

Coworkers' interpersonal justice and team citizenship behaviors: mediation of social exchange and identity and moderation of extraversion

Coworkers' interpersonal justice

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Abstract

Purpose – The purpose of this study is to examine the effect of coworkers' interpersonal justice (defined as the extent to which one is treated by coworkers with dignity, courtesy and respect) on team citizenship behaviors. More precisely, the authors first test the mediating role played by both team-member exchange and team identification in this relationship. Further, they examine the moderating role of extraversion in these two mediating mechanisms.

Design/methodology/approach – Based on 134 subordinate-supervisor dyads, the authors conducted moderated multiple mediation analysis.

Findings – The results of this study showed that, for highly extraverted employees, coworkers' interpersonal justice positively influences team citizenship behaviors because of an exchange relationship of better quality among the team members. In contrast, for employees with low or medium levels of extraversion, the positive effect of coworkers' interpersonal justice on team citizenship behaviors is explained by their higher identification with the team.

Practical implications – This paper holds important implications for management practice in teamwork environment. Given coworkers' interpersonal justice role in determining team citizenship behaviors, the findings of this study highlight the importance of establishing a work culture where each employee treats others fairly.

Originality/value – Overall, these findings indicate that, depending on the level of employees' extraversion, mechanisms grounded in the social exchange and the social identity perspectives act as complementary mechanisms in the team-focused justice-citizenship behaviors relationship.

Keywords Organizational justice, Social exchange, Social identity, Organizational citizenship behaviors, Personality

Paper type Research paper

Nowadays, managing perceptions of justice among employees is crucial to organizations. Organizational justice is indeed of central interest because of its implications in terms of employees' motivation and performance (Colquitt *et al.*, 2001). In particular, a plethora of research has showed the relationship between workplace justice and employees' behaviors such as citizenship behaviors (Colquitt *et al.*, 2013). Two theories on the mechanisms through which justice impacts employees' behaviors have received increasing attention in



recent years: the social exchange perspective and the social identity perspective (Cropanzano *et al.*, 2018).

This prior research mainly deals with justice stemming from the organization or the supervisor. Interestingly, Rupp *et al.* (2014) pointed out that a critical and fruitful avenue for future research on justice would be to explore justice emanating from other sources like coworkers. Indeed, coworkers' justice may be a useful predictor of employees' attitudes and behaviors (Ambrose *et al.*, 2021; Li and Cropanzano, 2009). Given the increased use of teams in organizations and the meaningfulness of the team as a proximal entity for employees, it is, thus, of both theoretical and empirical importance to understand the consequences of coworkers' justice.

Precisely, we develop in this research a model examining the effects of coworkers' interpersonal justice on team citizenship behaviors. Coworkers' interpersonal justice refers to the extent to which one is treated by coworkers with dignity, courtesy and respect. Among the four dimensions of justice (Colquitt *et al.*, 2001), the interpersonal facet of coworkers' justice is worth studying for two reasons. First, whereas interpersonal justice has been less studied than other justice dimensions, it is the facet the most associated to citizenship behaviors (Colquitt *et al.*, 2001). There is also a need to break down results obtained for interactional justice into its two components – interpersonal and informational justice – as their consequences might differ (Karriker and Williams, 2009). Second, the interpersonal treatment received from coworkers belongs to employees' immediate work environment and may, thus, have critical consequences for their attitudes and behaviors at work.

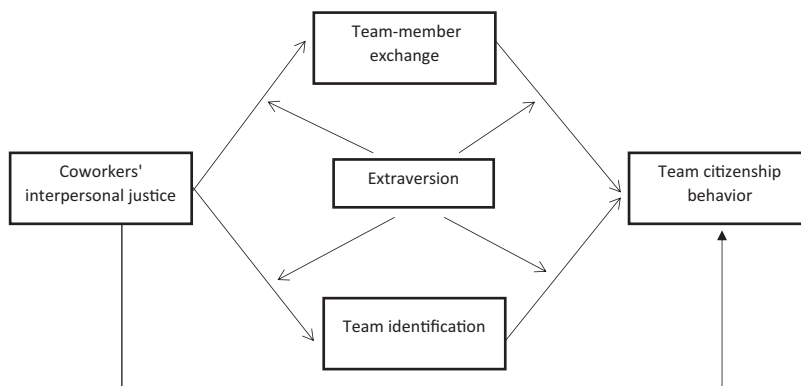
The aim of this study is twofold. First, paralleling research which has been done on the organizational focus, we will investigate the role played by the social exchange and the social identity perspectives in the coworkers' interpersonal justice–team citizenship behaviors relationship. Precisely, we will study whether these two perspectives underlie this relationship between coworkers' interpersonal justice and team citizenship behaviors, by examining the mediating effects of both team-member exchange and team identification.

