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Title: Personality traits and perceptions of organizational justice

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Title: Personality traits and perceptions of organizational justice

Abstract

This study examined the association between Five-Factor Model personality traits and perceptions of organizational justice. The sample for the study comprised 903 participants (35–50 years old; 523 women) studied in 2007 and 2012. Measures used were the NEO-FFI questionnaire and the short organizational justice measure. The results showed that high neuroticism was associated with low distributive, procedural, and interactional justice. Furthermore, high agreeableness was associated with high procedural and interactional justice and high openness with high distributive justice. This study suggests that neuroticism, agreeableness, and openness are involved in perceptions of organizational justice and that personality should be considered in research and in practices at the workplace.

Keywords: organizational justice, Five-Factor Model, personality, equity theory

Introduction

During the past decades, organizational justice has been recognized as an important determinant of employee well-being and health (see e.g. Colquitt et al., 2013). It has also been suggested that perceptions of fairness and justice are not the same across individuals (Greenberg, 2001). It is therefore surprising that we still do not know why individuals perceive organizational justice differently. Given that previous research has shown that personality influences how we perceive our psychosocial working environment (Törnroos et al., 2012) and what our work attitudes are (Judge, Heller, & Mount, 2002), personality might help explain individual differences in organizational justice perceptions.

In order to increase perceived organizational justice at work, we need to understand why individuals do not perceive organizational justice in the same way. A first step to achieve this is to examine the role personality plays in perceptions of organizational justice. Studies on the associations between personality traits and perceptions of organizational justice have focused mainly on the trait neuroticism and traits conceptually similar to it (e.g. Elovainio, Kivimäki, Vahtera, Virtanen, & Keltikangas-Järvinen, 2003), or on personality traits as moderators of organizational justice effects (e.g. Elovainio et al., 2003; Scott & Colquitt, 2007). Only one previous study has examined the direct association between the all the Five-Factor Model personality traits and perceptions of organizational justice in a limited sample of business organizations (Shi, Lin, Wang, & Wang, 2009). To show that the direct associations hold in more occupationally diverse samples and that the associations also hold over time, further research is needed. In this study, we aimed to contribute to both theory and practice by examining the relationship between the Five-Factor Model personality traits and organizational justice perceptions in a longitudinal population-based sample consisting of a diverse range of occupations.

Theory and Hypotheses

Organizational justice. Organizational justice has traditionally been conceptualized with three components: distributive, procedural, and interactional justice. Although these components are correlated, they have been shown to be distinct – the three components differ in which facets of perceptions of fairness they emphasize and in what consequences these perceptions have (Colquitt, 2001). Distributive justice emerged from equity theory, which states that individuals compare their outcomes (rewards, working conditions) to input (effort, skills), in comparison with other individuals (Adams, 1965). Because this perceived fairness of outcomes could not completely explain employees' reactions to injustice, social psychology scholars shifted focus from outcomes towards the process by which outcomes were allocated – procedural justice (Leventhal, 1980; Thibaut & Walker, 1975). Procedural justice is achieved when the employee has a say during the decision-making process or can influence the outcome (Thibaut & Walker, 1975), or where the process is perceived as consistent, lacking in bias, accurate, and ethical (Leventhal, 1980). The third component of organizational justice, interactional justice, is concerned with the interpersonal aspect of organizational practices and behaviour towards the employee (Bies & Moag, 1986). Perceptions of interactional justice emerge from the politeness, honesty, and respect the employee perceives in the communication process with superiors (Bies & Moag, 1986).

Personality and perceptions of organizational justice. Although employees might agree that justice is an important part of well-being at work, the perception of organizational justice varies from one employee to the other. For example, a recent study on justice orientation, which is defined as how strongly individuals value justice, showed that individuals with high justice orientation were more vulnerable to evaluate a situation as unjust, than individuals with low justice orientation (Sasaki & Hayashi, 2014). Individual dispositions, such as personality, can influence perceptions of the work environment in several ways – individuals perceive their environments differently depending on their personality and these perceptions can lead individuals to react and

behave differently (Barsky & Kaplan, 2007; Törnroos et al., 2012). To understand which factors contribute to perceptions of organizational justice and to develop methods for managers to take individual differences into account, we need to know more about the role of personality in perceptions of organizational justice.

