrease psychological health (Tepper, 2001). Indeed, Adams’s (1965) equity theory states that the perception of inequity induces a tension. With time, this tension and the resentment felt may increase psychological distress because this unfair treatment threatens individuals’ self-worth and represents a stressful experience (Greenberg, 2006; Tepper, 2001; Vermunt & Steensma, 2005). At the empirical level, many studies indicate that distributive injustice may negatively influence psychological health outcomes (Francis & Barling, 2005; Judge & Colquitt, 2004; Lambert, Hogan, & Allen, 2006; Spell & Arnold, 2007a, 2007b; Tepper, 2000, 2001).

Procedural justice represents individuals’ perceptions of the fairness of the process used to make decisions affecting them, such as those relating to pay, promotions, and punishment (Thibaut & Walker, 1975). This form of justice is associated with the structural characteristics of the decisions (Elovainio, Kivimäki, Steen, & Vahtera, 2004; Roch & Shanock, 2006). Employees consider the situation as unfair when they judge that they cannot exert some influence on the procedures by which decisions are made (Gilliland & Chan, 2001; Lambert, 2003;

Tepper, 2001). According to Thibaut and Walker (1975), the absence of procedural justice makes long-term outcomes less controllable and predictable for the individuals. In other words, this form of injustice generates uncertainty about employees' economic and social exchange relationships with their employing organization (Aryee, Chen, & Budhwar, 2004; Roch & Shanock, 2006). Therefore, a lack of influence on the decision-making process creates a stressful situation, which may foster psychological distress (Greenberg, 2006; Tepper, 2001; Vermunt & Steensma, 2005). At the empirical level, many studies support the effect that procedural justice may have on psychological health outcomes (Elovainio, Kivimäki, & Helkama, 2001; Elovainio, Kivimäki, & Vahtera, 2002; Francis & Barling, 2005; Kivimäki, Elovainio, Vahtera, & Ferrie, 2003; Lambert et al., 2006; Spell & Arnold, 2007a, 2007b; Tepper, 2001).

The Moderating Effect of Coworker Support and Work Autonomy

Coworker support and work autonomy are thought to exercise a buffer effect by attenuating the negative effects of injustice in the workplace on the level of psychological distress. These two factors refer to complementary aspects of the work environment. Whereas the first factor refers to the social environment of employees, the second relates to job design.

Coworker Support

In organizational settings, coworkers may constitute an important source of support especially when task accomplishment allows employees to interact with their coworkers (Parris, 2003). The support provided by coworkers may take different forms in the workplace, including emotional and instrumental support (Beehr, Jex, Stacy, & Murray, 2000; Ducharme & Martin, 2000). Emotional support consists in providing care, empathy, and love; for example, listening to others' personal problems. Instrumental support refers to tangible help that coworkers may provide; for example, performing assigned tasks for others.

In studies on stress and its consequences, social support undoubtedly constitutes the moderating variable most often taken into account (Cohen & Wills, 1985; Viswesvaran, Sanchez, & Fisher, 1999). Specifically, the literature on social support indicates that support provided by others may counteract the effect of stressors on stress-related outcomes (Beehr et al.,

2000; Cohen & Wills, 1985). Insofar as the perception of injustice in the work environment constitutes a stressor, coworker support may exercise a buffer effect, which means that the relationship between perceived injustice and psychological distress is likely to be weaker for employees who benefit from a high level of support than for those for whom this level of support is lower. Coworker support may generate positive feeling states that may enhance individuals' capacity to adapt to unfair treatment in terms of distributive and procedural justice. Indeed, a high level of coworker support implies that individuals benefit from social recognition (Cohen, 1988), which may make them less sensitive to inequity involving the benefit received from the employer (low level of distributive justice). Moreover, support from others reinforces individuals' sense of mastery (Bovier, Chamot, & Perneger, 2004), which may protect them from a lack of control over organizational decision-making processes (low level of procedural justice). However, when the level of coworker support is low, individuals are more vulnerable to unfair treatment from their employing organization in terms of distributive and procedural justice. At the empirical level, although some studies seek to determine the extent to which interpersonal relations at work can influence the perception of justice (Clay-Warner, 2001; Lind, Kray, & Thompson, 1998; Umphress, Labianca, Brass, Kass, & Scholten, 2003; Van den Bos & Lind, 2001), none of the reviewed studies tested the moderating effect of coworker support on the relationship between both distributive and procedural justice and psychological distress. Consequently, the following hypotheses are formulated:

Hypothesis 1: Coworker support moderates the relationship between distributive justice and psychological distress so that this relationship is weakened when employees benefit from a high level of coworker support.