Second, the present study will examine a boundary condition of these two posited mediations, by testing the moderating role of extraversion. According to the interactional psychology approach and cognitive affective theory, behaviors are shaped by the interaction between personal and situational variables, so that personality governs people responses to that environment (Colquitt *et al.*, 2006). Personality may, thus, impact employees' reactions to justice perceptions. We focus in this paper on extraversion (i.e. the tendency to seek out interaction opportunities with others), as the core of this trait (i.e. the relationships with others) fits particularly well with the aim of studying interpersonal interactions within teams. Figure 1 presents the theoretical model that underlies this research.

Coworker's interpersonal justice and team citizenship behaviors

Interpersonal justice refers to the interpersonal treatment people receive. Interpersonal justice is linked to a multitude of outcomes such as organizational commitment, turnover intentions or citizenship behaviors – that is, individual extra-role behaviors that are discretionary, not directly or explicitly recognized by the formal reward system (Colquitt *et al.*, 2001).

Prior research focused mainly on justice emanating from the supervisor or the organization (Rupp and Cropanzano, 2002). However, individuals are sensitive to other sources of justice such as customers (van Jaarsveld *et al.*, 2021) or coworkers (Ambrose *et al.*,



Coworkers'
interpersonal
justice

Figure 1.
Theoretical research
model

Source: Figure by authors

2021; Ohana, 2016). Indeed, people identify coworkers as a source of justice that is distinct from other sources (Fortin *et al.*, 2020). Yet, research on perceptions of justice emanating from the group to which the individual belongs is scarce. Most of these studies consider justice from coworkers as a unit-level construct, that is, a facet of justice climate which aggregates individual perceptions. Li *et al.* (2013) defined the so called “peer justice” as “shared perceptions of the extent to which coworkers treat each other with fairness.” At the individual level of analysis, very few previous studies examine coworkers’ interpersonal justice, that is, the individual perception of the way in which the group displays interpersonal justice to oneself and its impact on work attitudes and behaviors. For example, Lavelle *et al.* (2009a, 2009b) tested the relationship between interactional fairness of the workgroup and positive behaviors directed toward the workgroup.

In line with this latter study, one can reasonably assume that coworkers’ interpersonal justice fosters team citizenship behaviors. Previous research relying on a multi-foci approach indeed suggested that the source of justice is the same as the target of citizenship behaviors. Accordingly, the entity held responsible of the justice feeling will be the recipient of the citizenship behaviors (Lavelle *et al.*, 2009a; Harris *et al.*, 2020). If an employee perceives that s/he is fairly interpersonally treated by his/her coworkers, then s/he will be inclined to display high levels of citizenship behaviors toward them. We argue in the present research that the explanation of this relationship between coworkers’ interpersonal justice and team citizenship behaviors can be derived from two theoretical approaches, that is, the social exchange theory and the social identity theory.

Team-member exchange as a mediator

A first underlying explanatory mechanism of the effect of coworkers’ interpersonal justice on team citizenship behaviors is based on social exchange. With social exchanges, positive action by coworkers directed to the individual leads the latter to reciprocate in positive ways through his/her attitudes and behaviors. A concept frequently used to capture social exchange among coworkers is team-member exchange (Gervasi *et al.*, 2022). Team-member exchange represents an individual’s perception of the exchange quality of his/her interactions with other team members (Seers, 1989). More precisely, it is defined as the individual’s perception of the quality of:

The reciprocity between a member and his or her team with respect to the member's contribution of ideas, feedback, and assistance to other members and, in turn, the member's receipt of information, help, and recognition from other team members (Seers *et al.*, 1995, p. 21).

Employees who receive fair interpersonal treatment from their coworkers will interpret the exchanges that occur with the team as positive and perceive that their coworkers take care of them. They may then reciprocate with positive attitudes and behaviors toward the team and, for example, display in return citizenship behaviors toward its members (Lavelle *et al.*, 2015). Few empirical studies confirm this mediating role. Lavelle *et al.* (2009a) found that group commitment (i.e. a proxy for social exchange) mediates the link between coworkers' procedural fairness and team citizenship behaviors. In another study, Lavelle *et al.* (2009b) showed that perceived workgroup support (i.e. another proxy for social exchange) mediates the relationship between coworkers' interactional justice and team citizenship behaviors.

Based on these arguments, we hypothesize the following:

- H1. Team-member exchange mediates the positive relationship between coworkers' interpersonal justice and team citizenship behaviors.

Social identity as a mediator

Apart from social exchange, social identity represents an alternative framework to understand why coworkers' interpersonal justice is positively associated with team citizenship behaviors. According to social identity theory, group membership models people's comprehension of who they are. Tajfel (1978, p. 63) defined social identity as:

That part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership.

Individuals include to a greater or lesser degree their group in their sense of self, leading to the "collective-self" (Brewer and Gardner, 1996). People may indeed cognitively merge their sense of self with their judgment of the characteristics of their workgroup. Team identification represents this perceived oneness between self and the team that makes people conceive their self in terms of "we" rather than "I" (Ashforth and Mael, 1989).

