

Justice and leadership as precursors to OCB: a time-lagged study of fairness, well-being and ethics

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Abstract

Purpose – Using the tenet of self-determination theory, the current study investigates the relationship between perceived organizational justice and organizational citizenship behavior (OCB). Moreover, the study examines the sequential mediation of performance appraisal fairness (PAF) and well-being, as well as the moderating role of ethical leadership (EL), in the relationship between three types of perceived justice (procedural, distributive and interactional) and PAF. Incorporating the literature on EL, this study aims to investigate the relatively unexplored role of EL as a moderator.

Design/methodology/approach – A time-lagged study design was applied using a purposive sampling technique where data was collected from employees working in the Telecom sector. Data were analyzed using structural equation modeling techniques through MPLUS.

Findings – The results revealed that perceived justice (procedural, distributive and interactional) has a positive impact on OCB with the sequential mediation of PAF and well-being and moderation of EL. According to the findings, organizations should prioritize justice to build a healthy work environment that promotes employee well-being and encourages OCB.

Originality/value – The current study contributes to the existing body of knowledge by shedding light on the relationship between perceived justice, PAF, psychological well-being, EL and OCB. These relationships were tested in isolation, however, the current study intended to develop and test an integrated model.

Keywords Perceived justice, Ethical leadership, Performance appraisal fairness, Psychological well-being, OCB

Paper type Research paper

Introduction

Organizational citizenship behavior (OCB) has become one of the key issues that is required by the organization to survive in the competitive environment (Schwarz *et al.*, 2023). It appears when employees do not see their work and employer as an external part of their self-identification (Adil *et al.*, 2023). Because the values, objectives and standards of the organization are internalized to create a sense of unity between the individual and the organization. As a result, employees who consider themselves the citizens of the organization have the personal responsibility of its successes and failures (Widarko and Anwarodin, 2022). It has been identified that OCB improves commitment of the employees (Adil *et al.*, 2023; Schwarz *et al.*, 2023; Xerri and Brunetto, 2013), fosters a sense of belonging and loyalty (Abror *et al.*, 2020), which further leads to the overall success of the organization. High the study of Malhotra *et al.* (2020) reported that only 30% of employees get motivated by the core purpose of their organization. The results highlight the fact that



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practitioners and researchers remain interested in the understanding of management strategies that help to achieve desired level of OCB. It is an important area of work that should be diligently expounded on by companies that are determined to develop a highly engaged, motivated and purpose-aligned workforce. Such positive behavior of employees is strongly predicted through perception of organizational justice (Jafari and Bidarian, 2012; Karriker and Williams, 2009). Such perception of justice is very relevant to the expressions of employee's desire to display OCB (Donglong *et al.*, 2020). Organizational justice is also a key to delivering to employees evidence of organizational reliability and creating an opportunity of some level of certainty in their jobs and treatment, contributing to the increased level of meaning in their working life (Moorman and Byrne, 2013; Donglong *et al.*, 2020; Demirkiran *et al.*, 2016; Jafari and Bidarian, 2012). Despite literature discussed this relationship of perception of justice and OCB, some processes have been overlooked which are requiring to study by developing and testing of an integrated model (Malhotra *et al.*, 2020; Ali, Sastrodiharjo, and Saputra, 2022; Schwarz *et al.*, 2023). Limited research exists in this specific context, necessitating further research is required by taking collective stand points of transforming the relationship between the perception of organizational justice and OCB (Musenze and Mayende, 2023). Moreover, considering the moderating role of ethical leadership (EL), this study aims to provide a more nuanced understanding of how EL can enhance or diminish the impact of justice on appraisal fairness. This examination is essential for advancing our knowledge of the intricate dynamics between leadership, justice and employee outcomes. For the purpose, the current study consider the mediating role of the performance appraisal fairness (PAF) (Abdullah and Malik, 2022) and its effect on the psychological well-being of the employees (Mert *et al.*, 2022; Wang and Li, 2022; van Hall *et al.*, 2023). These paths are integrated in the current study as mediating mechanisms. In addition to the mediating pathway of PAF and psychological well-being, this study emphasizes the significance of EL as a moderator in the relationship between the three types of justice (procedural, distributive and interactional) and PAF. EL plays a crucial role in shaping how justice influences appraisal fairness (Burhan *et al.*, 2023).

Framework and hypotheses

Self determination theory

The current study uses self-determination theory (SDT) to explain how justice perceptions influence employees' performance appraisal perceptions and OCB. Justice perceptions help meet employees' basic psychological demands by reassuring them that the company will meet them at work (Noruzy *et al.*, 2011). Workplace justice nourishes individuals by equitably judging their contributions to the firm and providing performance appraisals (Moorman and Byrne, 2013; Diefendorff *et al.*, 2017; Ryan and La Guardia, 2000). Higher PAF levels encourage psychological well-being and identification with values-aligned commitments (Dal Corso *et al.*, 2019), giving employees a sense of certainty and investment in their tasks, roles and work-related obligations. Conversely, unfavorable work settings that hinder fundamental necessities pressure individuals to adopt identities incongruent with their interests, reducing OCB as part of their personal identity (Eskew, 1993; Burhan and Malik, 2025; Burhan *et al.*, 2023). We claim that the work environment, particularly views of justice, influences employees' OCB engagement by meeting their psychological needs. We suggest EL moderates the effects of justice on PAF. According to SDT, social context can help or impede individual attitudes (Ryan and La Guardia, 2000), and EL is vital to translating justice perceptions into PAF (Burhan *et al.*, 2023; Burhan *et al.*, 2025). Our study visualizes the proposed framework in Figure 1 to provide a holistic view of the intricate relationships between justice, PAF, EL and OCB.