Hypothesis 2: Coworker support moderates the relationship between procedural justice and psychological distress so that this relationship is weakened when employees benefit from a high level of coworker support.

Work Autonomy

Work autonomy refers to the capacity allowed by the organization to make decisions concerning the accomplishment of work (Breaugh, 1998). In other

words, it refers to the control that individuals have over how and when job tasks are undertaken (Daniels, Tregaskis, & Seaton, 2007). The concept of control is recognized as being an important moderator in the work stress process (Frerse, 1989; Semmer, 2000; Terry & Jimmieson, 1999). Accordingly, the effect of perceived injustice on psychological distress is likely to be lessened for employees with a high level of work autonomy compared with those with a low level of work autonomy. Indeed, a high level of work autonomy makes the job more stimulating and gratifying, which may lead individuals to be less sensitive to inequity in the outcome/input ratio (low level of distributive justice). Furthermore, assigned control over task-related activities enables employees to exercise personal control within the work environment (Daniels & Guppy, 1994), which may make them less vulnerable to a lack of involvement in organizational decision-making procedures (low level of procedural justice). Conversely, when the level of work autonomy is low, employees are likely to be more affected by unfair treatment on the part of their employing organization.

At the empirical level, none of the reviewed studies tested the moderating effect of work autonomy on the relationship between distributive justice and psychological distress. However, concerning the moderating effect that work autonomy may exert on the relationship between procedural justice and psychological distress, previous studies provide mixed results. On the one hand, Elovainio et al.'s (2001) study show that the relationship between procedural justice and occupational strain is not moderated by job control (or work autonomy). This nonsignificant moderating effect may be explained by the low level of reliability of the job control measure ($\alpha = 0.66$). On the other hand, the Elovainio, et al., (2005) study indicates that work time control moderates the relationship between procedural justice and sickness absence. Contrary to Elovainio et al., who focused on a specific facet of work autonomy (i.e., work time control) and who used a measure of sickness absence that does not differentiate between physical and psychological health problems, our focus in the present study is on work autonomy as moderator and psychological distress as outcomes. Consequently, the following hypotheses are formulated:

Hypothesis 3: Work autonomy moderates the relationship between distributive justice and psychological distress so that this relationship is

weakened when the level of work autonomy is high.

Hypothesis 4: Work autonomy moderates the relationship between procedural justice and psychological distress so that this relationship is weakened when the level of work autonomy is high.

Method

Participants and Procedure

Participants in this study were working for a Canadian correctional institution that administers sentences of a term of 2 years or more. This study was conducted with the consent of the senior management and unions, who were interested in investigating the determinants of quality of work life. A letter was sent to all employees inviting them to participate voluntarily in this study by completing a survey. Questionnaires were administered by two trained research assistants in an onsite meeting room during regular working hours. These research assistants informed the participants that the study aimed to investigate the quality of work life and stressed the confidentiality and anonymity of their responses.

To lessen common method biases, we divided data collection into two separate survey times (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). At Time 1, 326 participants completed a survey assessing distributive justice, procedural justice, and coworker support. Three weeks later, 249 of these participants completed a second survey concerning work autonomy and psychological distress. Demographic characteristics were measured at Time 1 and Time 2. Considering that the total number of employees in the organization is 398, the response rate for both survey times was 62.6%. The respondents held various positions, such as that of correctional officer, counselor, food service worker, medical worker, and teacher. The proportion of men in the sample was 62.9%. The mean age of participants was 42.5 years ($SD = 8.8$ years), and their mean tenure in the organization was 11.4 years ($SD = 7.0$ years).