The group engagement model offers further insight on the potential link between interpersonal justice, team identification and team citizenship behaviors (Xiang *et al.*, 2019). According to the group engagement model, interpersonal justice gives some information about the status an individual has inside the group. This feedback emanating from justice shapes people's definition of themselves and helps to create and maintain their social identity. Favorable group identification intensifies their concern with their group welfare and interest. Employees with strong team identification are intrinsically motivated to help the group with its viability and success (Blader and Tyler, 2009). Indeed, the group success equals then individual success as the group and the self overlap (Ashforth and Mael, 1989). They are, thus, more willing to display team citizenship behaviors that will help to satisfy the needs of the group and to achieve group goals.

Empirical evidence for the mediating role of identification in the relationship between justice and citizenship behaviors has already been found for the organizational target. For example, Blader and Tyler (2009, Study 2) showed that organizational identification is a mediator of the link between organizational procedural justice and a general measure of citizenship behaviors. Empirical studies dealing with the coworkers' focus are

comparatively scarcer. Workgroup identification was found to mediate the relationship between justice (but emanating from the supervisor) and workgroup extra role behaviors (Olkkonen and Lipponen, 2006). Even though no study shows so far this relationship with the team focus, we can, thus, assume that:

- H2. Workgroup identification mediates the positive relationship between coworkers' interpersonal justice and team citizenship behaviors.

Extraversion as a moderator

Researchers have consistently called for examining moderators of the justice–outcome relationship to understand why people react differently to the same situation in terms of fairness (Collins and Mossholder, 2017). According to cognitive affective theory (Mischel and Shoda, 1995), individual-level differences, such as personality, determine the emphasis individuals place on some attributes in their work environments when forming job attitudes and engaging in subsequent behaviors. This theory indeed explains that the psychological effect of a situation depends on how an individual interprets the situation. This interpretation varies as a function of individual differences in personality. Personality variables such as extraversion can, thus, enhance or buffer the effect of justice on attitudes and behaviors (Colquitt *et al.*, 2006). People with high levels of extraversion are social, warm, outgoing, energetic, optimistic and assertive (Costa and McCrae, 1992). Extraversion is an individual characteristic that is stable and that exerts an influence on an extensive range of behaviors (Judge *et al.*, 1999). It is perhaps the dominant factor in the Big Five model of personality (Bauer *et al.*, 2006). Importantly for the present study, extraversion is likely to be of most relevance to team settings and intra-team processes (Prewett *et al.*, 2018). Because extraverts value social interactions, extraversion is indeed expected to be of relevance for the functioning of the social mechanisms of their team (Islam and Bowling, 2022).

We argue here that extraversion might influence the strength of the mediating effect of team-member exchange in the coworkers' interpersonal justice – team citizenship behaviors relationship. First, as a concept of social interaction, the development of team-member exchange should be contingent on the extent to which employees interact effectively with others. Research has shown that people with high levels of extraversion are seeking out interaction opportunities with others and are searching for positive work environments (Costa and McCrae, 1992). They may, thus, value more coworker's interpersonal justice because it allows them to develop positive exchange relationships with other workgroup members. In this regard, they may be more sensitive to the treatment they receive from their workgroup members in terms of fairness. In contrast, because introverts are shy, withdrawn and less interested in social interactions (Goldberg, 1990), they may attach less value to their perceived justice provided by workgroup members to determine the quality of the exchanges with them.

Second, team-member exchange may benefit more to extraverted than to introverted individuals. Extraverts enjoy interactions with others, and therefore, they may value positive team-member exchange (Liao *et al.*, 2013). Extraverted employees may then view positive social interactions with workgroup members as a meaningful gift that must be more reciprocated in terms of team citizenship behaviors (Liao *et al.*, 2013). Overall, it is thus likely that extraversion moderates the first stage of the indirect effect (i.e. the path from coworker's interpersonal justice to team-member exchange) and/or its second stage (i.e. the path from team-member exchange to team citizenship behaviors). Accordingly, we hypothesize that:

- H3.* Extraversion moderates the positive and indirect effect of coworkers' interpersonal justice on team citizenship behaviors through team-member exchange. Specifically, the indirect effect of team-member exchange is stronger when extraversion is high compared to when it is low.

Extraversion might also influence the strength of the mediating effect of team identification in the coworkers' interpersonal justice–team citizenship behaviors relationship. First, extraverted people tend to identify themselves with their group independently of the treatment they receive (Costa and McCrae, 1992). Because they prefer to be in group situations, extraverts have a stronger sense of oneness with the group they belong to (Johnson *et al.*, 2012). Extraverts show heightened levels of positive affect (Larsen and Ketelaar, 1991) that make them prone to experience positive feelings toward their social group (Johnson *et al.*, 2012). These positive feelings will be reflected in their identification with their social group. Therefore, their identification with their team is spontaneous and more independent of the status they derive from the (un)fair treatment they receive. In contrast, introverts tend to be solitary, withdrawn, cautious and, therefore, tend not to spontaneously identify with their team (Costa and McCrae, 1992). Based on the above, it is reasonable to assume that the treatment received from the group will have more influence on team identification for extraverts than for introverts.