Organizational justice has been shown to be related to employee outcomes, and SDT (Deci *et al.*, 2017; Ryan and Deci, 2000) offers a strong theoretical basis for understanding the relationship between organizational justice, PAF and employee outcomes. SDT is a theory that asserts three psychological needs i.e. autonomy, competence and relatedness. These are essential for autonomous motivation, psychological growth and adaptation in performance. In this context, organizational justice is a direct environmental determinant of the satisfaction of autonomy needs, thus having a particularly prominent role. A sense of being fair in organizational processes and decisions can evoke a sense of volitional involvement and self-endorsed action (Ryan and Deci, 2000) rather than external control and produce deeper internalization of work behaviors and a positive psychological state. SDT then goes one step further and considers PAF as one of the most important tools that address competence needs. Informative feedback in fair and constructive appraisal processes strengthens the sense of competence of employees, which are based on the satisfaction of the need to master and to have an impact. Adopting an equitable and accurate way of evaluating performance has been found to increase the attainment of intrinsic motivation, persistence and continued effort when facing challenges in the workplace (Deci *et al.*, 2017). This relationship is not just associative, as SDT's theory suggests that there exists a theoretical principle that links the relationship between supportive environmental conditions and positive motivational and performance consequences: competence need satisfaction (Ryan and Deci, 2000). In addition to autonomy and competence, the interpersonal aspects of justice and appraisal fairness also have an impact on the third need i.e. relatedness. Interactions that are characterised by fair treatment and respectful appraisal indicate to employees that they are regarded as a valuable part of the organisation, which fosters a sense of meaningful connectedness and care among people (Baumeister and Leary, 1995). This feeling of belonging reduces feelings of alienation, increases the quality of motivation and creates the emotional security needed for complete psychological participation and development. Together, then, organizational justice and appraisal fairness act as motivating and affective supports for the environment, satisfying all three basic psychological needs at once, such that the satisfaction of both leads to the best motivational and affective conditions for optimal employee functioning (Ryan and Deci, 2000; Deci *et al.*, 2017).

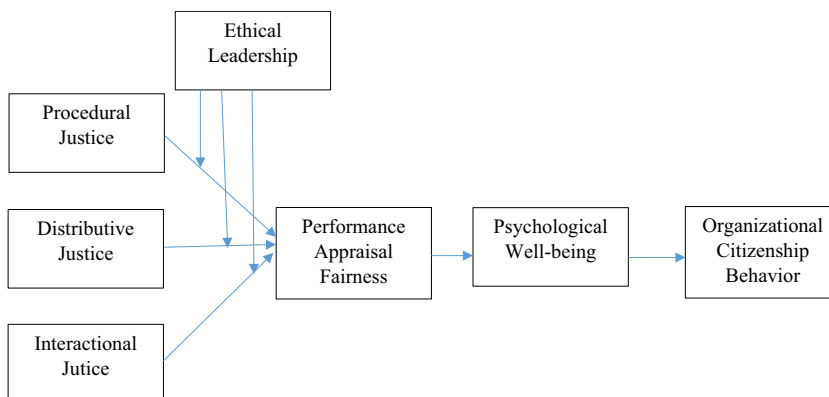


Figure 1. Conceptual Framework

The following Hypotheses are formed based on the arguments:

- H1a.* Procedural Justice has a significant impact on PAF.
- H1b.* Distributive Justice has a significant impact on PAF.
- H1c.* Interactional Justice has a significant impact on PAF.

Performance appraisal fairness and psychological wellbeing

Based on the SDT (Ryan and Deci, 2000), a recent stream of research indicates that PAF is a significant organizational antecedent to employee psychological well-being, and assessment of PAF fulfills the three fundamental psychological needs simultaneously. In terms of autonomy, fair appraisal processes that include employee consultation and participative evaluation create a feeling of “volitional agency” as people believe their voice is heard and their views are taken into account in the decisions that are made, which affect them (Guest, 2017). Theoretically, this self-endorsement (as opposed to external impositions) has been associated with increased internalization of work roles and, therefore, with increased psychological well-being. Now as to competence, the systems of appraisal that accurately reflect and reward what employees actually do and their abilities to do it well give the right sort of feedback to these individuals, and help them feel competent and capable (Jena et al., 2018). Psychological well-being is now recognized as a multidimensional phenomenon, including vitality, self-acceptance and positive relational functioning, with the latter directly supported by when an employee experiences appraisal as they see it as fair and equitable (Ryan and Deci, 2000; Diener et al., 2009). Empirical evidence shows that fair appraisal approaches that accurately acknowledge and reward employees’ contributions and achievements are effective affirmations of self-worth that strengthen self-confidence and positive self-concept (Jena et al., 2018). The interpersonal aspects of the appraisal process are also significant because when people communicate respectfully, appraisals are not biased and justification of appraisal results are transparent, employees feel valued as organization members, and not just objects of administration (Ismail et al., 2016; Chun et al., 2018; Yamazaki and Yoon, 2016). The treatment creates social connectedness and thus enhances the quality of the relationship between a supervisor and subordinate, which are both identified as predictors of psychological well-being in an organizational setting (Kadiresan et al., 2015; Kampkötter, 2017; Kyei-Poku and Yang, 2020). Overall, when employees are treated fairly and equitably during the process, distribution and interpersonal elements of appraisal.

Based upon the above arguments the proposed hypothesis is:

- H2.* PAF has a significant positive impact on psychological well-being.