Measures

As this study was conducted with French-speaking participants, the measures concerning distributive justice, procedural justice, and work autonomy were translated from English into French using the subject matter expert method (Behling & Law, 2000; Brislin,

1980). First, the original scales were translated and adapted to the Canadian context by two bilingual experts who performed this task individually. Second, these two experts evaluated the similarity of their translations and rectified minor discrepancies. Finally, the original and adapted versions of the measures were examined by a third bilingual expert to make sure that the measures were semantically and conceptually equivalent.

Distributive justice. We assessed distributive justice using the scale from Moorman (1991). This scale includes five items (e.g., "You are fairly rewarded for the amount of effort you put forth"). Participants responded using a response scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Higher scores mean greater distributive justice.

Procedural justice. Procedural justice was measured using seven items developed by Moorman (1991). A sample item is "Procedures in your organization are designed to collect accurate information necessary for making decisions." Each item was linked to a 6-point response scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Higher scores indicate greater procedural justice.

Coworker support. Rousseau, Aubé, and Savoie's (2006) scale was used to measure coworker support. This scale consists of 12 items that assess different forms of coworker support, such as helping to get the job done, encouraging to do good work, and transmitting work-related information. Participants were asked to rate each item on a 5-point response scale on which 1 = *not true at all* and 5 = *entirely true*.

Work autonomy. Work autonomy was assessed with Breaugh's (1998) nine-item scale. A sample item is "I am free to choose the method(s) to use in carrying out my work." Responses were given on a

7-point response scale on which 1 = *strongly disagree* and 7 = *strongly agree*.

Psychological distress. Psychological distress was assessed with the 23-item scale developed by Massé et al. (1998). This scale was further validated by Poulin, Lemoine, Poirier, and Lambert (2005). Participants were asked to indicate the extent to which they had experienced the symptoms or manifestations identified by the items during the previous month. Sample items are "I felt ill at ease with myself," "I felt useless," and "I felt sad." Responses were given on a scale ranging from 1 (*almost never*) to 5 (*almost always*).

Results

Preliminary Analyses

Considering that some individuals only completed surveys at Time 1, we conducted *t* tests to compare these individuals with those who completed surveys at both Time 1 and Time 2. Results show no significant differences with regard to the mean scores for the following variables: distributive justice, $t(316) = 0.56$, $p = .88$; procedural justice, $t(316) = 1.56$, $p = .12$; coworker support, $t(316) = 0.60$, $p = .55$; and age, $t(316) = 0.89$, $p = .37$. The *t* tests revealed that individuals who only participated at Time 1 included a higher proportion of men than those who participated at both Time 1 and Time 2, $t(316) = -2.52$, $p = .01$. On the whole, there was no serious selection problem due to participant loss, because dropouts' characteristics were quite similar to those of other participants.

Table 1 displays descriptive statistics (means and standard deviations), intercorrelations among the variables, and Cronbach's alphas. All scales show

Table 1
Means, Standard Deviations, Reliabilities, and Correlations Between Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Distributive justice	3.08	1.35	(.95)						
2. Procedural justice	3.30	1.24	0.54**	(.97)					
3. Coworker support	2.61	0.84	0.43**	0.48**	(.95)				
4. Work autonomy	3.90	1.36	0.44**	0.37**	0.40**	(.92)			
5. Psychological distress	2.03	0.68	-0.34**	-0.32**	-0.38**	-0.28**	(.97)		
6. Gender	0.37	—	0.18**	0.01	0.05	0.22**	0.00	—	
7. Age (years)	42.5	8.8	0.05	-0.04	0.06	0.17**	0.09	-0.14*	—

Note. *N* = 248 participants. Reliability estimates (Cronbach's alphas) are in parentheses. For gender, men are coded 0 and women are coded 1.

p* < .05, two-tailed. *p* < .01, two-tailed.

acceptable internal consistency ($0.92 < \text{Cronbach's alphas} < 0.97$). One case was eliminated as a multivariate outlier.

As expected, distributive justice and procedural justice are significantly ($p < .01$) correlated with psychological distress ($r_s = -.34$ and $-.32$, respectively). Correlations indicate that a lack of either form of justice is likely to increase employees' psychological distress.