The Five-Factor Model (FFM) specifies five broad personality dimensions or traits: neuroticism, extraversion, openness, conscientiousness, and agreeableness (McCrae & Costa, 2003). Research has shown that the FFM traits are related to perceptions of several work-related issues, like job satisfaction (e.g. Judge et al., 2002), work performance (e.g. Barrick & Mount, 1991; Hertz & Donovan, 2000), work motivation (Judge & Ilies, 2002), and work stress (Törnroos et al., 2013). It would, therefore, seem logical that the FFM personality traits would also be associated with perceptions of organizational justice.

Neuroticism has been shown to be associated with negative feelings and distress (McCrae & Costa, 2003), and with sensitivity to unfair treatment (Schmitt, Gollwitzer, Maes, & Arbach, 2005). Individuals high on the neuroticism scale perceive receiving low rewards compared to the effort they put in at work (Törnroos et al., 2012) and might therefore also perceive lower distributive justice. Neuroticism is associated with perceptions of lower decision authority (Törnroos et al., 2013), which would translate into perceptions of lower procedural justice. In addition, because individuals with high neuroticism are more prone to perceive the actions of others as negative (McCrae & Costa, 2003) and might receive less social support at work (Lewis, Bates, Posthuma, & Polderman, 2014), it would follow that they also perceive lower interactional justice at work. Based on this evidence and on previous research, showing that neuroticism is associated with lower procedural and interactional justice (Shi et al., 2009), and perceptions of lower social fairness at selection (Truxillo, Bauer, Campion, & Paronto, 2006), our hypothesis is:

Hypothesis 1: High neuroticism is associated with perceptions of (a) low distributive, (b) low procedural, and (c) low interactional justice.

Although extraversion is linked to several beneficial occupational outcomes – such as high social support (Lewis et al., 2014), high job satisfaction (Judge et al., 2002), and less work stress (Törnroos et al., 2013) – an association to organizational justice has not been documented (Mayer, Nishii, Schneider, & Goldstein, 2007; Shi et al., 2009; Truxillo et al., 2006). For example, Shi et al. (2009) found in their study that extraversion was not associated with any of the components of perceived organizational justice and Mayer et al. (2007) found that extraversion was not associated with perceptions of procedural or interactional justice climates. This paradox might be caused by the need for extraverts to focus on evaluations of the self (Truxillo et al., 2006), instead of evaluations of the environment as compared to others. In addition, extraversion is associated with perceptions of higher rewards, higher efforts, higher control, and higher demands (Törnroos et al., 2012, 2013). Consequently, they are satisfied with the outcome but also perceive that their input is high, which makes it likely that they neither perceive high or low organizational justice. Therefore, the following hypothesis is set for extraversion:

Hypothesis 2: Extraversion is not associated with any of the components of perceived organizational justice.

Conscientious individuals are hard working and persevering (McCrae & Costa, 2003) and conscientiousness has in previous studies been associated with perceptions of higher job satisfaction (Judge et al., 2002) and higher equity in efforts spent and rewards received (Törnroos et al., 2012). However, the characteristics of conscientiousness do not seem to be important in perceptions of organizational justice or fairness perceptions (Shi et al., 2009; Truxillo et al., 2006). Conscientiousness might, therefore, be more important in perceptions of achievement and performance, than in perceptions of equity compared to others. The following hypothesis is therefore set for conscientiousness:

Hypothesis 3: Conscientiousness is not associated with any of the components of perceived organizational justice.

Agreeableness is characterized by trust in and sympathy towards others (Barrick & Mount, 1991), and agreeable individuals tend to feel guilty in situations, where they are advantaged compared to others (Schmitt et al., 2005). Agreeable individuals would, therefore, be likely to perceive being treated fairly and have faith in the decisions made in an organization. Accordingly, Shi and colleagues (2009) found that agreeableness was associated with all components of organizational justice. Previous research has also shown that agreeableness is associated with perceptions of being adequately rewarded based on input (Törnroos et al., 2012). Thus, agreeable individuals would make positive social comparisons about output/input and perceive higher distributive and procedural justice. They might also be able to create positive responses from others at work because of their selfless, helpful, and flexible nature (McCrae & Costa, 2003). This might influence their perceptions of being treated with respect by their superiors and therefore agreeable individuals might perceive higher interactional justice. Our hypothesis regarding agreeableness and perceptions of organizational justice is, therefore:

Hypothesis 4: High agreeableness is associated with perceptions of (a) high distributive, (b) high procedural, and (c) high interactional justice.