Psychological well-being and OCB

Psychological wellbeing has been defined as a multidimensional construct of positive affect, positive life satisfaction and an individual’s sense of purpose, and is considered a key motivator of employee behavior within the workplace context (Ryff and Singer, 2008). SDT suggests that satisfaction of the needs for autonomy, competence and relatedness is a key factor in maintaining psychological well-being, and will foster intrinsic motivations and pro-social behavioral orientations beyond the formal requirements of the role (Ryan and Deci, 2000). In this motivational context, the relationship between psychological well-being and OCB has theoretical significance. Affective and cognitive resources such as higher levels of

psychological well-being tend to spill over into employees' readiness to invest discretionary effort and optimism, which are organizational benefits that go beyond formal job descriptions (Huang *et al.*, 2021; Kang and Zhang, 2020). This positive psychological state reduces the perceived costs of exceeding role expectations, resulting in citizenship behaviors that appear to be more of a natural outgrowth of one's involvement in the organization rather than an obligation to do so (Burhan *et al.*, 2024; Zapf, 2002). In addition, psychological wellbeing is related to job satisfaction and a feeling of occupational achievement, which leads to organizational commitment and true investment in shared achievement (Xu *et al.*, 2019). Positive social relationships among employees characterized by helpfulness, assistance and prosocial attitudes and regard for others at workplaces (Choi, 2021; Hassan *et al.*, 2023) are also likely to emerge and be nurtured in organizations where employees thrive psychologically. Psychological well-being as a whole serves as a motivational and relational resource to improve employees' motivation, satisfaction and social connectedness, leading to a higher willingness and ability to do more for the organization than what their formal roles demand (Huang *et al.*, 2021; Kang and Zhang, 2020):

H3. Psychological well-being has a significant positive impact on OCB.

Sequential mediation

The current study tests a theoretically derived sequential mediation model that posits psychological mechanisms of psychological well-being and PAF between the organizational justice dimensions and OCB. With the concepts of SDT (Ryan and Deci, 2000) as the basis, it is suggested that procedural, distributive and interactional justice do not have a direct impact on OCB, but rather, through a series of need-satisfying experiences that first appear as appraisal fairness perceptions and later as increased psychological well-being. Procedural justice also offers employees an opportunity to be heard and to feel that they have some control in the evaluation process, which directly addresses their need for autonomy, a psychological state which has a long history of being associated with better mental health and well-being outcomes (Choi and Shin, 2022; Mert and Caglar, 2020). If they believe the appraisal system is fair and under their control, employees feel psychologically safe and are more likely to exhibit behaviours that go beyond their job description and are beneficial to the organization (Karriker and Williams, 2009; Donglong *et al.*, 2020). There is also a pathway to distributive justice that is unique, yet complementary, to the other pathway discussed above – when rewards and outcomes are equitably distributed in proportion to individual contributions, employees' competence needs are affirmed, which reinforces their sense of competence and self-worth, strengthening psychological well-being (Ambrose and Schminke, 2009; Roch and Shanock, 2006). This positive psychological state in turn leads to a reciprocal relationship in which employees reciprocate by engaging in citizenship behaviors, closing the mediated relationship between distributive justice, PAF and well-being, and OCB. Interactional justice is mediated through another distinct channel theoretically, focusing on the need for relatedness, which involves treating interpersonal behavior in appraisal interactions with respect, dignity and transparency (Roch and Shanock, 2006). This fair treatment between co-workers and supervisors promotes trust and positive relational dynamics between them, thus improving psychological well-being to ultimately build the prosocial orientation that will lead to increased OCB engagement (Abdullah and Malik, 2022). In all three dimensions of justice, PAF and psychological wellbeing serve as theoretically coherent and sequentially ordered mediators that shed light on the complex motivational and affective pathway that accounts for the relationship between perceptions of

- H4a. PAF and psychological well-being sequentially mediated the relationship between Procedural Justice and OCB.
- H4b. PAF and psychological well-being sequentially mediated the relationship between Distributive Justice and OCB.
- H4c. PAF and psychological well-being sequentially mediated the relationship between Interactional Justice and OCB.

Moderation of ethical leadership

EL embodies showing followers moral behaviors and standards of conduct and actively influencing followers to adopt moral behaviors and standards of conduct (Brown *et al.*, 2005). Ethical leaders uniquely have the ability to positively influence employees' basic psychological needs, by promoting autonomy through giving voice to employees and establishing transparency to decision-making, demonstrating to employees their competence through merit-based and impartial evaluations, and fostering relatedness through respectful and trust-based relationships with employees (Akhtar *et al.*, 2019; Saha *et al.*, 2020; Burhan *et al.*, 2023). Importantly, it is suggested that EL does not simply reinforce the influence of perceptions of organizational justice, but that it magnifies them. When employees already have high perceptions of organizational justice, ethical leaders make the psychological salience and credibility of those perceptions more pronounced by reinforcing the trustworthiness of fair procedures, just outcomes and respectful interpersonal treatment (Zhang *et al.*, 2019; Qiu *et al.*, 2020). Theoretically, this distinction is useful, and it is relevant to the substitutes-for-leadership argument (Kerr and Jermier, 1978), that is, one which suggests that good situational features like justice make leadership influence unnecessary. However, EL is an augments, not an alternative; EL, when combined with justice perceptions, can help to satisfy psychological needs when leadership is not perceived as having ethical credibility, and ethical leaders can reinforce the motivational and perceptual effects on appraisal judgments of their perceived fairness (Gelens *et al.*, 2013).

