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Perceived Management Practices, Transformational Leadership, Teamwork, and Organizational Citizenship Behavior: The Mediating Role of Organizational Commitment

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ABSTRACT

Purpose – This study examines the associations of perceived management practices, transformational leadership, and teamwork with organizational citizenship behavior (OCB) among fitness-center employees, considering organizational commitment as a mediating mechanism within social exchange theory. **Design/methodology/approach** – A cross-sectional survey involved 97 employees across five 3C Gym branches in Surabaya, Madiun, and Malang, Indonesia, using saturated sampling. Data were analyzed using PLS-SEM with SmartPLS 4, supplemented by predictive assessments and sensitivity analyses involving OCB dimensions, affective commitment, and branch controls. **Finding/Results** – Management practices and teamwork consistently showed positive associations with OCB. Transformational leadership was positively associated with OCB but became insignificant after controlling for branch membership. Teamwork positively related to organizational commitment, which partially mediated its association with interpersonal OCB. However, this mediation disappeared when only affective commitment was considered. Management practices primarily related to interpersonal OCB, while leadership showed no significant association with commitment. **Originality/Value** – This study demonstrates that management practices, leadership, and teamwork do not influence OCB through a uniform commitment mechanism. It highlights source-specific social exchange relationships while acknowledging organizational context, measurement sensitivity, and cross-sectional limitations that prevent causal interpretation.

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1. Introduction

A fitness center sells an experience, not only access to equipment. Members judge a gym by how instructors greet them, how quickly front-desk staff respond, and whether the training floor is kept clean without anyone having to ask, and much of this work appears in no job description. Such behavior is organizational citizenship behavior (OCB): discretionary behavior not explicitly recognized by the formal reward system that, in aggregate, supports the effective functioning of the organization (Organ, 1988). In sport services, employee OCB shapes how consumers perceive service quality (Husin, Chelladurai, & Musa, 2012; Kim & Byon, 2018), so for 3C Gym it is part of the service product itself.

First, evidence on the transformational leadership–commitment–OCB chain is inconsistent. Among 134 employees of an Indonesian distribution company, transformational leadership had no direct effect on OCB, while organizational commitment carried part of its influence (Suardana & Surya, 2023). In a census of 103 public-sector employees, transformational leadership raised commitment, yet commitment did not affect OCB (Sari & Soliha, 2016). Conversely, affective commitment fully mediated the link among athletic head coaches (Lee, Woo, & Kim, 2018), and only the affective component mediated it among bank salespeople (Novianti, 2021). The commitment mechanism therefore needs retesting in other settings, including small service organizations.

Second, the management practices that employees experience are seldom examined as a source of OCB alongside supervisors and co-workers. Reviews and Indonesian studies mostly treat organizational effectiveness as a unit-level consequence of OCB (Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Rego & Cunha, 2008; Setiawan, Sulistyowati, & Sari, 2022). The construct examined here is narrower: the individual employee's perception of how well the gym's management and human resource practices, namely support at work, assistance with the work, rewards, and performance appraisal, are run. It is labelled perceived management practices; the study neither measures organizational effectiveness nor tests the OCB → effectiveness link. Social exchange theory treats such practices as benefits that employees may repay (Blau, 1964; Cropanzano & Mitchell, 2005), and in golf courses support at work, supervisory assistance, rewards, and appraisal increased OCB, whereas training did not (Husin et al., 2012). For managers, these practices are the part of the exchange they can change directly.

Third, teamwork as a source of OCB has rarely been examined among fitness-center employees. Work-group cohesiveness is related to OCB at both the individual and the group level (Kidwell, Mossholder, & Bennett, 1997), and teamwork cohesion mediates the effect of job delight on OCB (Judeh, 2023), but research on fitness employees has concentrated on emotional labor, exhaustion, and job satisfaction (Lee & Woo, 2017). Gym work makes the question informative for exchange theory. Employees work alongside members, so coordination lapses are visible at once; branches are small and flat, so the manager, the shift supervisor, and co-workers share the same floor and employees can compare what each gives them; and routines pass from shift to shift, making co-workers the partners an employee depends on most. In larger organizations these three sources are separated by hierarchy and distance; in a gym they meet every day.

These gaps point to a more specific question than whether each antecedent relates to OCB. Employees maintain separate exchange relationships with the organization, the supervisor, and co-workers and tend to reciprocate toward the party that provided the benefit (Lavelle, Rupp, & Brockner, 2007; Settoon, Bennett, & Liden, 1996), so the three sources need not reach