Openness is regarded a “double-edged sword” (DeNeve & Cooper, 1998, p. 199) and a trait that, in its broad form, is rarely associated with well-being outcomes (Connelly, Ones, & Chernyshenko, 2014). The characteristics of openness do not translate into feelings or behaviours important in perceiving the environment as threatening or enjoyable. Research on openness and occupational outcomes have to the most part been unsuccessful in finding an association (e.g. Shi et al., 2009; Törnroos et al., 2012) and therefore we will set the following hypothesis regarding openness and perceptions of organizational justice:

Hypothesis 5: Openness is not associated with any of the components of perceived organizational justice.

Methods

Participants and procedure

Data for the present study was from the ongoing prospective, population-based Cardiovascular Risk in Young Finns study. The study began in 1980 with a total of 3 596 participants from six age cohorts in the population register of the Social Insurance Institution, covering the entire geographic area of Finland and nationally representative of various socioeconomic groups (Raitakari et al., 2008). The data was acquired from the data manager of the Young Finns study.

The measurements for the present study were carried out in 2007 and in 2012 (participants being 35 to 50 years old) with a questionnaire. 1 504 participants had data from both time points. Of the participants, 1 226 were working full time and had a supervisor in 2012, which was a prerequisite for being included in the analysis. Having a supervisor was an inclusion criterion because organizational justice is concerned with managerial procedures and fairness (Colquitt, 2001). 325 participants were additionally excluded due to more than 50% missing values in any of the study variables. Thus, the complete data consisted of 903 participants (523 women, 57.9 %). The mean age of the participants was 43 years in 2012, and a clear majority of the participants (96.8%) had secondary education or higher and the largest occupational group was upper non-manual (52.6%). All participants gave written informed consent, and local ethics committees approved the study.

The attrition analyses were run on the sample consisting of the 903 participants who had data on Five-Factor Model traits from 2007 and 2012, data on organizational justice from 2012, and no missing data in the covariates. These participants were compared to those 1 400 participants who had participated in at least one of the measurement points used in the current study but did not meet the requirements for being included. Comparisons between the included and excluded participants were conducted using t-tests and χ^2 -tests. The attrition analyses showed that in

comparison to the excluded, the included participants were slightly older (43.26 vs. 42.16, $t = 5.14$, $p < .001$) had a higher educational level (2.36 vs. 2.26, $t = 3.91$, $p < .001$), and higher occupational status (2.17 vs. 1.95, $t = 4.86$, $p < .001$). Compared to the excluded, the included had lower scores on neuroticism (2.35 vs. 2.44, $t = 3.24$, $p = .001$), higher scores on conscientiousness (3.74 vs. 3.66, $t = 3.25$, $p = .001$), and higher scores on agreeableness (3.72 vs. 3.65, $t = 3.15$, $p = .002$). The implications of these results will be discussed in the discussion.

Measures

The Five-Factor Model personality traits were measured using the Finnish version of the NEO-FFI (Neuroticism, Extraversion, Openness, Five-Factor Inventory), which was developed by Rantanen et al. (Rantanen, Metsäpelto, Feldt, Pulkkinen, & Kokko, 2007). The Finnish version used in this study contains 60 questions that are based on the questions from the original NEO-FFI (Costa & McCrae, 1989), as well as on questions from the Finnish version of the NEO-PI (Personality Inventory). Some of the questions in the Finnish PI version are modified to better correspond to non-Indo-European languages.

Neuroticism was measured with 12 questions ($\alpha = .88$; e.g. “*I sometimes feel completely worthless*”), extraversion with 12 questions ($\alpha = .82$; e.g. “*I want to be surrounded by other people*”), conscientiousness with 12 questions ($\alpha = .83$; e.g. “*I work hard in order to accomplish my goals*”), openness with 12 questions ($\alpha = .69$; “*I am intellectually very curious*”), and agreeableness with 12 questions ($\alpha = .80$; “*I would rather cooperate than compete with others*”). The participants answered the questions on a scale from 1 (*does not apply*) to 5 (*applies well*). The mean for each scale was calculated only for those participants with a maximum of 50 % missing values in the items of the scale.

