

## Believing in a personal just world helps maintain well-being at work by coloring organizational justice perceptions

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Justice is a core fundamental theme for individuals in organizations. This study suggests that believing the world is just where one gets what one deserves, and deserves what one gets, is an important personal resource that helps maintain well-being at work. Further, it suggests that personal belief in a just world, but not general belief in a just world, exerts its influence on well-being through increasing overall justice perceptions of the work environment. Using two waves of data drawn from a large random sample of working adults in Switzerland, results showed that personal belief in a just world at time 1 indeed augmented perceptions of overall organizational justice, and this in turn increased job satisfaction at time 2, that is, 1 year later. As expected, this effect was only evident for personal and not general belief in a just world, highlighting personal belief in a just world as an important yet largely overlooked resource for the work context, and suggesting the need to consider individual's beliefs about justice as drivers of overall organizational justice perceptions.

**Keywords:** belief in a just world; organizational justice; work stress; job satisfaction

In his seminal work on justice, Lerner (1980) states that people have a fundamental need to believe that the world is a just place where good deeds are rewarded and bad deeds are punished. This so-called just world hypothesis has sparked considerable research interest in how individuals defend their belief in a just world when it is challenged, that is, in the face of blatant injustice (Furnham, 2003; Hafer & Bègue, 2005). More recently, a new theoretical conceptualization emerged that considers belief in a just world as a personal resource that contributes significantly to positive outcomes related to mental health (Dalbert, 2001, 2007; Furnham, 2003). In the course of this research, it became apparent that believing that justice reigns in one's own world (personal belief in a just world (P-BJW)) needs to be distinguished from believing that justice reigns in the world in general (general belief in a just world (G-BJW) Dalbert, 1999; Lipkus, Dalbert, & Siegler, 1996). This distinction is important because P-BJW and G-BJW have different, and at times, even opposite effects (e.g., Strelan & Sutton, 2011; Sutton & Douglas, 2005), with only P-BJW having clearer and more consistent effects on individuals' well-being.

Initial evidence suggests that P-BJW is an important correlate of positive outcomes (e.g., organizational

commitment and reduced burnout) in organizational settings (e.g., Dalbert, 2007). However, this research is still in its infancy, relying on a limited number of mainly cross-sectional studies, that also do not rule out other causes such as personality. Most importantly, however, the mechanism that links P-BJW to outcomes at work is not clear from past research.

This is the focus of our study. More specifically, drawing on just world theory and expanding on theories of organizational justice that link justice to core aspects of the self (Cropanzano, Byrne, Bobocel, & Rupp, 2001), we suggest and test in a two-wave cross-lagged study spanning over the time period of 1 year that employees' P-BJW, but not their G-BJW, augments overall organizational justice perceptions, which in turn positively influence well-being at work. Put differently, we propose individual differences in P-BJW, a fundamental personal need to believe in justice, as a driver of overall organizational justice perceptions, and that it is through this route that P-BJW, and not G-BJW, helps maintain well-being at work as indicated by higher job satisfaction and reduced work stress.

This study offers several contributions. First, bringing together two streams of research on justice, it demonstrates that the distinction between P-BJW and G-BJW is

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theoretically and empirically relevant because only the belief that justice reigns in one's own life (i.e., P-BJW) helps individuals to maintain job satisfaction and reduce work stress, through overall organizational justice perceptions. Second, by showing overall organizational justice perceptions as the intervening mechanism between P-BJW and job satisfaction and work stress, this study shows *why* P-BJW and not G-BJW matters. Third, by identifying P-BJW as a key individual driver of overall organizational justice perceptions, this study demonstrates that overall organizational justice perceptions are driven by fundamental and stable personal beliefs about justice.

### **Belief in a just world**

Belief in a just world is a fundamental belief that the world is a just place where people's outcomes, rewards, and punishments, fit what they deserve, that is, they are "caused by who they are or what they have done" (Lerner, 1987, p.108). Similarly, other theories consider the belief that the world is just and orderly as part of the very few, most fundamental human beliefs (Epstein, 2003; Janoff-Bulman, 1992; Pyszczynski, Greenberg, & Solomon, 1997) that—once shattered—have highly detrimental consequences for mental health (e.g., Cann et al., 2010).

Given that the world is often unjust, in that it is characterized by numerous inequalities and injustices, for example, in terms of access to education or wealth, the belief in a just world can also be described as a positive illusion that helps people deal with these harsh realities of the world. It gives individuals a view of the environment as stable and orderly, as opposed to random, where events are meaningful and outcomes match behaviours, thus permitting commitment to long-term goals (Lerner, 1978; Lerner & Montada, 1998). Therefore, it has a strong motivational component: Individuals are motivated to defend their belief in the face of contradictory evidence, that is, injustice. When confronted with injustice, they tend to restore justice either behaviourally or cognitively (Dalbert, 2009). Cognitive restoration typically takes place when behavioural restoration (e.g., through compensating victims of injustice) is not possible, and implies a reinterpretation of the situation that is aligned with one's just world belief (e.g., through downplaying the injustice).

Just world beliefs are remarkably stable and do not easily change as a function of changes in the environment. In fact, previous research showed that changes in beliefs in a just world only occur in response to serious and persistent life events such as long-term unemployment, imprisonment, or becoming a victim of war (Cubela Adoric, 2004; Fasel & Spini, 2010; Otto & Dalbert, 2005).

### **Personal and general belief in a just world**

Belief in a just world is compartmentalized into two spheres of justice, that is, into belief in a just world for

the world in general and for one's own world or the self (Dalbert, 1999; Furnham & Proctor, 1989; Sutton & Douglas, 2005). P-BJW is focused on the self. It comprises a person's need to believe that she usually gets what she deserves in life and that most of the events that happen to her are just. As such the P-BJW is particularly relevant when evaluating events within the boundary of one's own immediate experience. It is positively related to indices of adaptive coping and subjective well-being, for people in various situations including different groups of victims (Otto, Boos, Dalbert, Schöps, & Hoyer, 2006; Otto & Dalbert, 2005). This suggests that P-BJW is a personal resource that helps people deal with various events so that their well-being remains intact.

G-BJW is the belief that the world in general is a just place where people get what they deserve and entails how individuals see the world as just or unjust for others (Furnham & Proctor, 1989). It is thus focused on the environment in general, including others, and hence reflects the need to believe that people in general are treated fairly by the world, where justice prevails over injustice and where good things happen to good people and bad things happen to bad people. As such, G-BJW is particularly relevant when judging events occurring in other people's lives. It is related to harsh social attitudes towards disadvantaged groups or individuals such as the poor or victims of sexual assault, blaming them for their fate, and thus protecting the belief that the world is a just place where people get what they deserve (Bègue & Bastounis, 2003; Van den Bos & Maas, 2009).