Moderating Effect of Coworker Support and Work Autonomy

According to Hypotheses 1 through 4, coworker support and work autonomy are likely to moderate the relationships between both distributive and procedural justice and psychological distress. To test these hypotheses, we used hierarchical multiple regression analysis as proposed by Cohen, Cohen, West, and Aiken (2003). The variables were introduced into the regression models in three successive steps. Specifically, in the first step, gender and age were entered as control variables. These two demographic characteristics were statistically controlled for because they might have had a confounding effect on the results. Indeed, past research has indicated that gender and age may have a significant effect on

psychological distress (e.g., Jorm et al., 2005; McDonough & Strohschein, 2003). In the second step, the independent variable (distributive or procedural justice) and the moderating variable (coworker support or work autonomy) were added to the regression model. Finally, in the third step, we entered a cross-product interaction term involving the independent and the moderating variables. It should be noted that the scores of the independent and moderating variables were centered, which make it possible to reduce the multicollinearity between the variables and the interaction term. A significant coefficient regression of the interaction term indicates that the moderating variable influences the strength of the association between the independent and dependent variables.

The results of the hierarchical multiple regression analysis in Table 2 show that coworker support moderates the relationship between distributive justice and psychological distress. Indeed, the interaction term is significant ($\beta = 0.15, p < .05$) and explains 2.2% of psychological distress variance. Coworker support also moderates the relationship between procedural justice and psychological distress (see Table 3). The interaction term is significant ($\beta = 0.12, p < .05$) and explains 1.5% of psychological distress variance. Furthermore, as shown in Table 3,

Table 2
Moderating Effect of Coworker Support on the Relationships That Distributive and Procedural Justice Have With Psychological Distress

Model	B	SE B	β^a	ΔR^2
Dependent variable: Psychological distress				
Step 1				.009
Gender	.10	.08	.07	
Age	.01	.01	.12*	
Step 2				.193**
Distributive justice	-.14	.03	-.27**	
Coworker support	-.24	.05	-.29**	
Step 3				.022*
Distributive Justice \times Coworker Support	.09	.03	.15*	
Dependent variable: Psychological distress				
Step 1				.009
Gender	.03	.08	.02	
Age	.01	.01	.09	
Step 2				.169**
Procedural justice	-.09	.04	-.17*	
Coworker support	-.25	.05	-.30**	
Step 3				.015*
Procedural Justice \times Coworker Support	.08	.04	.12*	

Note. N = 248 participants.

^aStandardized regression coefficient.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Table 3

Moderating Effect of Work Autonomy on the Relationships That Distributive and Procedural Justice Have With Psychological Distress

Model	B	SE B	β^a	ΔR^2
Dependent variable: Psychological distress				
Step 1				.009
Gender	.17	.09	.12*	
Age	.01	.01	.15*	
Step 2				.157**
Distributive justice	-.15	.03	-.30**	
Work autonomy	-.10	.03	-.19**	
Step 3				.010
Distributive Justice \times Work Autonomy	.04	.02	.10	
Dependent variable: Psychological distress				
Step 1				.009
Gender	.09	.09	.06	
Age	.01	.01	.11	
Step 2				.139**
Procedural justice	-.13	.04	-.24**	
Work autonomy	-.10	.03	-.19**	
Step 3				.027**
Procedural Justice \times Work Autonomy	.07	.02	.17**	

Note. N = 248 participants.

^aStandardized regression coefficient.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

work autonomy exercises a moderating effect on the relationship between procedural justice and psychological distress. The interaction term is significant ($\beta = 0.17$, $p < .01$) and explains 2.7% of psychological distress variance. However, contrary to Hypothesis 3, work autonomy does not moderate the relationship between distributive justice and psychological distress.

To identify the form of the moderation, the regression model was plotted at three values of the moderating variable; namely the mean, one standard deviation below the mean and one standard deviation above the mean of the moderating variable (Cohen et al., 2003). Figures 1, 2, and 3 show that the form of the moderation is consistent with Hypotheses 1, 2, and 4. Indeed, as the level of the moderating variable (i.e., coworker support or work autonomy) increases, the strength of the relationship between the independent variable (i.e., distributive or procedural justice) and the dependent variable (i.e., psychological distress) decreases. Therefore, these results support Hypotheses 1, 2, and 4.