Organizational justice was measured in 2012 with a short 8-item version (Elovainio et al., 2010) of Colquitt's organizational justice measure (Colquitt, 2001). The shorter version has

been found to provide satisfactory psychometric properties (internal consistency and a good model fit to the data) and it has shown adequate criterion validity (Elovainio et al., 2010). The factor structure of the organizational justice scale was examined with confirmatory factor analysis. Model fit was evaluated based on Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA) index, and the Bayesian Information Criterion (BIC). Compared to a model with all items loading on one general organizational justice factor (CFI = .64, RMSEA = .32, BIC = 18023.26) and a model with two latent factors (CFI = .95, RMSEA = .12, BIC = 16411.12), the three-factor solution (distributive, procedural, and interactional justice) had the best fit to the data (CFI = .99, RMSEA = .06, BIC = 16224.78). Based on these results, the three-factor solution was used in the analyses. The organizational justice scales were formed by calculating a mean of the items in each scale. Procedural justice ($\alpha = .68$) was measured with 3 items (e.g. *“Have you been able to express your views and feelings during procedures used to arrive at your outcome”*), interactional justice ($\alpha = .93$) with 3 items (e.g. *“Has your supervisor treated you with dignity?”*), and distribute justice ($\alpha = .96$) with 2 items (e.g. *“Does your outcome reflect the effort you have put in for your work”*). The response scale was from 1 (*totally disagree*) to 5 (*totally agree*).

Based on previous research and preliminary bivariate analyses age, gender, educational level, and occupational status were included in the study as possible covariates (Herr et al., 2015; Khoreva & Tenhiälä, 2016; Tessema, Tsegai, Ready, Embaye, & Windrow, 2014). Educational level was classified as (1) low (comprehensive school), (2) intermediate (secondary education), or (3) high (academic; graduated from a polytechnic or a university). Occupational status was based on the Central Statistical Office of Finland: (1) manual, (2) lower non-manual, and (3) upper non-manual. The occupational status of entrepreneurs was determined based on their educational level (low, intermediate, and high education corresponding to manual, lower non-manual, and upper non-manual respectively). Educational level and occupational status were dummy-coded for the analyses.

Data analyses

The associations between personality traits and organizational justice were examined by hierarchical linear regression analyses. The analyses were performed using three models: Model 1 included only the covariates, Model 2 included the covariates and the five personality traits measured in 2012, and Model 3 included the covariates and the five personality traits measured in 2007. We examined both the cross-sectional association (Model 2) and the longitudinal association (Model 3) to show that our results in the longitudinal association are reliable. Because we were interested in examining the association of personality with perceptions of organizational justice – as opposed to organizational justice perceptions changing personality – it is important to note that personality was measured years before organizational justice. In addition, we used a longitudinal design to make sure common method variance of the self-reported scales does not inflate the results.

Results

Table 1 presents the means, standard deviations, and correlations between the study variables. The correlations between personality traits in 2007 and organizational justice in 2012 were virtually the same as for personality traits in 2012. Neuroticism, extraversion, and agreeableness were correlated with distributive, procedural, and interactional justice. Conscientiousness was correlated with procedural and interactional justice and openness with distributive and interactional justice. Test-retest correlations for the personality scales over time were high: .77 for neuroticism, .80 for extraversion, .78 for conscientiousness, .77 for agreeableness, and .77 for openness.

The results of the regression analyses are depicted in Table 2. The cross-sectional results for the association between personality and perceptions of organizational justice (Model 2) showed that high neuroticism was associated with low distributive ($\beta = -.21, p < .001$), low

procedural ($\beta = -.14$, $p < .001$), and low interactional justice ($\beta = -.13$, $p = .001$). In addition, high agreeableness was associated with high procedural ($\beta = .18$, $p < .001$) and high interactional justice ($\beta = .16$, $p < .001$). The personality traits explained an added 5% of the variance in distributive justice, 10% in procedural justice, and 8% in interactional justice, when compared to Model 1 with only the covariates. The longitudinal analysis (Model 3) revealed similar results as the cross-sectional analysis and showed support for hypotheses 1a, 1b, 1c, 2b, and 2c. High neuroticism was associated with lower distributive ($\beta = -.19$, $p < .001$), lower procedural ($\beta = -.12$, $p = .002$), and lower interactional justice ($\beta = -.10$, $p = .015$), while high agreeableness was associated with higher procedural ($\beta = .21$, $p < .001$) and higher interactional justice ($\beta = .17$, $p < .001$). In addition, high openness was associated with higher distributive justice ($\beta = .08$, $p = .033$). In this model, the personality traits additionally explained 3% of the variance in distributive justice, 9% in procedural justice, and 5% in interactional justice, compared to Model 1.