Although P-BJW and G-BJW are related, they are different. In general, people endorse P-BJW more strongly than G-BJW (e.g., Dalbert, 1999) indicating that people indeed compartmentalize the world into two spheres of justice. Importantly, the two beliefs in a just world have distinct and separate effects (Bègue & Bastounis, 2003; Sutton & Douglas, 2005). As mentioned earlier, G-BJW gives rise to negative social attitudes, whereas P-BJW nourishes subjective well-being. At times, the two beliefs even have opposite effects. For example, P-BJW is positively associated to forgiveness in victims of a transgression, whereas G-BJW is negatively associated to the same outcome (Strelan & Sutton, 2011). Or, G-BJW is related to stronger delinquent intentions in young residents in assisted living, while P-BJW is negatively related to delinquent intentions (Sutton & Winnard, 2007).

The distinction between P-BJW and G-BJW has not yet been systematically applied in organizational research. This research tends to conceptualize belief in a just world as a unified global concept without distinguishing between the two spheres of justice. For example, Ashkanasy, Windsor, and Treviño (2006) examined the impact of belief in a just world on ethical decision-making, and Skarlicki and Turner (2014) investigated the influence of belief in a just world on victim derogation bias in

employee ratings. Both studies did not distinguish between the P-BJW and G-BJW and used a global measure that blends the two concepts, obscuring conceptual clarity and interpretation of the results. However, as demonstrated in recent studies, the two beliefs need to be modelled as separate concepts (e.g., Lucas, Young, Zhdanova, & Alexander, 2010; Strelan & Sutton, 2011) to account for their distinct effects.

### **Just world beliefs and well-being at work**

Additional elements suggest that P-BJW but not G-BJW acts as an adaptive personal resource that helps sustain well-being in diverse situations including at work. Existing correlational evidence supports the notion of P-BJW as a resource in organizational contexts. For example, P-BJW was positively related to adjustment in terms of optimism, trust, and reduced depression in targets of mobbing at work (Cubela Adoric & Kvartuc, 2007). In another study, P-BJW was positively related to organizational commitment and self-rated performance and negatively related to emotional exhaustion, depersonalization, and intentions to quit (Otto & Schmidt, 2007). Even though these studies provide initial support for the adaptive functions of P-BJW in organizational settings, they remain inconclusive. First, they do not provide an answer to the central question about the specificity of the effects of the two beliefs in a just world because they did not include both P-BJW and G-BJW. Second, they used cross-sectional data and thus did not provide any information about causality. Third and equally important, none of these studies reveal what explains the relationship between P-BJW and adaptive outcomes at work, that is, they did not show the intervening mechanism. To address these points, a cross-lagged design that can give information about the plausible causal order (Finkel, 1995), that includes an intermediary variable proposed by theory, and that models the effects of both P-BJW and G-BJW is needed. This is applied in this study.

### **Personal belief in a just world as a driver of organizational justice perceptions**

The conceptualization of P-BJW as an adaptive personal resource suggests that one central way that the P-BJW helps maintain well-being is by providing people with an enduring cognitive framework through which they assimilate daily (in)justice experiences (Bobocel & Hafer, 2007; Dalbert, 2001; Otto & Schmidt, 2007). Thus, P-BJW may contribute to well-being at work by colouring perceptions of organizational fairness positively. Indeed, Bobocel and Hafer (2007) mentioned that stronger belief in a just world may augment perceptions of fairness in the workplace, suggesting a theoretical link between organizational justice perceptions and belief in a just world.

How may belief in a just world influence perceptions of organizational justice? Organizational science emphasizes that organizational justice is a subjective concept, that is, organizational justice is the subjective perception of fairness in the workplace that pertains to a situation (an outcome, an interaction, etc.; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Cropanzano & Ambrose, 2015). The subjective component makes judgments of organizational justice prone to influences stemming from individual differences: How a person perceives or defines fairness does not only depend on elements of the situation but also on aspects of the perceiver's self, ultimately providing an answer to the question of why justice matters to people (Cropanzano et al., 2001; Skitka, Aramovich, Lytle, & Sargis, 2010). The self functions as a frame of reference when assessing fairness in a given situation, influencing the factors that will weigh most heavily in a person's fairness judgment (Skitka et al., 2010).

Indeed, perceptions of justice are closely related to fundamental psychological needs. Cropanzano et al. (2001) review relationships between the most prominent theories on justice and basic psychological needs, concluding that justice matters to the extent that it serves an important psychological need, in particular the need for control, for belonging, and for meaning. We suggest that the belief in a just world, and more specifically P-BJW, influences justice perceptions because it may be closely related to these needs. For example, P-BJW reflects a motivation to see the personal context as certain, where the individual feels some control over the predictability of events and favourability of outcomes occurring directly in his or her life (Blader & Bobocel, 2005), suggesting a relationship with the need for control. P-BJW results in individuals expecting just treatment from others and wanting to act justly themselves (Dalbert, 1998, 2001), suggesting a link between P-BJW and belonging needs. Finally, P-BJW reflects an individual's need to strive for justice as a worthwhile end in and of itself (Dalbert, 2009; Lerner, 1977), suggesting a link to the need for meaning and to live a virtuous life.

The relationship between P-BJW (or G-BJW) and organizational justice perceptions has not been tested empirically yet. Nevertheless, studies conducted in non-organizational contexts provide initial support for the notion that fundamental beliefs in the form of P-BJW influence perceptions of justice favourably. Several studies show that stronger endorsement of just world beliefs is associated with increased perceptions of fairness and deservingness (for an overview, see Hafer & Choma, 2009). A few studies concentrated on P-BJW and are thus more relevant for this research that highlights the differences between the two beliefs. A longitudinal study with adolescents revealed a positive influence of P-BJW on justice beliefs at school and at home (Dalbert & Stoeber, 2006) and a cross-sectional study with prisoners

showed positive associations of P-BJW with perceptions of fairness of the legal system and of prison guards (Dalbert & Filke, 2007). These studies provide initial supportive evidence for our hypothesis. However, it is difficult to draw firm conclusions from these studies because they did not model the effects of G-BJW. This limits the interpretability of the results, in particular with respect to the specificity of the effects of P-BJW versus G-BJW on justice perceptions. In summary, there are clear theoretical reasons and some empirical evidence to expect that P-BJW but not G-BJW favourably shapes perceptions of organizational justice in employees and thus we propose the following hypothesis:

*Hypothesis 1:* P-BJW will be positively related to overall organizational justice perceptions (H1a) while the relationship between G-BJW and overall organizational justice perceptions will be non-significant (H1b).