Second, employees with higher levels of team identification may want to contribute more to the team success. Indeed, as they include to a greater degree their group in their sense of self, they may wish to benefit from the image of a successful entity. Extraverts are likely to exert less effort than introverts to contribute to the team success because they are outgoing and energetic; they tend to go over their task by helping workgroup members (Wilmot *et al.*, 2019). It is, therefore, likely that, whatever their level of team identification, extraverts already possess the resources and the will needed to display high levels of team citizenship behaviors (Guay and Choi, 2015). Contrarily, when introverts identify with their team, they may be disposed to engage in even more team citizenship behaviors to add some new contributions to its success. Introverts categorize themselves in less social groups but tend to attach greater importance to their identification to those groups in determining their subsequent behaviors (LePine and Van Dyne, 2001). A high level of identification with a workgroup will elicit a stronger sense of oneness with this workgroup in introverted individuals. Because their self-concept is extremely tied to the workgroup, helping workgroup members through citizenships behaviors makes great sense to introverts, as it contributes to helping (to some extent) themselves (van Dick *et al.*, 2006). Overall, it is thus likely that extraversion moderates the first stage of the indirect effect (i.e. the path from coworker's interpersonal justice to team identification) and/or its second stage (i.e. the path from team identification to team citizenship behaviors). Accordingly, we hypothesize that:

- H4.* Extraversion moderates the positive and indirect effect of coworkers' interpersonal justice on team citizenship behaviors through team identification. Specifically, the indirect effect of team-member exchange is stronger when extraversion is low compared to when it is high.

Method

Sample and procedure

The sample was composed of employees recruited via StudyResponse, a nonprofit service that provides access to 40,000 participants from a variety of occupations who are interested in completing surveys. Pre-screening criteria were used to recruit potential participants who:

- had to be currently employed in the USA;
- had a supervisor who was willing to enroll in the StudyResponse service;
- must be over 18 years of age; and
- had at least one year of organizational tenure.

The questionnaires were then distributed to 225 employees and their direct supervisor via an email containing a link to the electronic survey and that provided information on the objectives of the research. In this email, all participants were also ensured anonymity and confidentiality of their responses, their voluntary participation and that they could leave the survey at any time.

For the subordinate survey, each participant received \$5 upon the completion of the online questionnaire as part of a larger project containing in total 117 questions (assessing demographic characteristics, individual traits and relationship with supervisor, organization and workgroup). For the supervisor survey, supervisors received \$5 upon the completion of the online questionnaire containing 26 questions related to their perceptions of their subordinate's attitudes and behaviors. We obtained 159 employee surveys (70% response rate) and 157 supervisor surveys (71% response rate). Surveys from the subordinates and their direct supervisors were matched using a unique anonymous code provided by StudyResponse. After removing missing data and unmatched responses, the final sample consisted of 134 matched dyads, which corresponds to a response rate of 60%.

Of these 134 responses, 37% of the employees were female. The average employee age was 39 years ($SD = 9$). The average organizational tenure is 11 years ($SD = 6$), and the average tenure within the workgroup is 8 years ($SD = 5$). Of the respondents, 80% have been to college, and 20% have at least a master degree. Occupations were coded according to 41 different categories. In our sample, 29 occupations were concerned. The most represented occupations are managerial (12%), technology (11.3%), administration support (7.5%), accounting or financial (6%) and engineering and design (6%). Of the participating supervisors, 32% were female. Of these supervisors, 41% were between 35 and 44 years old, 16% were below 35 years and 43% over 44 years. The average organizational tenure of the supervisors is 13 years ($SD = 8$), and the average number of years supervising their current workgroup is 8 years ($SD = 5$). Our study was carried out in accordance with the ethical guidelines of the first author institution and the Declaration of Helsinki.

Measures

For all measures, a seven-point Likert-type scale was used to measure respondents' level of agreement with each item (1 = strongly disagree and 7 = strongly agree).

Coworkers' interpersonal justice. We assessed coworkers' interpersonal justice using the four interpersonal justice items from [Rupp and Cropanzano \(2002\)](#). The items were adapted to tap the team focus by changing organization to workgroup in each sentence. A sample item is "My work group treats me with dignity and respect." Cronbach's alpha for this scale was 0.79.

Team-member exchange. To assess team-member exchange, we relied on the ten-item scale developed by [Seers \(1989\)](#) and [Seers et al. \(1995\)](#). A sample item is "Other members of my work group understand my problems and needs." Cronbach's alpha for this scale was 0.91.

Team identification. Team identification was measured using the six items on organizational identification of [Mael and Ashforth \(1992\)](#). A sample item is "When someone criticizes my work group, it feels like a personal insult." Cronbach's alpha for this scale was 0.85.