EL has a different moderating effect within each dimension of justice. Respecting procedural justice, ethical leaders who act in a transparent, consistent and principled manner foster employees' trust in the appraisal processes, thus making the evaluative outcomes more psychologically meaningful and accepted (Bauwens *et al.*, 2019). In terms of distributive justice, leaders who behave in a moral and impartial manner help to substantiate the actions related to the allocation of rewards, and fair outcomes are more convincing indicators of fairness within the organization (Gelens *et al.*, 2013; Jang *et al.*, 2021). As far as interactional justice is concerned, ethical leaders who consistently communicate with respect and dignity foster a more positive interpersonal climate, which enhances the relationship between treatment of employees and appraisal fairness perceptions (Selvarajan *et al.*, 2018; York and Yazar, 2022). However, the positive relationship between justice perceptions and PAF may be severely undermined when EL is not provided, or is found to be inconsistent. When an employee's experiences and perceptions of the appraisal process as a whole are undermined by a lack of EL, or a lack of consistency in leadership, the overall process may be viewed with suspicion and mistrust, even if the process is formally fair or the outcome is fair (Burhan *et al.*, 2023). These are conditions that erode employee motivation, reduce job satisfaction and reduce organizational commitment, and highlight the critical role that EL plays in amplifying justice/fairness dynamics in the context. The above theoretical and empirical

argument suggests that the impact of organizational justice dimensions on PAF is positively moderated by EL, which is reflected in a stronger relationship between the dimensions of the organizational justice and PAF when EL is high, than when it is low:

- H5a.* Ethical leadership significantly moderated the relationship between Procedural Justice and PAF.
- H5b.* Ethical leadership significantly moderated the relationship between Distributive Justice and PAF.
- H5c.* Ethical leadership significantly moderated the relationship between Interactional Justice and PAF.

Methodology

Research design and sample selection

The study is grounded in a positivist research philosophy and deductive approach since it seeks to test hypotheses derived as a result of a theoretical construct, using the empirical analysis in a particular organizational setting. The telecom sector in Pakistan is chosen as the research setting which is theoretically and practically justified. The telecom business in Pakistan is a very dynamic, competitive and fast emerging sector with strong performance pressure, new technologies, the change of policies and a huge workforce with involvement into operations related jobs that imply organized performance assessment and stratification in leadership functions. These characteristics render it a prime ground in studying organizational justice, the fairness of performance appraisal, psychological wellbeing, EL as well as citizenship behaviors since employees oftentimes encounter formal appraisal systems, supervisor subordinate relationships and consequences that depend on both rewards and career advancement. By examining a variety of private-sector telecom operators (both multinationals and multinational national firms) the flexibility of organizational practices can be sufficiently varied, although the homogeneity among jobs (operations departments), industry-specific pressures and cultural context remains sufficiently homogenous, which then makes the results of this study more context-relevant and applicable to the telecommunications sector in Pakistan. Purposive sampling was used in the study to sample full-time employees who worked in the operations departments of five large Pakistani telecommunication firms in the private sector. The respondents had to possess a bachelors degree (qualification of graduation) and one year of experience in their present position to make them familiar with the performance appraisal processes and organizational dynamics. The multi-company sampling method allows the consideration of variation not only between companies but also the management of sector-specific effects, though it is difficult to generalize the results to a different industry (e.g. manufacturing, public sector) or other non-operations roles. The self-administered questionnaires were collected through organizational channels where there was a voluntary participation and anonymity to reduce the chances of bias on responses. This approach aims to ensure that the participants possess the necessary knowledge and experience relevant to the study's objectives. As suggested by [Abbasi et al. \(2025\)](#), to mitigate common method biases (CMB), a time-lagged study design along with a dyadic approach was used. The data collection process was divided into three distinct time points. Initially, participants (employees) completed justice-related questionnaires, followed by a three-month interval during which the variables of mediation and moderation were assessed by the same group of employees. Finally, at time point three, managers/supervisors responded to questionnaires related to the dependent variables (OCB) about the employees

working in the organization. Before distributing the questionnaires, informed consent was obtained from all participants. This ensured that they were fully aware of the study's purpose, procedures and their rights as participants. By obtaining informed consent, the study adheres to ethical principles and respects the autonomy and voluntary participation of the employees. The meticulous consideration of research philosophy, sampling technique, time-lagged design and informed consent strengthens the validity and reliability of the study, enhancing its overall rigor and credibility.

Instrumentation

To measure the variables of the study, the items were taken from the published and well-established constructs. All the items were measured on the five-points Likert scale where 1 = strongly disagree, and 5 = strongly agree, else otherwise stated. Distributive justice, interactional justice and procedural justice are measured by using the scale of [Flint et al. \(2012\)](#). EL is measured by using [Brown et al. \(2005\)](#) scale. [Stavraki et al. \(2022\)](#) scale is used to measure psychological wellbeing. For the assessment of PAF, the scale of [Walsh \(2003\)](#) is used. [Argentero et al. \(2008\)](#) scale is used to measure organization citizenship behavior of employees.

Results

Confirmatory factor analysis

The results of the confirmatory factor analysis (CFA) using SEM techniques have been generated through MPLUS and presented in [Table 1](#). The table consists of item-level factor loadings (l), standardized factor loadings, composite reliability (CR) and average variance extracted (AVE) of each construct. All AVE values are more than 0.50 (and most greater than 0.60) as suggested by [Hair et al. \(2014a\)](#), which means that the convergent validity is sufficient. The other values presented in the table had no major issues since they were within acceptable ranges.