#### **How personal belief in a just world affects well-being: the mediating role of organizational justice**

If, as we proposed earlier, P-BJW drives perceptions of organizational justice, it is through this route that P-BJW may positively influence well-being at work. Organizational justice perceptions are a well-known predictor of various positive work outcomes, including job satisfaction and reduced work stress (e.g., Greenberg & Colquitt, 2013). Organizational justice perceptions can include different aspects related to fairness in the workplace such as distributive, procedural, and interpersonal aspects (Cohen-Charash & Spector, 2001; Colquitt et al., 2001), but can also be treated as one overall entity (Ambrose & Arnaud, 2005; Ambrose & Schminke, 2009; Hauenstein, McGonigle, & Flinder, 2001; Lind, 2001), because when forming justice appraisals, individuals are likely to use whatever information is available and salient at that moment and thus make a holistic judgment (Greenberg, 2001). We employed overall organizational justice perceptions in this study because we were interested in relatively broad outcomes related to well-being at work, that is, overall job satisfaction and general work stress. When outcomes are fairly general, overall organizational justice perceptions are more adequate precursors than perceptions of the different justice dimensions because there is a better match in the breadth or specificity of the predictor and the criterion (Colquitt & Shaw, 2005; Holtz & Harold, 2009).

Job satisfaction refers to an individual's overall evaluation of aspects related to his or her job (Judge, Heller, & Mount, 2002). The positive relationship between overall organizational justice perceptions and job satisfaction is established (Kim & Leung, 2007; Sora, Caballer, Peiró, Silla, & Gracia, 2010). Organizational justice perceptions

might be related to job satisfaction because they help individuals cope better with the demands and uncertainties of the workplace, thus experiencing increased satisfaction (Proost, Verboon, & Ruysseveldt, 2015; Sora et al., 2010). Moreover, meta-analytical results show that the strength of the relationships between job satisfaction and the dimensions of justice are all very similar (Cohen-Charash & Spector, 2001) and that overall justice is more strongly related to job satisfaction than the individual justice dimensions (Ambrose & Schminke, 2009).

Work stress is an uncomfortable psychological state resulting from a perceived imbalance of demands and resources (De Bruin, 2006). The relationship between organizational justice and work stress is also well established. The different dimensions of organizational justice are related to general work stress as well as various types of stress and strain responses, such as insomnia, perceived overall stress, absences related to sickness, and burnout (e.g., Elovainio, Kivimäki, & Vahtera, 2002; Greenberg, 2006; Judge & Colquitt, 2004; Robbins, Ford, & Tetrick, 2012). The relationship between organizational justice perceptions and stress may exist because low organizational justice is appraised as a stressor that leads to various stress and strain responses (Judge & Colquitt, 2004; Sora et al., 2010). Alternatively, perceptions of organizational justice have "the ability to reduce the uncertainty and lack of control that are at the heart of feelings of stress" (Judge & Colquitt, 2004, p. 396) possibly explaining why fair treatment at work is a potential mechanism of stress reduction (Vermunt & Steensma, 2003). To our knowledge, the relationship between overall organizational justice perceptions and work stress has not been directly tested yet. However, the empirical evidence cited earlier suggests that it exists. Moreover, overall organizational justice perceptions might be even more closely related to general work stress than the perceptions of different justice components, because, as mentioned earlier, general outcomes are better predicted by overall organizational justice than by justice components (Colquitt & Shaw, 2005; Holtz & Harold, 2009). Based on the elements presented earlier, we propose the following hypothesis:

*Hypothesis 2:* Overall organizational justice perceptions will be negatively related to work stress (H2a) and positively related to job satisfaction (H2b).

Finally, as argued in the previous paragraphs, P-BJW but not G-BJW can be expected to act as a personal resource that helps maintain job satisfaction and reduce work stress in various circumstances. Moreover, as we proposed in Hypothesis 1, the impact of P-BJW on work stress and job satisfaction is likely to be due to its effect on overall organizational justice perceptions. As a consequence, the relationships between P-BJW and job



satisfaction and work stress, respectively, are most likely to be indirect, and to pass through overall organizational justice perceptions. We therefore propose the following hypothesis:

*Hypothesis 3:* P-BJW will be indirectly and negatively related to work stress (H3a) and indirectly and positively related to job satisfaction (H3b), through overall organizational justice perceptions. The indirect pathways between G-BJW and job satisfaction and work stress will be non-significant (H3c).

## Method

We tested our hypotheses in a large sample of employed people using cross-lagged data of two measurement waves spanning over 1 year. The relatively long time span of 1 year between the two waves is a particularly strict test of our hypotheses. If the belief in a just world is a fundamental and stable belief, its influence on overall organizational justice perceptions and well-being should be observable over relatively long periods of time.

## Participants

With the assistance of the Swiss Federal Office of Statistics, a sample was randomly drawn from the national register of inhabitants of adults aged 25–55 living in the two largest linguistic regions of Switzerland, that is, the German- and French-speaking areas that together make up 91% of the population. This sample is roughly representative of the population in terms of age (for those aged between 25 and 55), gender, and nationality. At T1, 6,000 addresses were obtained, and of these, 2,956 people (response rate of 49.3%) started the second part of the survey that contained the measures used in this study. One year later, at T2, all participants who had started the research protocol at T1 ( $n = 2,956$ ) were invited to participate in the study again. Of these 1,944 participants responded (response rate of 65.8%).

For this research, we first selected the participants who completed the protocol at both waves ( $n = 1,702$ , 48.5% male,  $M_{\text{age}} = 43.4$ ). Then, we selected those who were in employment at both waves, resulting in 1,258 participants (48.3% male), aged between 25 and 55 ( $M = 43.72$  years,  $SD = 8.45$ ), with an average work rate of 36.3 hours per week ( $SD = 8.13$ ), tenure of 9.17 years ( $SD = 7.86$ ), and 43.8% holding a supervisor position. A small percent of the sample had a primary education (4.7%), most a secondary education (55.2%) and some a tertiary education (40.1%). The majority of the sample completed the questionnaire in German (64.5%), the rest chose French. This ratio corresponds to the percentage of people living in the

German-speaking part of Switzerland, which is Switzerland's largest linguistic region. The use of data derived from a sample based on random sampling has obvious advantages over the (widespread) use of convenience samples. In addition to obtaining a more detailed and correct picture of the concerned population, it significantly reduces sample selection bias and hence increases the robustness and potential generalizability of the results.

## Measures

Unless specified otherwise, a team of bilingual (French- and German-speaking) researchers translated scales that only existed in English into French and German. A second team of bilingual researchers independently verified the translations, to make sure that the German and French versions were equivalent. The entire questionnaire was pretested for comprehensibility of instructions and items in a sample of 50 adults between the ages of 25 and 55 (25 women; 25 German-speaking; 25 French-speaking).