Table 1. Bivariate correlations between the study variables

Variable	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. Gender			1															
2. Occupational status	2.23	0.88	-.09**	1														
3. Educational level	2.36	0.54	-.06	.53***	1													
4. Neuroticism 2007	2.35	0.66	-.16***	-.12**	-.12***	1												
5. Extraversion 2007	3.41	0.55	-.13***	.14***	.13***	-.47***	1											
6. Conscientiousness 2007	3.74	0.53	-.16***	.07*	.12***	-.30***	.36***	1										
7. Agreeableness 2007	3.72	0.50	-.19***	.18***	.16***	-.27***	.28***	.21***	1									
8. Openness 2007	3.16	0.50	-.17***	.20***	.27***	-.04	.28***	.07*	.18***	1								
9. Neuroticism 2012	2.26	0.67	-.14***	-.14***	-.11***	.77***	-.40***	-.28***	-.25***	-.07*	1							
10. Extraversion 2012	3.42	1.67	-.12***	.16***	.15***	-.40***	.80***	.30***	.26***	.27***	-.47***	1						
11. Conscientiousness 2012	3.76	0.53	-.11***	.06	.11**	-.29***	.30***	.78***	.21***	.06	-.35***	.36***	1					
12. Agreeableness 2012	3.79	0.49	-.18***	.17***	.13***	-.27***	.24***	.18***	.77***	.18***	-.37***	.32***	.26***	1				
13. Openness 2012	3.10	0.52	-.16***	.20***	.23***	.01	.26***	.03	.15***	.77***	-.06	.31***	.04	.19***	1			
14. Distributive justice	3.28	1.16	.11***	.15***	.09***	-.22***	.09**	.02	.10**	.09**	-.25***	.14***	.07	.14***	.09**	1		
15. Procedural justice	3.70	0.78	.03	.11***	.08**	-.23***	.18***	.13***	.27***	.05	-.28***	.21***	.18***	.27***	.06	.34***	1	
16. Interactional justice	3.80	0.98	-.03	.12***	.06***	-.17***	.14***	.08**	.21***	.08*	-.22***	.19***	.12***	.25***	.10**	.38***	.59***	1

Notes:

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2. Standardized regression coefficients for Five-Factor Model traits and organizational justice

	N = 903								
	Distributive justice			Procedural justice			Interactional justice		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<i>Covariates</i>									
Gender (0 = women, 1 = men)	.13***	.12**	.11**	.04	.06	.07*	-.01	.01	.01
Educational level = low	.01	.02	.03	.05	.06	.07	.03	.04	.05
Educational level = intermediate	-.02	.01	.01	-.02	.01	.01	-.00	.03	.03
Occupational status = manual	-.17***	-.13**	-.14***	-.11**	-.07	-.07	-.13***	-.09*	-.10**
Occupational status = lower non-manual	-.04	-.02	-.03	-.02	-.00	.00	.01	.03	.03
<i>Independent variables</i>									
Neuroticism 2012		-.21***			-.14***			-.13**	
Extraversion 2012		.01			.07			.05	
Conscientiousness 2012		-.02			.07			.01	
Agreeableness 2012		.05			.18***			.16***	
Openness 2012		.07			-.00			.03	
Neuroticism 2007			-.19***			-.12**			-.10*
Extraversion 2007			-.03			.05			.04
Conscientiousness 2007			-.03			.04			.00
Agreeableness 2007			.05			.22***			.17***
Openness 2007			.08*			-.01			.03
R ²	.04	.10	.08	.02	.12	.11	.02	.10	.07
Adjusted R ²	.04	.09	.07	.01	.11	.10	.01	.09	.06
F	7.68***	9.60***	8.21***	2.86*	12.53***	11.45***	3.66**	9.56***	7.11***

Notes:

* $p < .05$, ** $p < .01$, *** $p < .001$

Reference group in educational level: high

Reference group in occupational status: upper non-manual

Discussion

The results of our study show that neuroticism, agreeableness, and openness are related to perceptions of organizational justice. Neuroticism was associated with perceptions of lower distributive, procedural, and interactional justice, while agreeableness was associated with perceptions of higher procedural and interactional justice. Openness was associated with perceptions of higher distributive justice. These relations were independent of gender, educational level, and occupational status. Our hypotheses on the association of neuroticism and agreeableness with organizational justice were thus partly supported. Our results show that personality, in part, is associated with perceptions of organizational justice.