Through the process of CFA, a number of items were dropped in the original scales because of the low standardized factor loading (usually below 0.50–0.60 criterion) and/or inability to contribute to the model fit. Particularly, in the case of OCB, four items (OCB2, OCB4, OCB5, OCB7) were selected by eliminating the rest, which had poor loadings. In the same manner, in the case of Psychological Wellbeing (PWB), PWB2, PWB3 and PWB4 were dropped in the CFA because of low factor loadings, whereas the other items performed well. Such deletions had to be made to obtain a satisfactory model fit and construct validity.

[Table 2](#) presents the descriptive stats for identification of normal distribution of the data. The values of skewness and kurtosis are between +3 and -3. So it has been revealed that all the data is normally distributed.

To identify the possibility of CMB, a common latent factor (CLF) test was conducted using Mplus software according to the unmeasured latent method factor approach suggested in the modern methodology sources. A latent common factor was added to the CFA model, and the observed indicators were free to load on their corresponding substantive latent factors and on the CLF. The CLF model was estimated in two forms i.e. the second with the freely estimated CLF loadings that were allowed to vary across indicators, and the second with the CLF loadings being equal. This method enables one to directly assess the size of method effects and adjust substantive relationships. [Table 3](#) indicates that the addition of the CLF led to slight changes in improving the model fit as compared to the original CFA model. The chi-square difference test was non-significant ($\chi^2 = 28.74$, $df = 42$, $p = 0.94$), and changes in other fit indices were negligible (CFI = 0.002, TLI = 0.001, RMSEA = 0.001). The standardized average loading of the indicators on the CLF was 0.18, which means that the

Table 1. EFA/CFA, composite reliability and average variance extracted outcomes

Constructs and items	<i>p</i>	<i>Λ</i>	CR	AVE
<i>Distributive justice</i>				
DJ1	0.785	0.727***	0.897	0.686
DJ2	0.813	0.755***		
DJ3	0.820	0.713***		
DJ4	0.764	0.698***		
<i>Interactional justice</i>				
IJ1	0.775	0.728***	0.969	0.84
IJ2	0.869	0.793***		
IJ3	0.971	0.992***		
IJ4	0.883	0.805***		
IJ5	0.891	0.787***		
IJ6	0.949	0.973***		
<i>Ethical leadership</i>				
EL1	0.904	0.668***	0.986	0.868
EL2	0.830	0.992***		
EL3	0.876	0.753***		
EL4	0.906	0.792***		
EL8	0.898	0.711***		
EL9	0.828	0.698***		
EL10	0.863	0.979***		
EL11	0.899	0.844***		
EL12	0.862	0.927***		
EL13	0.766	0.891***		
EL14	0.717	0.833***		
<i>Procedural justice</i>				
PJ1	0.706	0.817***	0.972	8.835
PJ2	0.926	0.922***		
PJ3	0.829	0.869***		
PJ4	0.873	0.815***		
PJ5	0.862	0.872***		
PJ6	0.841	0.704***		
PJ7	0.912	0.664***		
<i>Organization citizenship behavior</i>				
OCB2	0.946	0.504***	0.986	0.946
OCB4	0.956	0.839***		
OCB5	0.939	0.992***		
OCB7	0.938	0.619***		
<i>Performance appraisal fairness</i>				
PF1	0.851	0.708***	0.957	0.849
PF2	0.885	0.827***		
PF3	0.883	0.951***		
PF4	0.802	0.621***		
<i>Psychological wellbeing</i>				
PWB1	0.561	0.633***	0.989	0.907
PWB5	0.936	0.953***		
PWB6	0.979	0.991***		
PWB7	0.620	0.92***		

(continued)

Table 1. Continued

Constructs and items	<i>p</i>	<i>Λ</i>	CR	AVE
PWB8	0.782	0.950***		
PWB9	0.933	0.921***		
PWB10	0.959	0.852***		
PWB11	0.669	0.906***		
PWB12	0.639	0.768***		
PWB13	0.940	0.798***		

Note(s): Model fit Measure, X2 = 376.366, DF = 163, CFI = 0.933, RMSEA = 0.05, SRMR = 0.051

Table 2. Descriptive statistics (*n* = 357)

Constructs	Mean	S.D	Skewness		Kurtosis	
	Stat	Stat	Stat	S.E	Stat	S.E
Distributive justice	2.5574	0.63954	0.025	0.129	−0.436	0.257
Interactional justice	2.7738	0.71402	0.029	0.129	−0.801	0.257
Procedural justice	2.7022	0.75582	0.023	0.129	−0.790	0.257
Ethical leadership	2.9701	0.96367	0.287	0.129	−0.929	0.257
Psychological wellbeing	1.6756	0.46193	−0.220	0.129	−0.649	0.257
Organization citizenship behavior	2.7863	0.80793	−0.276	0.129	−0.892	0.257
Performance appraisal fairness	2.8063	0.89356	0.613	0.129	−0.352	0.257

CLF explained about 3.24% of the variation in the measured variables. Incorporating the CLF, the changes in substantive factor loading were only 0.03 (minimum: 0.01, maximum: 0.05) on average, and the structural path coefficients in the hypothesized model were very stable (average change = 0.02, all changes less than 0.05). These results demonstrate that common method variance does not significantly inflate or distort the relationships among the study constructs.