Discussion

Many authors have argued that more research needs to be conducted on the moderating processes

involved in the relationship between perceived justice in the workplace and its consequences (Colquitt & Greenberg, 2003; Colquitt, Greenberg, & Scott, 2005; Francis & Barling, 2005; Nowakowski & Conlon, 2005). In fact, although numerous studies have been conducted on the consequences of distributive and procedural justice, few studies have identified the factors that are likely to moderate these relationships. This lack of research is particularly obvious with regard to the relationship between unfair treatment and psychological health outcomes, because of the fact that this is a somewhat recent avenue of research (Judge & Colquitt, 2004).

The aim of this study was to investigate the moderating effect of two environmental factors on the relationships between both distributive and procedural justice and psychological distress. The moderating variables considered in this study were coworker support and work autonomy. These two variables have been widely studied in the occupational stress literature (Sonnentag & Frese, 2003). However, in the organizational justice literature, the moderating effect of coworker support and work autonomy remains unclear.

As hypothesized, the results indicate that coworker support exert a moderating effect. Specifically, when employees benefit from a high level of support, their

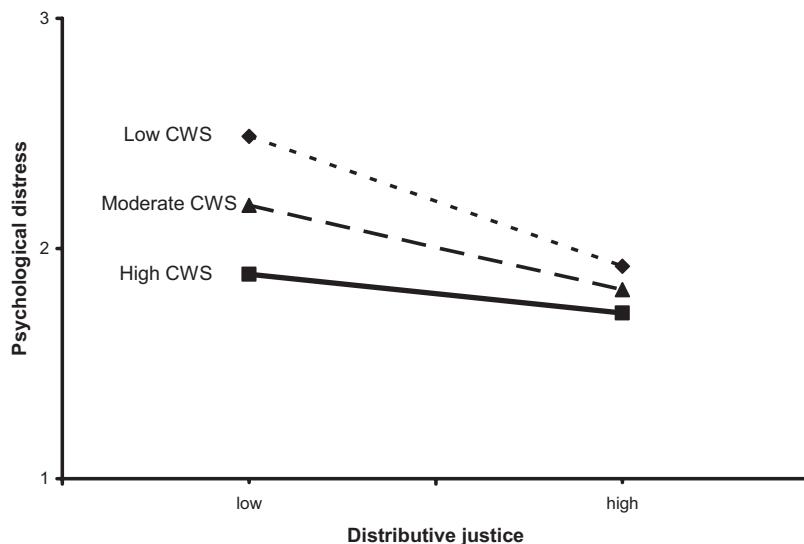


Figure 1. Relationship between distributive justice and psychological distress for low, moderate, and high levels of coworker support (CWS).

perceptions of injustice in terms of distributive and procedural justice are less likely to increase their psychological distress, compared with employees for whom the level of coworker support is low. These

results are consistent with those in the occupational stress literature that support the buffering effect of social support on the relationship between stressors and strain (e.g., Cohen & Wills, 1985; Viswesvaran