Extraversion. Because of limited space in the survey, extraversion was measured using the two items of the short form of the Big Five inventory of [Rammstedt and John \(2007\)](#). The two items are “I see myself as someone who is reserved” (reversed) and “I see myself as someone who is outgoing, sociable.” As recommended by [Eisinga et al. \(2013\)](#), we calculated the Spearman–Brown statistic to assess the internal reliability of this two-item scale. The Spearman–Brown coefficient between the two items is 0.66, suggesting an appropriate reliability ([Robinson et al., 2014](#)). Furthermore, the 0.72 average variance extracted for the scale is satisfactory. The composite reliability, less sensitive than Cronbach’s alpha to the number of items contained in the scale, is 0.84. As a whole, these statistics, thus, provide evidence for the reliability of this two-item scale.

Team citizenship behaviors. Supervisors assessed their subordinate team citizenship behaviors using five items taken from [Rupp and Cropanzano \(2002\)](#). These items were then adapted so that the workgroup was clearly the beneficiary of the citizenship behavior (e.g. “This employee assists other team members with their work (when not asked).” Cronbach’s alpha for this scale was 0.72.

Control variables. We controlled in our data analyses for the effect of three socio-demographic variables which have been shown to influence the mediators (i.e. team-member exchange or team identification) and/or the outcome variable (i.e. team citizenship behaviors) in prior studies. These included gender, age and team tenure.

Data analyses

To analyze the data, we proceeded in two steps. First, using Lisrel 8.8, we performed confirmatory factor analyses to examine the convergent and discriminant validity of the constructs included in our model via a sequence of nested measurement models. Given the small sample size, we used item parceling to reduce the number of parameters to estimate. Parcels were created by averaging items with the highest and lowest exploratory factor analysis loadings for each construct, followed by the items with the next highest and lowest loadings until all of the items were included. Second, we tested our hypotheses on observed variables with SPSS using bootstrapping analyses with the computational tool PROCESS. In particular, 5,000 bootstrap samples were drawn to generate bias-corrected confidence intervals (95%) of the indirect effects. Overall, our analysis strategy regarding the hypotheses follows four stages:

- (1) First, we tested our two mediations (i.e. team-member exchange and team identification, [Figure 1](#)) separately (model 4 of the PROCESS macro).
- (2) Second, we tested our two mediations together in one model (model 4 of the PROCESS macro).
- (3) Third, we tested the moderating role of extraversion (model 58 of the PROCESS macro) in each mediation separately (i.e. team-member exchange and team identification). More precisely, we probed the indirect effect our independent variable (coworkers’ interpersonal justice) and our dependent variable (team citizenship behaviors), through each mediator separately, at three values of extraversion (i.e. at the mean, at one standard deviation below the mean and one standard deviation above the mean).
- (4) Finally, the two mediators altogether were tested in a full moderated mediation model (model 58 of the PROCESS macro) as proposed in [Figure 1](#).

Results

CFA were performed on the five constructs included in our model (i.e. coworkers' interpersonal justice, team-member exchange, team identification, team citizenship behaviors and extraversion) via a sequence of nested measurement models. Given the small sample, we created two parcels for coworkers' interpersonal justice, five for team-member exchange, three for team identification and three for team citizenship behaviors. The five-factor measurement model fitted the data well ($\chi^2[81] = 152.17$; RMSEA = 0.08; and CFI = 0.97). Furthermore, the more constrained models displayed significant decrements in fit as compared with the five-factor model (for the four-factor model with coworkers' interpersonal justice and team-member exchange together $\Delta df = 4$, $\Delta\chi^2 = 42.62$ and $p < 0.01$; for the four-factor model with coworkers' interpersonal justice and team identification together $\Delta df = 4$, $\Delta\chi^2 = 98.98$ and $p < 0.01$; for the four-factor model with team identification and team-member exchange together $\Delta df = 4$, $\Delta\chi^2 = 85.26$ and $p < 0.01$; for the three-factor model with coworkers' interpersonal justice, team identification and team-member exchange together $\Delta df = 7$, $\Delta\chi^2 = 131.31$ and $p < 0.01$; and for a one-factor model $\Delta df = 9$, $\Delta\chi^2 = 214.79$ and $p < 0.01$). Moreover, all indicators loaded reliably on their predicted factors with standardized factor loadings being significant. Descriptive statistics, reliability coefficients and intercorrelations among variables are presented in Table 1.