Discriminant validity

It is recommended by methodological experts (e.g. [Sakaran, 2003](#); [Cooper and Glaesser, 2016](#); [Hair et al., 2014b](#)) that before regression analysis, it is imperative to check the correlation between different variables as the assumption of regression. To fulfill the requirement, [Table 4](#) consists of the correlation (discriminant validity) among independent variables, dependent variables and mediators. The values presented in the table show that the correlation among different variables is < 0.60, so the is no issue of Multicollinearity was found in the data.

Hypotheses testing

The hypothesis testing was performed with Hayes PROCESS macro (Model 7) in SPSS using 5,000 bias-corrected bootstrap samples because all regression assumptions were satisfied. This study discussed a moderated serial mediation model whereby EL moderates the relationship between the dimensions of organizational justice (Distributive Justice, Procedural Justice and Interactional Justice and PAF with PAF and Psychological Wellbeing (Pwell) being the sequential mediators between the justice dimension and Organizational Citizens [Table 5](#) indicates that all three dimensions of justice have strong and statistically significant direct effects on OCB and all are controlling for the serial mediators, i.e.

Table 3. Common latent factor (CLF) test results (Mplus output)

Model	χ^2	df	CFI	TLI	RMSEA [90% CI]	SRMR	$\Delta\chi^2$ (Δ df)	<i>p</i>	Avg. Standardized loading on CLF	Variance explained by CLF (%)
Baseline CFA model	1248.4	982	0.96	0.96	0.043 [0.039–0.047]	0.039	–	–	–	–
CLF model (loadings freely estimated)	1219.6	940	0.96	0.96	0.041 [0.037–0.045]	0.036	–	–	0.19	3.61
CLF model (loadings constrained equal)	1219.6	982	0.96	0.96	0.042 [0.038–0.046]	0.037	28.74 (42)	0.9	0.18	3.24

Table 4. Discriminant validity (n = 357)

Variables	1	2	3	4	5	6	7
(1) Distributive justice	0.828						
(2) Interactional justice	0.167*	0.917					
(3) Procedural justice	0.129*	0.087*	0.914				
(4) Ethical leadership	0.127*	0.095*	0.152*	0.932			
(5) Psychological wellbeing	0.082*	0.078*	0.11*	0.066*	0.952		
(6) Organization citizenship behavior	0.099*	0.091*	0.168*	0.191*	0.065*	0.973	
(7) Performance appraisal fairness	0.078*	0.084*	0.131*	0.215*	0.059*	0.229*	0.921

Note(s): ****p* < 0.001, ***p* < 0.01, † *p* < 0.10

Distributive Justice (= 0.819, *t* = 10.275, *p* = 0.001), Procedural Justice (= 0.378, *t* = 6.113, *p* < 0.001). Such significant direct effects point out that the associations among the dimensions of the organizational justice and OCB are mediated by PAF and Psychological Wellbeing only partially. That is, although the suggested serial mediation pathway (organizational justice-PAF-Pwell-OCB) explains a significant percentage of the overall effect, a significant direct relationship between perceptions of justice and OCB is not mediated by the factors in the model. This implies that there may be other unmodeled processes or direct psychological processes where the perception of justice affects citizenship behaviors. The moderation was most pronounced to Distributive Justice since it has a much steeper positive slope at high EL than at low EL (Figure 2). The effect of Procedural Justice was also significantly strengthening (Figure 3), and the moderation effect was the weakest and not significant on Interactional Justice (Figure 4; almost parallel slopes). The serial pathway of the conditional indirect effects (*X* → PAF → Pwell → OCB) was significant and grew with the levels of EL, especially at high levels of EL: 0.026 (low EL), 0.037 (mean EL) and 0.048 (high EL) and the 95% bias-corrected confidence intervals were not zero. Only Procedural Justice (0.011, 95% BC CI [0.001, 0.027]) had an index of moderated mediation that was statistically significant. Distributive Justice and Interactional Justice did not find any significant conditional indirect effects. The conditional total effects were high and positive at all EL levels in all the dimensions of justice.

Overall, the results provide support for moderated serial mediation via PAF and Psychological Wellbeing, with EL strengthening the indirect pathway, most clearly for Procedural Justice. Nevertheless, the fact that large direct effects, as well as the large (but smaller) indirect ones, are still present, indicates that all three dimensions of justice are partially mediated. This suggests that although the serial mediators are capturing a significant process especially when EL is high, organizational justice also affects OCB via other direct or unexamined processes. Future studies might attempt to identify other mediators to further explain such direct routes.

Moderation analysis

Discussion and theory implication

Prior literature presented the contradictory results on the relationship between justice beliefs and OCB which need to further explore for better understanding of the mediating mechanisms that explain why and how justice perceptions affect OCB. In response to these calls, this study examines the mediating role of PAF and psychological well-being to explain the complex relationships between the three kinds of justice and these categories. Previous research (Abdullah and Malik, 2022; Ambrose and Schminke, 2009) has focused on the identification or

Table 5. Results of hypotheses ($n = 357$)