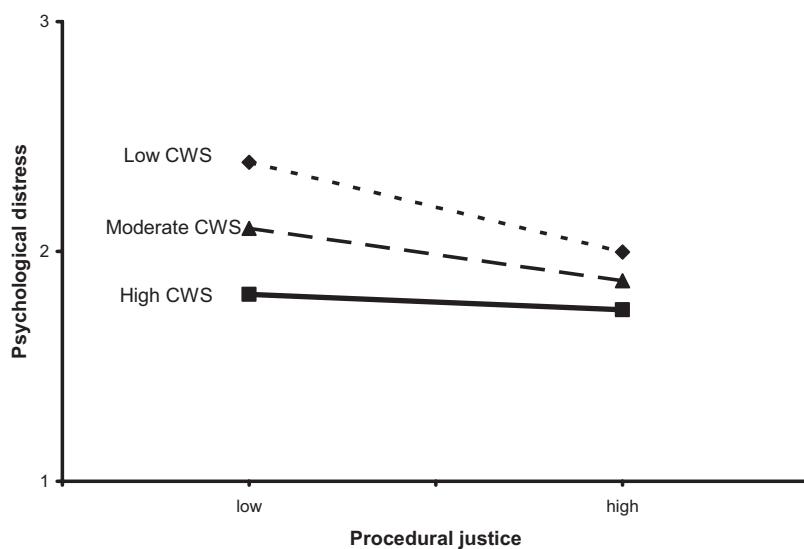


Figure 2. Relationship between procedural justice and psychological distress for low, moderate, and high levels of coworker support (CWS).

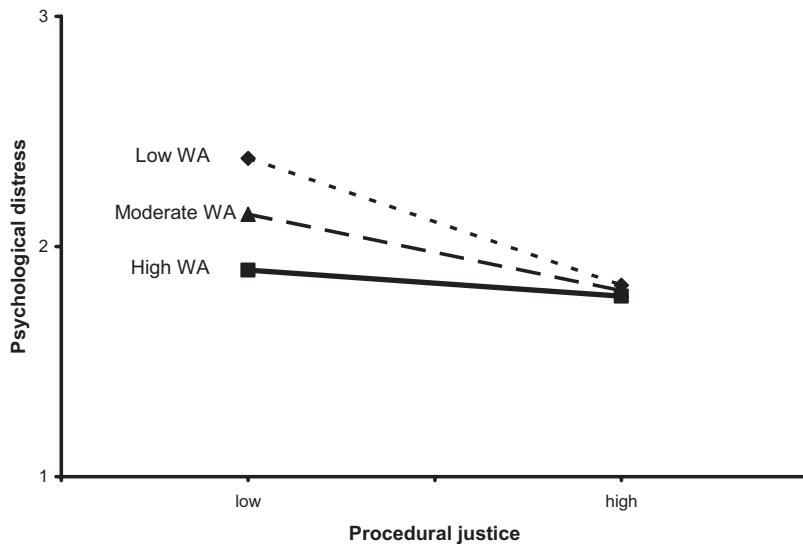


Figure 3. Relationship between procedural justice and psychological distress for low, moderate, and high levels of work autonomy (WA).

et al., 1999). Thus, the support provided by coworkers may alleviate the stress that arises from perceived violations of distributive justice or procedural justice. Indeed, social support is an effective means to enhance self-esteem and feelings of mastery, which help to protect individuals from stressors (Cohen & Wills, 1985).

As for the moderating effect of work autonomy, the results show that this factor moderates the relationship between procedural justice and psychological distress. Contrary to Elovainio et al.'s (2001) findings, the present study supports the moderating effect of work autonomy in this regard. Specifically, work autonomy may buffer against the negative effects of unfair treatment in terms of procedural justice. Therefore, the capacity to exert control over task accomplishment (work autonomy) may make individuals less sensitive to a lack of control over decision-making procedures (procedural justice). However, the relationship between distributive justice and psychological distress is not moderated by work autonomy. In other words, the tension created by an inequity in the ratio of contributions and outcomes cannot be alleviated by work autonomy. Although work autonomy helps to achieve a sense of self-worth (Terry & Jimmieson, 1999), it might also contribute to an increase in the inputs invested by individuals in their jobs because the level of responsibility is inher-

ently higher. Consequently, a high level of work autonomy may not lessen the negative effects of distributive injustice because employees may consider this increased responsibility in their ratio of contributions and outcomes. The results concerning the moderating effect of work autonomy demonstrate that this characteristic of job design does not have the potential to protect individuals from all kinds of injustice at work. Further research is needed to reach a deeper understanding of why work autonomy may attenuate the effect of procedural justice on psychological distress but not the effect of distributive justice.