H1 and *H2* suggested that the relationship between coworkers' interpersonal justice and team citizenship behaviors is mediated by both team-member exchange and team identification. When we introduced each mediator separately, the analyses revealed that the indirect effect of coworkers' interpersonal justice on team citizenship behaviors through both team-member exchange and team identification were significant (respectively, indirect effect = 0.15, boot confidence interval = [0.03; 0.30] and indirect effect = 0.15, boot confidence interval = [0.07; 0.24]), supporting both *H1* and *H2*. However, when both mediators were introduced together, only team identification emerges as a significant mediator in the relationship between coworkers' interpersonal justice and team citizenship behaviors (indirect effect = 0.13 and boot confidence interval = [0.03; 0.23]). Indeed, neither is the path between team-member exchange and team citizenship behaviors significant ($B = 0.09$; and $t = 0.67$) nor the indirect effect through team-member exchange (indirect effect = 0.05 and boot confidence interval = [-0.09; 0.21]). In sum, when both mediators are introduced in the analyses, only *H2* is fully supported. The analyses that we performed to test *H3* and *H4* shed important light on these results.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Gender	1.37	0.49	–	0.18*	0.20*	0.03	0.01	–0.07	0.10	0.13
2. Age	38.67	9.43		–	0.59***	–0.14	–0.03	0.03	0.17*	0.26**
3. Tenure team	7.94	4.67			–	–0.28**	–0.22*	–0.04	0.06	–0.01
4. CIJ	5.76	1.02				(0.79)	0.72***	0.54***	–0.02	0.28**
5. TMX	5.51	0.81					(0.91)	0.71***	0.08	0.36***
6. Team identification	5.44	0.99						(0.85)	0.09	0.38***
7. Extraversion	3.93	1.32							(0.66)	0.28**
8. TCB	5.64	0.80								(0.72)

Notes: CIJ = Coworkers' interpersonal justice; TMX = Team-member exchange; and TCB = Team citizenship behaviors. Cronbach's alphas are provided in parentheses on the diagonal. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: Table by authors

Table 1.
Means, standard deviations, intercorrelations and Cronbach's alphas

H3 and *H4* proposed moderated mediations, which mean that the mediating process between the initial variable coworkers' interpersonal justice and the outcome variable team citizenship behaviors depends on the values of the moderator variable (i.e. extraversion). We computed the conditional indirect effects (i.e. the value of the indirect effect conditioned on one or more values of the moderator) to test these hypotheses. More precisely, we first probed the indirect effect of coworkers' interpersonal justice on team citizenship behaviors, through team-member exchange and team identification separately, at three values of extraversion (Table 2). The results regarding team-member exchange indicated that extraversion moderates the second stage of the mediation, that is, the path between team-member exchange and team citizenship behaviors. Further, team-member exchange mediates the relationship between coworkers' interpersonal justice and team citizenship behaviors at medium and high values of extraversion only (i.e. the two corresponding bootstrapped confidence intervals of the conditional indirect effect do not contain 0 at the 5% level). Concerning team identification, the analysis reveals no moderating effect of extraversion. Consistent with this absence of moderation, the conditional indirect effects show that whatever the value of extraversion team

Mediator	TMX	Team identification
<i>DV: Mediator</i>		
Constant	−0.23	−0.02
Gender	−0.03	−0.28
Age	0.01	0.01
Tenure	−0.02	0.03
CIJ	0.56***	0.57***
Extraversion	0.06	0.05
CIJ × Extraversion	−0.06	0.08
<i>DV: TCB</i>		
Constant	4.71***	4.58***
Gender	0.09	0.19
Age	0.02**	0.03***
Tenure	−0.02	−0.03
CIJ	0.09	0.09
Mediator	0.26*	0.23*
Extraversion	0.12*	0.12*
Mediator × Extraversion	0.16**	0.04

Table 2. Moderated mediation analysis examining the impact of coworkers' interactional justice on team citizenship behaviors through team-member exchange and team identification with extraversion as moderator

<i>Conditional indirect bootstrap estimates for TMX</i>				
Extraversion	Boot indirect effect	Boot SE	LL CI	UL CI
−1 SD	0.03	0.09	−0.15	0.20
Mean	0.14	0.06	0.03	0.29
+1 SD	0.23	0.09	0.09	0.44
<i>Conditional indirect bootstrap estimates for team identification</i>				
−1 SD	0.08	0.05	0.00	0.20
Mean	0.13	0.04	0.05	0.23
+1 SD	0.19	0.07	0.06	0.35

Notes: *N* = 134; Bootstrap sample size = 5,000; Level of confidence for all confidence intervals is 95%; DV = Dependent variable; LL = Lower limit; CI = Confidence interval; UL = Upper limit; CIJ = Coworkers' interpersonal justice; TMX = Team-member exchange; and TCB = Team citizenship behaviors; **p* < 0.05; ***p* < 0.01; ****p* < 0.001
Source: Table by authors

identification mediates the relationship between coworkers' interpersonal justice and team citizenship behaviors.

We then introduced the two mediators altogether in the moderated mediation model. As displays in Table 3, this analysis indicates that only one interaction effect is significant (i.e. the interaction between extraversion and team-member exchange on team citizenship behaviors, $B = 0.18$ and $p < 0.05$). More importantly, the conditional indirect effects show that team-member exchange mediates the relationship between coworkers' interpersonal justice and team citizenship behaviors at high values of extraversion only (i.e. it is the sole bootstrapped confidence interval of the conditional indirect effect that does not contain 0 at the 5% level), whereas team identification mediates the relationship only at low and medium values of extraversion (i.e. the two corresponding bootstrapped confidence intervals of the conditional indirect effect do not contain 0 at the 5% level). As demonstrated by Hayes (2015), an indirect effect can depend on the level on a variable even if this variable does not moderate one of the components of the indirect effect. Therefore, the absence of a significant interaction on the mediation through team identification does not preclude the fact that the indirect effect varies depending on the level of extraversion.