Effect type/path	Justice dimension	Elead level	Effect (coeff)	Boot SE / SE	t-value	p-value	95% BC CI (LL, UL)
Direct effect: $X \rightarrow OCB$	Distributive (DJ)	–	0.819	0.08	10.275	0.000	[0.662, 0.976]
	Procedural (PJ)	–	0.378	0.062	6.113	0.000	[0.256, 0.499]
	Interactional (IJ)	–	0.458	0.061	7.449	0.000	[0.337, 0.579]
Conditional indirect via performance appraisal fairness (serial: $X \rightarrow$ performance appraisal fairness $\rightarrow$ psychological wellbeing $\rightarrow OCB$)	Distributive (DJ)	Low (–0.964)	–0.002	0.015	–	$p > 0.05$	[–0.035, 0.028]
		Mean (0.000)	–0.004	0.027	–	$p > 0.05$	[–0.059, 0.050]
		High (0.964)	–0.006	0.039	–	$p > 0.05$	[–0.085, 0.072]
	Procedural (PJ)	Low (–0.964)	0.026	0.015	–	$p < 0.05$	[0.004, 0.066]
		Mean (0.000)	0.037	0.018	–	$p < 0.05$	[0.009, 0.083]
		High (0.964)	0.048	0.023	–	$p < 0.05$	[0.012, 0.104]
	Interactional (IJ)	Low (–0.964)	0.013	0.013	–	$p > 0.05$	[–0.006, 0.046]
Index of moderated mediation via performance appraisal fairness		Mean (0.000)	0.023	0.016	–	$p > 0.05$	[–0.003, 0.064]
		High (0.964)	0.032	0.021	–	$p > 0.05$	[–0.002, 0.085]
	Distributive (DJ)	–	–0.002	0.013	–	$p > 0.05$	[–0.027, 0.023]
	Procedural (PJ)	–	0.011	0.006	–	$p < 0.05$	[0.001, 0.027]
	Interactional (IJ)	–	0.01	0.007	–	–	–
	Distributive (DJ)	Low (–0.964)	0.817	–	–	–	–
		Mean (0.000)	0.815	–	–	–	–
Conditional total effect ($X \rightarrow OCB$ overall = direct + indirect via performance appraisal fairness + indirect via psychological wellbeing)		High (0.964)	0.813	–	–	–	–
	Procedural (PJ)	Low (–0.964)	0.404	–	–	–	–
		Mean (0.000)	0.415	–	–	–	–
		High (0.964)	0.426	–	–	–	–
	Interactional (IJ)	Low (–0.964)	0.471	–	–	–	–
		Mean (0.000)	0.481	–	–	–	–
		High (0.964)	0.490	–	–	–	–

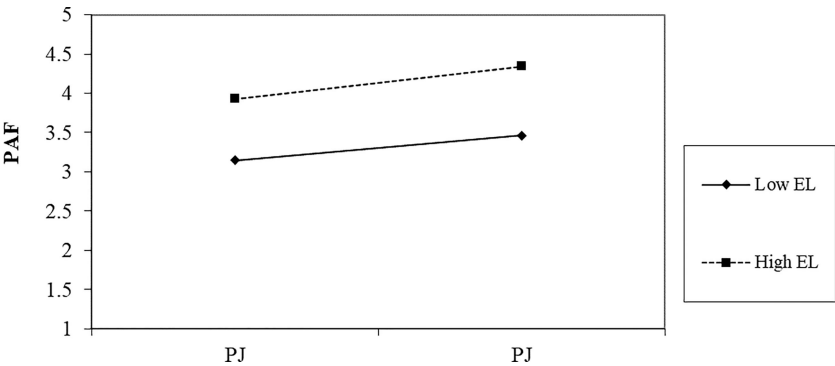


Figure 2. Moderation graph: procedural justice * ethical leader, perceived appraisal fairness

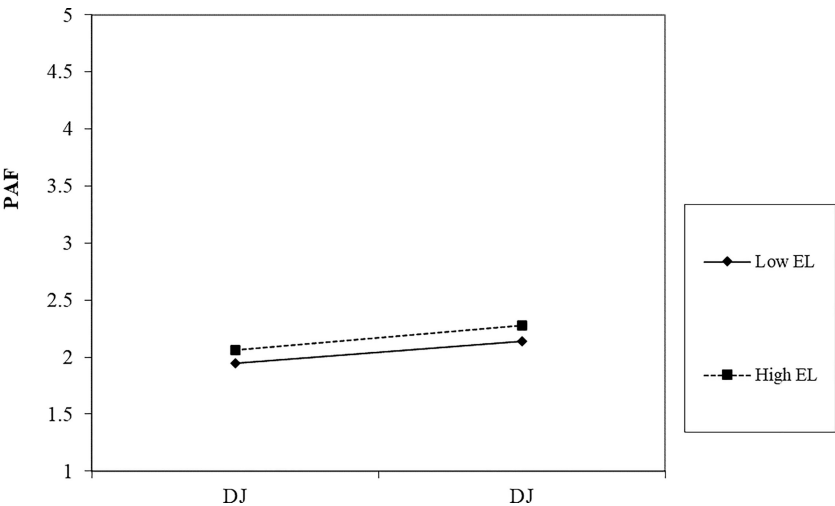


Figure 3. Moderation graph: distributive justice * ethical leader, perceived appraisal fairness

social exchange mechanisms to explain justice perceptions and OCB. The current research uses that SDT's for testing the sequential mediation of PAF and psychological well-being provides extra explanatory power, shedding light on how justice views become OCB. The results revealed that PAF and psychological well-being mediate fairness views and OCB. The findings are supporting the sequential mediation of PAF and psychological well-being, expanding justice studies and emphasizing the importance of these mediators in employee outcomes. The study also emphasizes PAF's role in building organizational relationships and nurturing employees' psychological connections (Chun *et al.*, 2018), reducing the risk of psychological alienation. Our research also shows that addressing psychological requirements boosts employees' OCB, providing a new perspective on PAF, psychological well-being and OCB. The study examines the impacts of all three justice dimensions on OCB through PAF and psychological well-being, adding to the justice-OCB literature (Dahleez *et al.*, 2022) and found that justice perception in isolation does not significantly affect OCB, contrary to prior studies