In our study, high neuroticism was associated with lower distributive (Hypothesis 1a), lower procedural (Hypothesis 1b) and lower interactional justice (Hypothesis 1c). Previous studies have linked high neuroticism to lower procedural and interactional justice, lower social fairness at selection, and higher victim sensitivity in perceptions of justice (Schmitt et al., 2005; Shi et al., 2009; Truxillo et al., 2006). Individuals high on the neuroticism scale might perceive the organization's rewards, procedures, and treatment as unjust, because of their predisposition to experience negative feelings and unfair treatment compared to others (McCrae & Costa, 2003; Schmitt et al., 2005). In addition, because individuals with high neuroticism are more prone to perceive others' actions as negative (McCrae & Costa, 2003) they might not perceive being treated with dignity and respect by their supervisors.

As expected, extraversion (Hypothesis 2) and conscientiousness (Hypothesis 3) were not related to perceptions of organizational justice in our study. Extraverted individuals are friendly and like others (McCrae & Costa, 2003) but they tend to have high self-esteem and make positive evaluations about themselves (Truxillo et al., 2006). Therefore, they might not make social comparisons of their own situation to that of others. The social comparison process has been shown

to be important in fairness perceptions (Cropanzano & Rupp, 2003). Similarly, conscientious individuals are achievement-oriented but at the same time dutiful (McCrae & Costa, 2003), which might be the reason that conscientiousness as a broad trait is not associated with organizational justice perceptions (Shi et al., 2009).

Agreeableness has in previous studies been linked to perceptions of higher organizational justice (Shi et al., 2009), higher job satisfaction (Judge et al., 2002), and lower work stress (Törnroos et al., 2012). Because agreeable individuals usually trust others and feel guilty if they are advantaged compared to others (Barrick & Mount, 1991; Schmitt et al., 2005), they might also perceive being treated justly and rewarded appropriately. This could help explain why agreeableness was associated with higher procedural (Hypothesis 4b) and higher interactional justice (Hypothesis 4c) in our study. Agreeable individuals might also not only perceive being treated fairly but also actually be treated with respect and dignity by their superiors because agreeable individuals have a tendency to be selfless and flexible (McCrae & Costa, 2003).

Against our expectations (Hypothesis 5), openness was associated with distributive justice in our study. Although openness is considered a broad trait that rarely shows an association to well-being outcomes (Connelly et al., 2014), some aspects of openness might explain the association with distributive justice. Individuals high on the openness scale are creative and have the enthusiasm to develop new ideas (McCrae & Costa, 2003). Therefore, they might feel that they are contributing more and not receiving adequate rewards, compared to others. This is also supported by research that shows that openness is associated with perceptions of higher efforts at work (Törnroos et al., 2012). In a previous study, openness did not have an association with organizational justice perceptions (Shi et al., 2009). There might be cultural differences behind this discrepancy or the different results might be due to differences in the samples. Our population-based sample was larger and consisted of occupations from all levels. This might have resulted in more power in finding an association although the effect size was small.

Theoretical and practical implications

Our findings show that personality can help explain why perceptions of organizational justice are not the same across individuals. Perceptions of organizational justice are influenced by both situational and personal characteristics, and therefore it is important to include a dispositional perspective to understanding organizational justice perceptions, as suggested by Shi and colleagues (2009). Although our results do not differ significantly from the results of Shi and colleagues (2009), our population-based sample had more power in explaining the associations. This shows that the results regarding neuroticism and agreeableness are robust and that these traits are important in organizational justice perceptions. Organizational justice theories could benefit from incorporating these traits in explaining differences in perceptions of organizational justice. For example, future research should be focused on examining why and how perceptions and the actual implementations of organizational justice differ, and what we could do to bring them closer together. This could be examined with supervisory ratings of organizational justice practices. There is also a need for more longitudinal research on how organizational justice perceptions vary over time. This could be integrated with the question on why perceptions and reality differ from each other: examining the within and between variation of organizational justice perceptions and justice implementation over time.