Globally, this study is consistent with other studies that consider perceived injustice as a stressor that is likely to engender stress-related health problems (e.g., Elovainio et al., 2001; Francis & Barling, 2005; Judge & Colquitt, 2004). Indeed, correlation analyses show that distributive justice and procedural justice are both negatively related to psychological distress, which means that a high level of perceived injustice is associated with a high level of psychological distress. Moreover, the strength of these relationships may be attenuated by coworker support and partially by work autonomy, which are well-known moderating factors in the occupational stress literature. Coworker support and work autonomy are recognized as key factors that are likely to decrease the negative

effects of work environment stressors (Semmer, 2000; Terry & Jimmieson, 1999; Van der Doef & Maes, 1999; Viswesvaran et al., 1999).

Limitations and Directions for Future Research

This study has some methodological limitations. First, the present study is based on a cross-sectional design, which does not make it possible to corroborate the assumption that distributive justice and procedural justice constitute antecedents of psychological distress. To support this possible link of causality with more certainty, future research should be based on a longitudinal design. Indeed, this design can help to make causal inference by rejecting alternative explanations, such as reverse causation and reciprocal causation. The use of this methodological approach requires the measurement of all variables at all time points and planning a time lag sufficient for observing changes in the scores of the variables. Second, all data were collected from one source, which raises the question of common method variance. This bias may have inflated the strength of relationships between justice perceptions and psychological distress. As proposed by Podsakoff et al. (2003), a post hoc factor analysis (Harman's single-factor test) was performed, showing that five factors account for the variance in the variables (66.2%). Although these results are not evidence that the measures are free of common method variance, they indicate that common method variance is not likely to be regarded as a problem in this study. For reduction of the common method variance, future research on organizational justice and its effects on psychological health would be improved by including physiological data connected with health, such as salivary cortisol and blood pressure (Francis & Barling, 2005; Tepper, 2001). This kind of data is more objective and is increasingly used in research on occupational stress (e.g., Wager, Fieldman, & Hussey, 2003). Third, this study took into account two basic forms of justice; namely distributive and procedural justice. However, the moderating effects of coworker support and work autonomy may be tested in future research by including interactional justice, which is considered as a third dimension of the construct of organizational justice (Colquitt, Greenberg, & Zapata-Phelan, 2005; Moorman, 1991). Fourth, this study focused on the moderating effects of two environmental factors. From the standpoint that injustices at work constitute stressors, it would be relevant in future studies to test the

moderating role of other factors recognized as attenuating the negative effects of stressors on psychological health, such as personality traits (e.g., locus of control and self-confidence) and individual coping strategies (e.g., positive reinterpretation and relaxation). Last, this study was conducted in a prison setting. This work environment is characterized by high-risk situations (e.g., physical assaults, hostage-taking incidents) that are not necessarily typical of most other work settings. Future research is necessary to verify whether the present findings can be replicated in other settings.

Practical Implications and Conclusion

At the practical level, the results of this study support the importance of promoting justice in organizations. Moreover, given that psychological health problems are associated with various indicators of effectiveness, such as employee turnover, absenteeism, and accidents (Hardy, Woods, & Wall, 2003; Quick et al., 2003; Van Dierendonck, Haynes, Borrill, & Stride, 2004), interventions aimed at improving distributive and procedural justice would have positive effects not only on individuals but also on organizations. For the enhancement of justice in the workplace, training programs may heighten managers' awareness of the harmful effects of injustices in the work environment on employees' psychological health. These training programs may lead managers to be more sensitive to the impact of their decisions on employees and to the importance of the procedures used in making decisions (Greenberg, 2004).

The ideal solution would be to eliminate all sources of injustice in the work environment. However, this solution is practically impossible to apply, given that it is very difficult or even impossible to reconcile the interests of all employees within the same organization (Greenberg, 2004). It is thus important for managers to know which factors are likely to buffer the negative effects of perceived injustices on employees' psychological health. The present study highlights two factors that are effective in reducing negative outcomes of unfair treatment at work and over which managers can exert some control; namely coworker support and work autonomy. Indeed, managers can strengthen coworker support by encouraging and rewarding teamwork. Teamwork generally makes it possible for employees to offer support to their coworkers (Parris, 2003). In addition, work autonomy can be fostered by implementing management practices that reinforce employee initiatives. These interventions may contribute to

lessening the adverse effects of injustices at work on employees' psychological health.

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