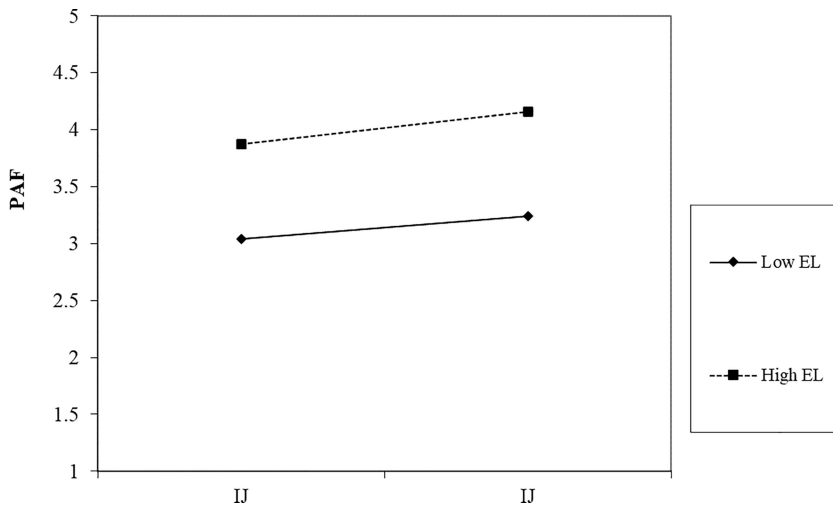


Figure 4. Moderation graph: informational justice * ethical leader, perceived appraisal fairness

(Blakely *et al.*, 2005). Instead, it emphasizes the sequentially mediating process of need satisfaction, explaining how and why perceived justice affects employees' OCB in their organizational environment and job area. Based upon the results, the study emphasizes the importance of distributive, procedural and interactional justice (Gelens *et al.*, 2013) as crucial components of the contextual environment that fulfill basic psychological needs and promote employees' OCB. This comprehensive approach investigates all three forms of justice simultaneously, filling a research need. Prior research (Islam, 2022) concentrated on procedural justice and its function in addressing fundamental requirements, neglecting all three forms of justice. The findings of the current study support literature (Baird *et al.*, 2020; Bauwens *et al.*, 2019) by indicating different forms of organizational justice have diverse effects. Findings also revealed that all three types of justice significantly improve PAF and psychological well-being. In addition to that, the study also tested the role of EL as boundary condition, hence advances the SDT. The study found that EL affects justice and OCB. When employees perceive EL in their organization, justice, PAF and psychological well-being strengthen, increasing the chance of OCB. This implies that views of justice improve employees' OCB through PAF and psychological well-being, but these effects are exacerbated when employees share the organization's ideals. Since EL matches personal values and interests, employees are more drawn to the organization and its tasks (Burhan *et al.*, 2023). They respond better to PAF and psychological capital, improving OCB.

Practical implication

The results provide practical recommendations to the organizations that desire to promote OCB. To begin with, managers ought to focus on equitable and impartial performance appraisal steps, especially procedural fairness (e.g. giving voice, applying clear criteria, being consistent) as it directly facilitates autonomy and competence needs, resulting in an increased psychological wellbeing and OCB. To enhance the control and recognition of employees, the organizations may apply well-organized training on appraisal to supervisors, focusing on the use of unbiased methods, feedback and rationale of decisions. Second, manager should develop EL on every

level to increase the impact of justice. Ethical decision-making, role modeling and respectful communication should be the topics of leadership development because they will promote the credibility of fair appraisals and increase the downstream effects on the wellbeing and OCB. Organizations must incorporate EL concepts into performance management systems (e.g. by having performance evaluation systems measure ethical behavior of supervisors) in high pressure domains, where performance appraisals are common and important (e.g. telecom). Third, the HR policies are to be maximized by ensuring that they incorporate need-supportive practices outside the appraisals such as autonomy in task assignments, competence-building activities (training, recognition) and relatedness-building activities (team activities) to strengthen the channels identified here (Begum and Arshi, 2020). Pulse surveys on perceived justice, appraisal fairness and wellbeing conducted regularly could be used to understand any gaps and implement specific interventions. Finally, the study shows that organizational justice does not have a direct impact on OCB, instead, it operates in a theoretically based cascading effect of appraisal fairness and psychological wellbeing via EL.

Limitations and future research

This study has significant design and scope constraints, but it provides essential insights. First, the study only covers telecom, which may limit its applicability to other industries. To better understand how cultural differences affect leadership behaviors and outcomes, future studies should include more industries. This study examines the moderating link between leadership styles and OCB, but future research should evaluate other organizational outcomes like employee engagement and performance. This larger approach would better examine how leadership styles affect organizational effectiveness. Exploring diverse leadership styles as moderators would also help explain how leadership styles affect employee behavior and outcomes. To improve management practices and organizational success, future studies should address these constraints and widen the research focus to better understand organizational leadership.

Second, the sample was quite homogeneous (in terms of organizational setting and type of employment full-time employees in one industry), but several demographic and work-related factors (age, gender, education, organizational tenure and job position) were not considered as control variables. These omissions were made because the sample was relatively homogeneous and because the aim of the study was to test theoretically motivated relationships. But earlier research indicates that these considerations may impact how employees feel about organizational justice, how fairly performance appraisal is rated, their psychological well-being and their participation in OCB. Thus, it cannot be completely eliminated that these variables can partially explain variance in the study constructs. These demographic and job-related variables should be used as controls in future studies to enable a more robust test of the hypothesized relationships and to eliminate other explanations.

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