As a whole, our results, thus, show that at low and medium values of extraversion the effect of coworkers' interpersonal justice on team citizenship behaviors occurs through team identification while at high values of extraversion the effect is explained by team-member exchange. These results fully support $H3$ and $H4$.

Coworkers' interpersonal justice

Predictor	B	SE	t
<i>DV: TCB</i>			
Constant	4.70	0.29	16.01***
Gender	0.12	0.13	0.94
Age	0.03	0.01	3.14**
Tenure	-0.03	0.02	-1.57
CIJ	0.08	0.09	0.92
TMX	0.10	0.13	0.77
Team identification	0.19	0.09	2.12*
Extraversion	0.12	0.05	2.67*
TMX $\times$ Extraversion	0.18	0.08	2.40*
Team identification $\times$ Extraversion	-0.05	0.06	-0.82

Conditional indirect bootstrap estimates for TMX

Extraversion	Boot indirect effect	Boot SE	LL CI	UL CI
-1 SD	-0.09	0.10	-0.30	0.10
Mean	0.06	0.08	-0.08	0.22
+1 SD	0.16	0.09	0.02	0.42

Conditional indirect bootstrap estimates for team identification

-1 SD	0.12	0.06	0.02	0.28
Mean	0.11	0.05	0.01	0.21
+1 SD	0.08	0.08	-0.07	0.23

Notes: $N = 134$; Bootstrap sample size = 5,000; Level of confidence for all confidence intervals is 95%; DV = Dependent variable; LL = Lower limit; CI = Confidence interval; UL = Upper limit; CIJ = Coworkers' interpersonal justice; TMX = Team-member exchange; TCB = Team citizenship behaviors; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Source: Table by authors

Table 3. Moderated multiple mediation analysis examining the impact of coworkers' interactional justice on team citizenship behaviors through team-member exchange and team identification with extraversion as moderator

Discussion

By integrating research on organizational justice, social exchange, social identity and personality, the present study examines the mechanisms by which coworkers' justice impacts team citizenship behaviors in teams. More specifically, we show that when extraversion is high, coworkers' interpersonal justice positively influences team citizenship behaviors because of an exchange relationship of better quality among the members of the same team. In contrast, at low or medium levels of extraversion, the positive effect of coworkers' interpersonal justice on team citizenship behaviors is explained by a higher identification to the team. In sum, team-member exchange takes over team identification in the influence of coworkers' interpersonal justice on team citizenship behaviors for highly extraverted employees.

In the past decade, much has been learned about organizational justice. However, by conceptualizing justice as emanating from entities with formal power (i.e. the organization or the supervisor), prior research likely understates justice's full impact. This study introduces an interesting perspective on the role of coworkers in fairness research. Our first contribution is that, consistent with recent research findings (Fortin *et al.*, 2020), we show that, while having no power over the recipient of (un)fair treatment, coworkers can also be responsible of fairness perceptions. Contrarily to most previous studies, we tested the impact of interpersonal justice that emanates from coworkers at the individual level of analysis. We demonstrate that employees who are treated with dignity and respect by coworkers exhibit more team citizenship behaviors than others toward them. We thereby introduce individuals' perceptions of the interpersonal treatment of coworkers within the team as a key determinant of team citizenship behaviors. Demonstrating that employees are sensitive to justice emanating from their workgroup has both practical and theoretical implications. On the one hand, given the increased use of workgroups in organizations and the meaningfulness of the workgroup as a proximal entity for employees (Meeussen and van Dijk, 2016), examining the effects of justice coming from workgroup members is of great practical importance in many work environments. On the other hand, because the process of accountability (i.e. how a social entity comes to be considered responsible for the (mis)treatment received) is fundamental to justice (Rupp *et al.*, 2014), distinguishing the source of justice and examining the specific effects of each source is of primary importance for theory and literature on justice. Our results indicate that future research should give greater consideration to examining this source of justice and expanding our still limited knowledge of its effects.