### *Personal belief in a just world*

To measure P-BJW at T1, we used the Personal Belief in a Just World scale (Dalbert, 1999) that includes seven items (e.g., "I believe that I usually get what I deserve" or "In my life, injustice is the exception rather than the rule";  $\alpha = .90$ ). Responses were indicated on a six-point scale ranging from 1 = *not true at all/strongly disagree* to 6 = *very true/strongly agree*.

### *General belief in a just world*

The General Belief in a Just World scale (Dalbert, 1999) was used to measure G-BJW at T1. Participants responded using a six-point scale ranging from 1 = *not true at all/strongly disagree* to 6 = *very true/strongly agree* to six items (e.g., "I am confident that justice always prevails over injustice" or "I think basically, the world is a just place";  $\alpha = .81$ ).

### *Overall organizational justice*

In both waves, an overall score for organizational justice perceptions was obtained by taking an average of six items drawn from the short version of the questionnaire by Elovainio et al. (2010) that covers aspects of procedural, interpersonal, and distributive justice. An example item is "Does your work situation reflect the effort you have put into your work?" Two items (i.e., "Has your supervisor seemed to tailor his/her communications to individuals' specific needs?" and "Have those procedures been free of bias?") were omitted because of difficulty to translate these items adequately into French and German.

Responses were indicated on five-point scales with 1 = *to a small extent* and 5 = *to a large extent*. Reliability of the scale was .85 at T1 and .88 at T2.<sup>1</sup>

#### *General work stress scale*

In both waves, the General Work Stress Scale (GWSS) was used to provide a measure of the level of stress caused by work (De Bruin & Taylor, 2005). This nine-item scale is designed to be a one-dimensional measure of overall work stress. Individuals responded to questions using a five-point scale ranging from 1 = *never* to 5 = *always* (De Bruin & Taylor, 2005). An example item is “Do you spend time worrying about your work?” Reliability for the scale was .87 at T1 and .89 at T2.

#### *Job satisfaction*

Five items, similar to those found in the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England, & Lofquist, 1967), were used to assess, in both waves, participants’ satisfaction with various aspects of the work domain, namely behaviour of the supervisor, perceived security, salary, working conditions, and relationships with colleagues. One general item, “In general, how satisfied are you with your job?” was added to these five, to make a six-item scale. Responses were indicated on four-point rating scales ranging from 1 = *not satisfied at all* to 4 = *very satisfied*. Reliability was .73 at T1 and .77 at T2.

#### *Control variables*

In a later step of the analysis, robustness checks with controls were done to isolate the effects of the focal variables. A number of control variables were included and the main models of the study analysed again (see below). First, we included standard demographic variables such as age (measured in years), gender (coded as 1 = *man*, and 2 = *woman*), survey language (coded as 1 = *German*, 2 = *French*), and education (coded as 1 = *primary*, 2 = *secondary*, 3 = *tertiary*). Second, we included supervisor status of the participant (coded as 0 = *not supervisor* and 1 = *supervisor*) because supervisors may be more satisfied at work, but also more stressed (Flanagan & Flanagan, 2002), as well as possibly have different understandings compared to those of subordinates, as to what are the most central elements that constitute organizational fairness (Greenberg, 1990).

Finally, we included participants’ core personality traits, that is, the Big Five traits of neuroticism, extraversion, agreeableness, openness, and conscientiousness. All the Big Five traits are correlated to the dimensions of organizational justice, with agreeableness and neuroticism the strongest correlates (Shi, Lin, Wang, & Wang, 2009). Furthermore, the Big Five personality traits, are

known to correlate substantially with work stress and job satisfaction (Judge et al., 2002; Mroczek & Almeida, 2004), and with P-BJW and G-BJW (Nudelman, 2013). Considering these relationships between personality traits and our key variables, it seemed pertinent to include the Big Five traits as control variables. They were assessed by the French (Aluja, García, Rossier, & García, 2005) and German versions (Schmitz, Hartkamp, Baldini, Rollnik, & Tress, 2001) of the NEO Five-Factor Inventory Revised (McCrae & Costa, 2004). Questions were answered using a five-point scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Reliabilities for the five dimensions ranged between .70 and .83. All control variables were measured at T1.

#### *Statistical analysis*

To test construct validity and the hypotheses confirmatory factor analyses and structural equation modelling were conducted using Mplus 6 with maximum likelihood estimation (Muthén & Muthén, 2010). All standardized model estimates are presented. For the structural equation models, we used two- and three-item parcels as indicators for each construct. Parcels have greater reliability than items, tend to be more normally distributed, and have less random error than items and thus increase the reliability of the structural coefficients of the model (Little, 2013; Little, Cunningham, Shahar, & Widaman, 2002). The following fit indices were considered; chi-square test statistic ( $\chi^2$ ), the comparative fit index (CFI), the Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA). A model is considered to have an acceptable fit if the CFI value is .90 or above, the TLI values are above .95 and the RMSEA value is .05 or less, with values less than .08 considered acceptable (Cheung & Rensvold, 2002; Vandenberg & Lance, 2000). For model comparisons, models were considered as not statistically different when change in CFI < .002 (Meade, Johnson, & Braddy, 2008).

#### **Results**

Table 1 shows the means, standard deviations, alpha reliabilities, and correlations of the measures used. Concerning the focal variables, the correlations between P-BJW, G-BJW, overall organizational justice perceptions, work stress, and job satisfaction at both time points were as expected. P-BJW correlated positively with overall organizational justice perceptions and job satisfaction, and negatively with work stress for both T1 and T2. G-BJW correlated positively with overall organizational justice perceptions only at T1, and positively with job satisfaction, and negatively with stress at T1 and T2. Overall organizational justice perceptions were negatively

Table 1. Means, standard deviations, and correlations of the measures.