It is also important to note that research has shown that individual dispositions are also involved in reactions to organizational justice (Elovainio et al., 2003; Scott & Colquitt, 2007). Therefore, researchers should be aware of the different implications personality can have on the measurement of organizational justice – if we want to know who is likely to perceive a situation as unjust, certain individual dispositions play a part as predictors, but if we are interested in knowing who will have an unfavorable outcome from injustice, certain individual dispositions should be used as moderators. In addition to using personality as a moderator of relationships between

organizational justice and outcomes, examining moderators of the personality–justice association is also important. Here, the moderators could be supervisor personality (person-supervisor fit), leader-member exchange (LMX) or trust in the organization. This line of research would generate valuable information regarding what role the context plays in why individuals perceive organizational justice differently.

Promoting fairness in managerial procedures and respectful treatment of employees should be the concern of all managers and organizations. Our study shows that managers should also be aware that individuals perceive fairness in different ways. It is important that these individual differences are acknowledged as important markers of individual well-being, and that managers should try to alleviate the concerns regarding fairness raised by employees. First, managers could benefit from training that focuses on understanding that individuals perceive their working environment in different ways. “One size fits all” management should be avoided and instead organizations should focus on inclusive work practices and inclusive leadership to promote employee well-being. Secondly, training managers in organizational justice principles might give them the tools to tackle the concerns raised by employees that are vulnerable to perceive situations as unjust. Managers should be aware that perceptions and reality do not always meet and that increased transparency, communication, and respectful treatment could help in increasing perceptions of organizational justice. Selection based on personality should be avoided since self-reported personality tests for personnel selection are not recommended (see e.g. Morgeson et al., 2007).

Limitations and future directions

There are some limitations that should be considered when interpreting our results. First, although the FFM traits and organizational justice were measured at two different time points, causal inferences of the nature of the association cannot be made, as the baseline level of organizational

justice was not measured. However, this was the first study to examine the association between FFM and organizational justice over time. Despite not having a fully prospective design, we were able to measure personality years before perceptions of organizational justice, ruling out the possibility of organizational justice perceptions influencing personality. Although the time lag was relatively long, test-retest correlations show that the FFM scales have rank-order stability over considerable periods of time (Rantanen et al., 2007). Second, compared to the excluded participants, the included had higher scores on educational level, occupational status, conscientiousness, and agreeableness as well as lower scores on neuroticism. Our results might, therefore, reflect individuals with higher conscientiousness, agreeableness, lower neuroticism, and higher socioeconomic status slightly better than individuals with opposite characteristics. However, there were no differences in organizational justice between the included and excluded participants, making the probability low for our sample being highly selective. Third, the Cronbach's alpha for the openness scale was below the threshold for adequate internal consistency. We tested the correlation between the openness scales over time and found a relatively high correlation ($r = .77$) showing high reliability of the openness scale in our study. In addition, previous research using the same scale as in this study has found test-retest reliability of .81 indicating that the reliability of the scale is high (Rantanen et al., 2007).

Despite these limitations, our study contributes to the literature on the antecedents of perceptions of organizational justice. The data for our study was relatively large, population-based, and consisted of a broad range of occupations. Our results show that personality traits, especially neuroticism, agreeableness, and openness, are involved in perceptions of organizational justice at work. Personality should, therefore, be integrated into organizational justice theory, in order to increase predictive power. Managers need to be aware that employees perceive their work environments in different ways and should be sensitive to the employees' concerns about fairness. Future studies may want to look at cultural differences in the association between personality and

perceptions of organizational justice, as there might be differences in perceptions of organizational justice between different cultures. There are also other individual difference variables that could be important predictors of justice perceptions (Colquitt, Scott, Judge, & Shaw, 2006). Researchers should therefore also focus on variables other than personality traits, for example, emotional intelligence in explaining why individuals perceive justice differently (Ouyang, Sang, Li, & Peng, 2015). In addition, future research should look at the association between personality and organizational justice perceptions at the aggregate level, for example, organizations and teams. This could reveal important information about which personality traits are important for perceiving organizational justice in different levels of the organization.

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