Our second contribution is to test mediating mechanisms grounded in both social exchange and social identity to better understand why coworkers' interpersonal justice impacts team citizenship behaviors. Previous research has explained the impact of justice on citizenship behaviors in terms of both social exchange and social identity (Jiang and Law, 2013). Whereas the mediating role of social exchange and social identity processes has been largely shown for the organizational and supervisor foci, nothing guaranteed such effects for the coworkers focus (Colquitt *et al.*, 2013). Indeed, the underlying mechanisms of the effects of coworkers' justice might have worked differently from those coming from a formal authority such as the supervisor or the organization (Li *et al.*, 2013). Our results demonstrate that, depending on the level of extraversion, each of the hypothesized mediating mechanisms (i.e. team-member exchange and team identification) plays a significant role in explaining the impact of coworkers' interpersonal justice on team citizenship behaviors. These findings, thus, confirm the relevance of these two mediating mechanisms for the coworkers' target. Furthermore, most of past research has examined them separately from each other (Lavelle *et al.* (2015) for social exchange and Olkkonen and Lipponen (2006) for social identity). Only few studies considered them in the same model

(Caesens *et al.*, 2014; Jiang and Law, 2013). Our results indicated that these two mechanisms (captured in the present research through team-member exchange and team identification) act as complementary mechanisms to explain the impact of coworkers' justice on employees' behaviors. This finding calls for a deeper understanding of the joint role played by social exchange and identification. While our results suggest that these two mechanisms can simply capture different and independent effects (Rupp *et al.*, 2014), they may also be considered in a causal chain where social exchange would lead to social identity (Lavelle *et al.*, 2015) or as intertwined (Van Knippenberg *et al.*, 2007). Future research is, thus, needed to disentangle the joint role of these two mechanisms in the relationship between justice and citizenship behaviors.

Relatedly, our third contribution is to offer a better understanding of how these two underlying mechanisms complement each other by explaining when they are at stake. Our study indeed suggests that extraversion acts as a boundary condition that influences these mechanisms' implication. We found evidence for the moderating role of extraversion on the social identity and social exchange mediating mechanism linking coworkers' interpersonal justice and team citizenship behaviors. As expected, extraversion has an influence on the indirect effect of team-member exchange and team identification so that the mediating role of team-member exchange is larger when extraversion is higher and the mediating role of team identification is larger when extraversion is lower. Whereas social exchange and social identity theories are considered as underlying processes of the justice–citizenship behaviors relationships (Colquitt *et al.*, 2013; Olkkonen and Lipponen, 2006), our results add some caution to that assertion by identifying boundary conditions to those underlying mechanisms. Even if we found that social exchange and social identity are two mechanisms explaining the justice–outcomes relationship, our research opens a novel perspective by studying the conditions (here, a personality factor) under which one and/or the other of these mechanisms are at stake. The presence and magnitude of these mediating effects as well as the eventual superiority of one these mechanisms can only be thought in terms of facilitating conditions.

Managerial implications

Our paper holds important implications for management practice, especially in teamwork environment. Given coworkers' interpersonal justice role in determining team citizenship behaviors, our findings highlight the importance of establishing a work culture where each employee treats others fairly. In this vein, three managerial practices can be suggested (Cropanzano *et al.*, 2011; Li *et al.*, 2013):

- (1) First, employee training, which has been shown to be an effective tool to spread justice in organizations (Skarlicki and Latham, 1997), should deal with the necessity to treat other employees in a fair manner. For example, training about conflict management or interpersonal communication may improve coworkers' interpersonal justice perceptions and, thus, benefits the workgroup and, ultimately, the organization.
- (2) Second, rewarding extrinsically or intrinsically fair treatment among team members is critical. For example, management could introduce such attitudes and behaviors into performance evaluations or 360-degree performance feedback processes (Cropanzano *et al.*, 2011).
- (3) Finally, as ethical management is spread from the top of the organization to the employees (Li *et al.*, 2013), managers should act as role models by constantly showing dignity and respect to others to promote coworkers' interpersonal justice among employees.

Limitations and future research

While this research has some methodological strengths (e.g. dyadic collection of data), some limitations should be noted. First, our model includes one kind of coworkers' justice and one Big Five trait only at the individual level of analysis. Further research may explore the generalization of the mediating mechanisms for other facets of coworkers' justice. To fully understand the interplay between justice, social exchange, social identity and personality theories, future research could study the potential role of other moderators such as other Big Five dimensions than extraversion or contextual variables. Second, our sample is relatively small (though appropriate) and comes from an online data panel (i.e. StudyResponse). Despite its suitability for management research (Walter *et al.*, 2019), this may result in a self-selection bias that could limit the generalizability of our results. Future studies should confirm our conclusions using a larger conventional sample taken from one or several identified organizations. Finally, it is worth mentioning that our model might be expanded beyond the individual level of analysis. Multilevel studies using hierarchical linear modeling that integrates both the individual and group perceptions of team justice may be interesting to analyze.

Conclusion

The present research has examined mediating and moderating mechanisms in the relationship between employees' perceptions of coworkers' interpersonal justice and their team citizenship behaviors. As a whole, our study contributes to an integrative understanding of the role of interpersonal justice emanating from coworkers to foster employees' positive behavior toward the team. Considering the role played by extraversion in determining the relevance of social exchange and social identity mechanisms in the coworkers' interpersonal justice–team citizenship behaviors enables new theoretical and practical insights. As teamwork becomes more and more common in organizations, it is crucial to understand how everyone reacts to the same working conditions based on their individual differences.

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Further reading

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