	<i>Mean</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Age	43.72	8.45	–										
2. Gender	1.52	0.50	-.02	–									
3. Language	1.36	0.48	.00	.03	–								
4. Supervisor status	1.43	0.50	.02	-.21	.02	–							
5. Education	2.36	0.57	-.08	-.03	.03	.14	–						
6. Neuroticism	2.52	0.60	-.12	.19	.14	-.12	-.10	–					
7. Extraversion	3.41	0.49	-.01	.07	.12	.17	.14	-.32	–				
8. Openness	3.47	0.49	.13	.16	.04	.01	.28	.02	.27	–			
9. Agreeableness	3.65	0.44	.11	.20	.07	-.16	.01	-.12	.08	.17	–		
10. Conscientiousness	3.94	0.44	.05	.04	.03	.09	-.02	-.36	.28	.06	.13	–	
11. T1 P-BJW	4.40	0.74	.06	-.04	-.26	.14	.13	-.36	.10	.03	.01	.15	–
12. T1 G-BJW	3.10	0.89	-.01	-.08	-.02	.08	-.12	-.10	.10	-.12	-.06	.08	.26
13. T1 OJ	3.84	0.66	.06	-.01	.01	.16	.13	-.34	.20	.04	.04	.22	.33
14. T2 OJ	3.69	0.70	.02	-.03	-.01	.14	.17	-.28	.20	.10	.06	.16	.27
15. T1 work stress	1.87	0.56	-.01	-.01	.13	.02	.05	.52	-.18	.02	-.10	-.24	-.27
16. T2 work stress	1.90	0.61	.01	.01	.16	.04	.05	.43	-.13	.06	-.08	-.18	-.20
17. T1 job satisfaction	3.23	0.44	.07	.01	-.01	.11	.08	-.30	.21	.03	.08	.16	.29
18. T2 job satisfaction	3.19	0.46	.02	.05	.01	.09	.10	-.24	.19	.04	.05	.13	.20
			12.	13.	14.	15.	16.	17.	18.				
12. T1 G-BJW			–										
13. T1 OJ			.10	–									
14. T2 OJ			.04	.55	–								
15. T1 work stress			-.15	-.35	-.25	–							
16. T2 work stress			-.12	-.24	-.39	.65	–						
17. T1 jobsatisfaction			.08	.59	.43	-.39	-.29	–					
18. T2 jobsatisfaction			.07	.41	.63	-.27	-.46	.51	–				

Note: Age was measured in years. Gender was coded as 1 = *man*, 2 = *woman*, survey language as 1 = *German*, 2 = *French*, supervisor status as 0 = *not supervisor*, 1 = *supervisor*, and education as 1 = *primary*, 2 = *secondary*, 3 = *tertiary*. T1 = time 1. T2 = time 2. OJ = Overall organizational justice perceptions. P-BJW = personal belief in a just world. G-BJW = general belief in a just world. Neuroticism, extraversion, openness, agreeableness, and conscientiousness were measured at T1. Correlations above  $|\cdot 07|$  are significant at  $p < .05$ .

related to work stress and positively related to job satisfaction. Job satisfaction and work stress were negatively correlated with each other.

### Confirmatory factor analyses

In step 1 of the analysis, we conducted confirmatory factor analyses to test whether P-BJW, G-BJW, and overall organizational justice perceptions are distinct constructs at T1. We tested five models (one-factor, three alternate two-factor models, and three-factor). In the one-factor model, all the parcels for P-BJW, G-BJW, and overall organizational justice loaded onto a single factor. In the first two-factor model, the parcels for P-BJW and G-BJW loaded onto the same factor, and the parcels for overall organizational justice on another factor. In the second two-factor model, G-BJW was its own factor, and the parcels for P-BJW and overall organizational justice loaded onto another factor. In the third two-factor model, P-BJW was its own factor, and the parcels for G-BJW and overall organizational justice loaded onto another factor. In the three-factor model, P-BJW, G-BJW and overall organizational justice were

three distinct factors. In the two- and three-factor models, all factors were allowed to correlate with each other. Results (see Table 2) clearly favour the three-factor model confirming the distinctness of these three constructs.

### Measurement invariance

In step 2, we tested if overall organizational justice, work stress, and job satisfaction displayed measurement invariance over time. In a first six-factor measurement model (three latent variables at T1 and T2), factor loadings were freely estimated. In a second six-factor model, we constrained the factor loading of each parcel to be equal over time. If the constrained model fits no worse than the unconstrained model, then metric invariance is reached and we are assured that the latent variables measure the same thing over time (Vandenberg & Lance, 2000). Results of these analyses (see Table 2) show that the difference in fit between the two models is negligible ( $\Delta CFI < .002$ ). Therefore, in subsequent analyses, the more parsimonious model is kept and the factor loadings are constrained to be equal over time.

Table 2. Fit of measurement models to test construct dimensionality and measurement invariance.

Model	$\chi^2$	df	CFI	TLI	RMSEA (90% CI)	$\Delta$ CFI	$\Delta\chi^2$
1 factor	2608.70*	27	.530	.370	.276 [.267; .285]		
2 factors (BJW and OJ)	1137.43*	26	.799	.721	.184 [.175; .194]	.269	1471.27*
2 factors (G-BJW and OJ, P-BJW)	1553.56*	26	.724	.617	.216 [.207; .225]	.194	1055.14*
2 factors (P-BJW and OJ, G-BJW)	1322.86*	26	.765	.675	.199 [.190; .209]	.235	1285.84*
3 factors (P-BJW, G-BJW, OJ)	85.15*	24	.989	.983	.045 [.035; .056]	.459	2523.55*
<i>Measurement invariance testing for organizational justice, stress and job satisfaction</i>							
Free loadings	328.52*	111	.983	.977	.039 [.035; .044]		
Longitudinal constraints on loadings	353.38*	120	.982	.977	.039 [.035; .044]	.001	24.86*

Note:  $\chi^2$  = chi-square test statistic; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root-mean-square error of approximation; CI = confidence interval;  $\Delta$ CFI = change in comparative fit index;  $\Delta\chi^2$  = change in chi-square test statistic; P-BJW = personal belief in a just world; G-BJW = general belief in a just world; OJ = overall organizational justice perceptions.

\* $p < .05$ .

### Hypotheses testing

In step 3, we tested our hypotheses. In Model 1, P-BJW and G-BJW (T1) predicted overall organizational justice (T1), which in turn predicted work stress and job satisfaction (T2). In this cross-lagged model the autoregressive paths were also included (e.g., T1 work stress predicts T2 work stress) as well as the cross-lagged paths (e.g., T1 work stress predicts T2 overall organizational justice). To test the indirect effects, we conducted bootstrap analysis with 5,000 random subsamples to obtain accurate point estimates of the effects as well as their 95% bias-corrected confidence intervals (Hayes, 2009).

Results confirm Hypothesis 1; P-BJW has a positive effect on overall organizational justice (H1a), while the effect of G-BJW is non-significant (H1b). Hypothesis 2 is partly confirmed; overall organizational justice positively predicts job satisfaction 1 year later (H2b), but not work stress (H2a). Hypothesis 3 proposed an indirect effect of P-BJW on work stress and job satisfaction through overall organizational justice perceptions. This hypothesis is partially supported with P-BJW indirectly predicting job satisfaction (H3b), but not work stress (H3a), through overall organizational justice perceptions. The indirect effects of G-BJW are non-significant,

thus providing support for H3c (see Tables 3 and 4 and Figure 1).

Additionally, the cross-lagged paths show that T1 job satisfaction positively predicts T2 overall organizational justice perceptions; and that T1 overall organizational justice perceptions predict T2 job satisfaction. These results suggest a reciprocal relationship between job satisfaction and overall organizational justice perceptions. The cross-lagged paths between organizational justice and work stress were non-significant.

### Robustness checks

Three robustness checks were conducted. First, we added demographic control variables (Model 2) and second the Big Five personality traits (Model 3) to the cross-lagged model detailed earlier by including them as predictors of all T1 variables. In both cases, model fit worsened slightly (Table 3). However, the addition of control variables did not substantially alter the path coefficients or the pattern of effects (Table 4) presented earlier suggesting that results are stable. Finally, to ensure that pattern of results were not due to a change in participants' employment situation between T1 and T2, we reran the model using only those participants who did not

Table 3. Fit of structural models.

Model	$\chi^2$	df	CFI	TLI	RMSEA (90% CI)	$\Delta$ CFI	$\Delta\chi^2$
Model 1	959.41*	229	.957	.948	.050 [.047; .054]		
Model 2	1929.47*	330	.903	.884	.064 [.062; .067]	.054	970.06*
Model 3	1485.56*	330	.935	.922	.053 [.050; .056]	.022	526.15*
Model 4	802.92*	229	.960	.951	.050 [.045; .053]		

Note: Model 1: P-BJW and G-BJW (time 1) predicted overall organizational justice (time 1), which in turn predicted work stress and job satisfaction (time 2). Model 2: Same as model 1, including demographic control variables. Model 3: Same as model 1, including the Big Five personality traits as control variables. Model 4: Same as model 1, restricting the sample to those with no change in their employment situation.  $\chi^2$  = chi-square test statistic; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root-mean-square error of approximation; CI = confidence interval;  $\Delta$ CFI = change in comparative fit index;  $\Delta\chi^2$  = change in chi-square test statistic.

Model comparisons made against model 1. Model 4 is not compared as this model is structurally the same as model 1.

\* $p < .05$ .



Table 4. Standardized model coefficients in all structural models.

	Model 1	Model 2	Model 3	Model 4
<i>Simultaneous effects</i>				
P-BJW → OJ (H1a)	<b>.40</b>	<b>.37</b>	<b>.28</b>	<b>.39</b>
G-BJW → OJ (H1b)	-.01	.03	.00	-.10
<i>Cross-lagged effects</i>				
OJ → Stress (H2a)	.03	.03	.04	-.01
OJ → Satisfaction (H2b)	<b>.18</b>	<b>.18</b>	<b>.17</b>	<b>.21</b>
Satisfaction → OJ	<b>.21</b>	<b>.20</b>	<b>.20</b>	<b>.25</b>
Stress → OJ	.01	-.04	-.02	.02
<i>Indirect effects</i>				
P-BJW → OJ → Stress (H3a)	.01 (-.15; .04)	.01 (-.12; .04)	.01 (-.01; .03)	.00 (-.03; .02)
P-BJW → OJ → Satisfaction (H3b)	<b>.07</b> (.04; .11)	<b>.07</b> (.04; .10)	<b>.05</b> (.03; .08)	<b>.08</b> (.05; .12)
G-BJW → OJ → Stress (H3c)	.00 (-.01; .00)	.00 (-.00; .01)	.00 (-.04; .00)	.00 (-.00; .01)
G-BJW → OJ → Satisfaction (H3c)	.00 (-.02; .01)	.01 (-.10; .02)	.00 (-.02; .01)	.00 (-.02; .01)
<i>Autoregressive effects</i>				
OJ	<b>.51</b>	<b>.51</b>	<b>.51</b>	<b>.57</b>
Stress	<b>.66</b>	<b>.67</b>	<b>.70</b>	<b>.72</b>
Satisfaction	<b>.45</b>	<b>.48</b>	<b>.47</b>	<b>.53</b>

Note: Model 1: P-BJW and G-BJW (time 1) predicted overall organizational justice (time 1), which in turn predicted work stress and job satisfaction (time 2). Model 2: Same as model 1, including demographic control variables. Model 3: Same as model 1, including the Big Five personality traits as control variables. Model 4: Same as model 1, restricting the sample to those with no change in their employment situation. To test indirect effects, bootstrap estimates were generated with 5000 samples and 95% bias-corrected confidence intervals (reported in parentheses). P-BJW = personal belief in a just world. G-BJW = general belief in a just world. OJ = overall organizational justice perceptions. Bold coefficients are significant.

experience significant changes in their employment situation between the two measurement waves ( $n = 1,041$ ,  $M_{\text{age}} = 44.49$ , 48.9 % male) (Model 4). Thus, we excluded participants who had changed jobs, or changed roles (e.g., were promoted or had new responsibilities) within their job between T1 and T2, and reran the hypothesized path model. Once again, the pattern of results remained stable (Table 4).

## Discussion

Inspired by just world theory and theories of organizational justice, this study brings together two streams of research on justice, showing that P-BJW—a fundamental need to believe that one gets what one deserves in one's own life—augments perceptions of overall organizational justice, which in turn foster well-being at work. Importantly, this pattern of results persisted over the time period of 1 year and after accounting for the impact of core personality traits or significant changes in the work environment. It contributes to the literature in several ways, as delineated in more detail in what follows.

We expected and found that P-BJW positively influences perceptions of overall organizational justice. This finding demonstrates that overall organizational justice perceptions are shaped by fundamental beliefs about how justice and injustice come about in one's own life. This belief is so fundamental and closely linked to the self because it allows people to give meaning to the events that happen to them and gives them a sense of control over

their life. The effect of BJW-P on overall organizational justice perceptions unravelled in this study is line with previous conceptualizations of organizational justice as a category of motivated behaviour that is linked to core aspects of the self and where the self functions as a frame of reference when assessing fairness in a given situation (Cropanzano et al., 2001; Skitka et al., 2010). It suggests that individual characteristics are significantly intertwined with how individuals evaluate fairness in the workplace. Individuals who believe that the world is just where they get what they deserve may look for organizational cues that support their belief, correctly detect them, and reinterpret those cues that would contradict it, which in turn leads to favourable appraisals of overall organizational justice.

Importantly, this study showed that it is P-BJW, and not G-BJW, that shapes perceptions of overall organizational justice, demonstrating that P-BJW and G-BJW are specific in their effects on overall organizational justice. This is in line with other research demonstrating distinct and sometimes even opposite effects of P-BJW and G-BJW (Strelan & Sutton, 2011; Sutton & Winnard, 2007). Our results further reinforce the theoretical distinction between the two spheres of the belief in a just world (Dalbert, 1999; Furnham & Proctor, 1989) and show that the two beliefs in a just world have unique and separate effects (Bègue & Bastounis, 2003; Sutton & Douglas, 2005). They underline the crucial necessity to model, theoretically and empirically, both beliefs in a just world in organizational research, where in fact, the distinction

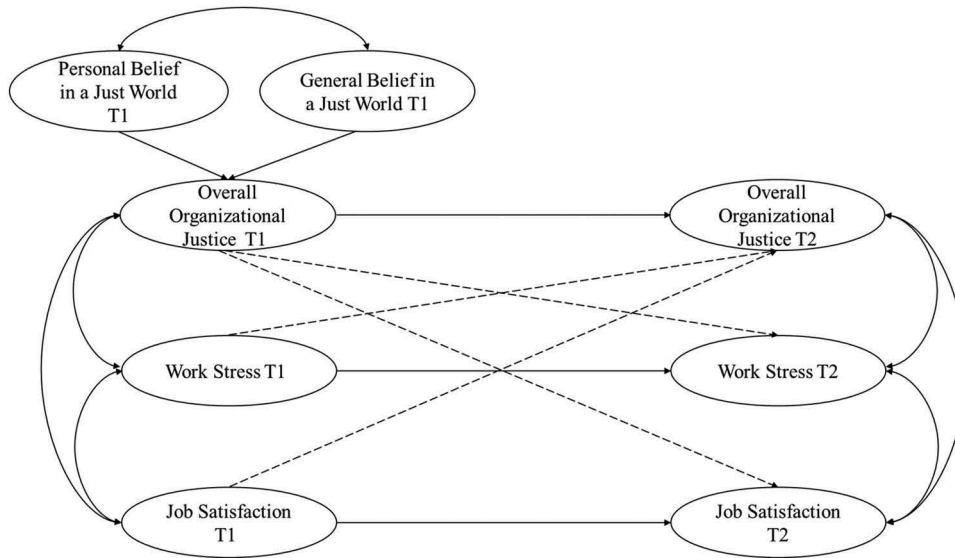


Figure 1. Graphical representation of Model 1. The figure shows only latent constructs. Dashed lines show cross-lagged effects.

between the two beliefs is often not even mentioned (e.g., Skarlicki & Turner, 2014).

We further expected that overall organizational justice perceptions are negatively related to work stress and positively related to job satisfaction. Our findings supported the effect on job satisfaction. This is largely in line with earlier research, replicating using a 1-year-lagged study, the well-known cross-sectional positive effect of overall organizational justice on job satisfaction (Ambrose & Schminke, 2009; Cohen-Charash & Spector, 2001). The cross-lagged effect from job satisfaction to overall organizational justice perceptions unravelled in our study however suggests an additional path, namely that job satisfaction affects appraisals of overall organizational justice over time. It points to a positive reciprocal relationship between job satisfaction and organizational justice such that the two mutually reinforce each other. Previous research has suggested that these relationships may be due to increased trust (Aryee, Budhwar, & Chen, 2002; Bijlsma & Van De Bunt, 2003; Dirks & Ferrin, 2002), but these studies were cross-sectional. Thus further research is needed to clarify the mechanism that may explain this reciprocal relationship.

We found no evidence for an effect of overall organizational justice perceptions on work stress, over the time period of 1 year. We had expected a negative relationship between organizational justice and work stress because it has been suggested that overall organizational injustice is appraised as a stressor and thus negatively affects psychological health (Judge & Colquitt, 2004; Vermunt & Steensma, 2005). However, even though this proposition received some support in cross-sectional studies, evidence for longitudinal associations between organizational justice and stress is mixed. Judge and

Colquitt (2004) found that some dimensions of justice (but not all) were related to experienced stress over 6 months, however, they did not account for experienced stress at the first measurement point, making clear interpretations of these results difficult. In difference to this, Lang, Biese, Lang, and Adler (2011) found no evidence for a relationship between organizational justice and depression over 3 and 6 months in different samples and thus no support for the low organizational justice-as-stressor hypothesis. The non-existence of a longitudinal relationship between overall organizational justice and work stress in our study may thus reflect, at least partly, the inconsistent relationship between organizational justice and stress which may be weak in field settings, or more complex, that is, fade out over extended periods of time and/or depend on additional factors, than previously thought (Lang et al., 2011). Alternatively, the mean levels of work stress in our study were relatively low, suggesting that the employees in this sample experienced only low levels of stress, thus making it simply more difficult to observe a relationship between overall organizational justice and work stress.

Finally, we expected that it is through the path of overall organizational justice perceptions that P-BJW, but not G-BJW, positively influences well-being at work over time. Put differently, we expected the effect of P-BJW on job satisfaction and work stress to be indirect, and we expected G-BJW to be unrelated to these outcomes. Results confirm these contentions for job satisfaction. It is noteworthy that the indirect effects of P-BJW on job satisfaction, through overall organizational justice perceptions, persisted over 1 year, underlining that P-BJW is indeed a potentially influential resource at work. Similarly, they were stable, that is, they remained even

when accounting for the impact of participants' core personality traits and significant changes in their work environment. Thus, results were not due to changes in the work environment but rather reflect true relations between beliefs in a just world, perceptions of overall organizational justice, and job satisfaction.

Taken together, these findings demonstrate that P-BJW is particularly adaptive and potentially powerful personal resource in the organizational environment. The capacity of P-BJW to function as a personal resource that has positive implications for well-being may be due to its relation with the fundamental needs that underlie fairness judgments (Cropanzano et al., 2001). P-BJW influences organizational justice perceptions and in turn well-being because it is closely related to the self and the psychological needs for control, belonging, and meaning. Thus, an individual is motivated to act in a manner and perceive experience at work in such a way that they contribute to the fulfilment of psychological needs.

### **Limitations**

Every study has its challenges, and some aspects that should be considered when interpreting these results are mentioned here. First of all, the design is not fully longitudinal as only two waves of data could be used. This means that some of the limitations, such as biased estimates for the association between two variables measured at the same time point, may apply. Even though we controlled for the association between variables measured at the same time point as well as for prior levels of the dependent and the intermediary variables, and for cross-lagged effects in our analyses, the design does not allow for making fully causal claims.

Moreover, although longitudinal designs, such as the cross-lagged design in this study, overcome some problems associated with cross-sectional research, they have some unique challenges. The duration of the time lag between measurement points is one such aspect. Ideally, this should be as close as possible to the true underlying casual lag; if the study time lag is too short, there is the possibility that the effects have not yet had time to develop, and if the lag is too long, then the effect may no longer exist (Taris & Kompier, 2014). In this study, a 1-year time lag seemed appropriate considering the aim to test the effects of a relatively stable fundamental belief. However, it is possible that the time lag was too long, as may be evidenced by the relatively small (albeit significant) indirect effects, and the absence of an effect of organizational justice on work stress over a year.

The effects of P-BJW were relatively small. Nevertheless, they are robust as shown by the

robustness checks that we conducted. Moreover, they were tested with a large randomly drawn sample. While the sample is one of the strengths of this research, this may also explain the relatively small effects, as the sample covers a wide range of working and personal conditions.

### **Future research**

We proposed that P-BJW drives perceptions of overall organizational justice. But is the reverse relation also possible, that is, may perceptions of organizational justice influence belief in a just world? Given the fundamental nature of the belief that the world is a just place, and its strong motivational component such that people are motivated to defend their belief even in the face of contradictory evidence (Hafer & Bègue, 2005; Lerner, 1980), beliefs in a just world should not change easily as a function of experiences. As such it seems unlikely that everyday experiences of workplace fairness alter the strength of P-BJW, unless they are drastic or enduring. However, there is the possibility that P-BJW and lasting levels of organizational justice may mutually reinforce each other. Future research should explore such possible reciprocal effects, using a fully longitudinal design. This research will need to account for the deservingness of fair treatment, as positive effects of fair treatment may depend on perceived deservingness (Bobocel & Hafer, 2007). Any underserved outcome (positive or negative) may pose a threat to the need to believe in a just world (Hafer & Bègue, 2005) but perceptions of deservingness may differ by player, for example employees and managers (Bobocel & Hafer, 2007).

G-BJW was not relevant to our research questions, but future research could explore when it is relevant in organizational contexts. G-BJW is particularly relevant when behaviours towards others are studied (e.g., Strelan & Sutton, 2011), thus the social context of organizations provides an ideal context for studying G-BJW. For example, Hafer and Bègue (2005) suggested that perpetrators of injustice may also be the target of just world restoring strategies such that in unfair power status hierarchies, individuals in lower positions rationalize that those occupying the power positions do actually have the necessary credentials. G-BJW may also relate to delinquent intentions and antisocial behaviour in organizations as has been shown in young adults (Sutton & Winnard, 2007).

### **Implications**

P-BJW could be seen as a form of resilience that helps individuals adapt and maintain well-being despite significant adversity (e.g., Dalbert, 1997; Otto et al., 2006). But,

as seen in this study and others (Otto, Glaser, & Dalbert, 2009; Otto & Schmidt, 2007) the contribution of P-BJW to well-being is not limited to adverse situations only. It seems to facilitate a sense of ease in dealing with minor stressors, thus leading to better functioning (Strelan & Sutton, 2011). In this way, P-BJW may function in a similar way to resilience, encouraging positive emotional responses to naturally occurring daily stressors by informing one's "habitual outlook on life" through reactions, appraisals, and interpretations of experiences (Ong, Bergeman, Bisconti, & Wallace, 2006, p. 743). P-BJW provides a general framework for interpreting events and experiences in one's own life and is thus an important and widely applicable personal resource (Dalbert, 2001, 2007). Thus, it appears that organizations should be aware that P-BJW may be a foundation upon which to build fruitful work experiences and particularly speak to their employee's sense of P-BJW through avenues such as enhancing perceived control (e.g., Blader & Bobocel, 2005).

The current study also raises a few disturbing questions, particularly those regarding potential side effects of P-BJW. First, its results suggest the possibility that individuals high in P-BJW under-report or even ignore serious events happening in the workplace because of their tendency to underplay injustice by seeking cognitive restoration. In this respect high P-BJW individuals might have an excessively naïve outlook on how they are treated at work, which in turn might even make them the target of systematic mistreatment (such as workplace discrimination, bullying, etc.). Second, the current study raises the question whether or not organizations can treat employees high in P-BJW poorly and still expect positive justice perceptions? P-BJW may be strong enough to compensate for poor treatment. However, even if this is the case, what is the organization's ethical responsibility to treat employees fairly? A danger is that the positive functions associated with belief in a just world "may allow injustices to go unchecked, because they are legitimized by the perceptions of fairness... ultimately creating a social institution that maintains a variety of forms of societal injustice" (Bobocel & Hafer, 2007, p. 286). If individuals high in P-BJW do not speak up when witnessing malpractices, the risk of negative repercussions for the organization, for example, on its functioning and reputation increases. This point seems to be particularly pertinent in light of recurrent business scandals such as the recent scandals in the car industry (Elson, Ferrere, & Goossen, 2015). Finally, as P-BJW is positively related to organizational commitment, and negatively to intentions to quit, P-BJW may lead poorly treated employees to not leave the organization which would be detrimental to the individual and the organization over time (Otto & Schmidt, 2007).

These potential risks require close considerations from management. More specifically, HR practices should develop tools through which employees can share their views about what happens at work and who can be held responsible. Leaders and managers should also be made aware of the potential risks of having collaborators with high P-BJW so that they could provide guidance and advice towards a more realistic consideration of (in)justice in the workplace.

## Conclusion

Results of this research suggest that individuals who believe that what happens in their own life is just, and that they deserve what they get, are more satisfied with their job because they perceive more overall organizational justice. But the beneficial effects of strong P-BJW may reach well beyond work-related well-being, because individuals who are engaged with their job are more productive, more willing to help others, and display higher levels of organizational commitment.

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## Note

- 1 To further assure that items adequately captured overall organizational justice perceptions, we conducted an additional validation study, including our measure of overall organizational justice ( $\alpha = .92$ ) and the perceived overall justice scale by Ambrose and Schminke (2009;  $\alpha = .94$ ). Participants from the United States were recruited through Amazon's Mechanical Turk. After excluding 33 participants who did not correspond to the study criteria (e.g., working at least 10 hours per week), the final sample consisted of 231 participants (67.5% men), aged between 25 and 57 ( $M_{\text{age}} = 34.06$ ), working 39.4 hours per week on average, with an average tenure of 6.37 years, and with 34% holding a supervisor position. Results of an exploratory factor analysis with varimax rotation including the perceived overall justice items and the organizational justice items showed a one-factor solution with an eigenvalue of 8.00 explaining 66.70% of the variance. All



the items loaded onto this one factor (all loadings > .70). The inter-item correlations ranged between .43 and .90, with an average inter-item correlation of .67. The KMO measure of sampling adequacy was .92 and the Bartlett's test of sphericity significant, further supporting the adequacy of the one-factor solution. Finally, organizational justice and perceived overall justice correlate at .79 (corrected for attenuation,  $r = .85$ ). Taken together, results further endorse that the aggregate measure of organizational justice used in the main study adequately captures perceptions of overall organizational justice.

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