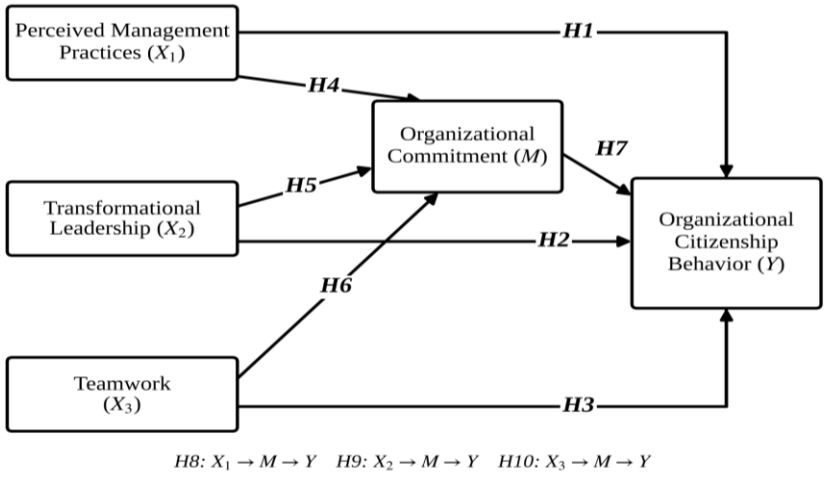
OCB through one mechanism. This study therefore asks whether perceived management practices, transformational leadership, and teamwork are linked to the OCB of 3C Gym employees through the same route, organizational commitment, or through different routes. Theoretically, it compares within one model whether commitment carries the three exchanges to the same extent, which concerns source-specific patterns rather than citizenship directed at the specific benefactor. Practically, it indicates where 3C Gym managers could begin improving management practices, supervision, and teamwork. Because the data are cross-sectional, the analysis can show whether the pattern is consistent with the proposed direction but cannot prove it.

2. Literature Review & Hypothesis Development

Social exchange theory holds that employment relationships rest on reciprocal exchanges not fully specified by contract: a party that receives favorable treatment feels obliged to return it (Blau, 1964), and OCB is one form of that return. Attitudinal predictors such as satisfaction, fairness, and commitment explain OCB better than dispositional ones (Organ & Ryan, 1995). Exchanges nevertheless differ in the resources involved and the relationships they create (Cropanzano & Mitchell, 2005). Perceived organizational support is tied mainly to organizational commitment, whereas leader–member exchange is tied mainly to citizenship and in-role behavior (Settoon et al., 1996), and team–member exchange explains outcomes beyond the leader relationship (Banks et al., 2014). The target similarity model generalizes this pattern: employees direct their responses toward the party responsible for the treatment (Lavelle et al., 2007). Perceived management practices represent exchange with the organization, transformational leadership exchange with the supervisor, and teamwork exchange with peers. Commitment to the organization may therefore carry some of these exchanges but not all. OCB-I and OCB-O are examined separately in Section 4.11; supervisor-directed citizenship was not measured.

Figure 1 presents the conceptual model. Perceived management practices (X1), transformational leadership (X2), and teamwork (X3) are hypothesized to relate to OCB (Y) through H1–H3 and to organizational commitment (M) through H4–H6, and commitment to OCB through H7. Commitment is thus a common candidate mechanism, and H8–H10, each combining a path to commitment with H7, show whether it carries each exchange equally. Being cross-sectional, the data test the directional hypotheses only as associations.

Figure 1. Conceptual Model



Source: Developed by the author.

Notes: X1 = Perceived Management Practices; X2 = Transformational Leadership; X3 = Teamwork; M = Organizational Commitment; Y = Organizational Citizenship Behavior (OCB). Arrows denote hypothesized direct effects (H1–H7). H8–H10 are the indirect effects of X1, X2, and X3 on Y through M.

2.1. Direct Effects on Organizational Citizenship Behavior

Perceived management practices refer to employees' perception of how well the gym's management and human resource practices are run, covering support at work, assistance in getting the work done, the reward system, and performance appraisal (Husin et al., 2012). The construct is an individual-level perception, distinct from organizational effectiveness, which is a unit-level outcome, and from perceived organizational support, which concerns whether the organization values the employee as a person. Because one facet, assistance with the work, is partly delivered by supervisors, its distinctness from transformational leadership is examined in Section 3.2. Social exchange theory explains why such practices should matter: fair rewards, consistent appraisal, and timely support are benefits that signal that contributions are noticed, and they create an obligation that employees can repay through discretionary effort (Blau, 1964; Cropanzano & Mitchell, 2005). The evidence is supportive but narrow. In golf courses, a sport service close to a fitness center, support at work, supervisory assistance, rewards, and appraisal increased OCB, whereas training did not (Husin et al., 2012). In a gym, where shift allocation, rewards, and appraisal are experienced week by week, this exchange should be especially salient.

Therefore: H1**:** Perceived management practices positively affect the organizational citizenship behavior of 3C Gym employees.

Transformational leadership is measured here through six behaviors: articulating a vision, providing an appropriate model, fostering acceptance of group goals, setting high performance expectations, giving individualized support, and providing intellectual stimulation (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). The construct is therefore one leadership style, and the findings do not extend to transactional, servant, authentic, or directive leadership. Two mechanisms link it to OCB. Within social exchange, individualized support from the supervisor is a benefit that followers reciprocate (Settoon et al., 1996); in addition, leaders who model extra effort and promote group goals make such effort part of what the group expects. Podsakoff et al. (1990) found that these behaviors were related to followers' trust and to OCB. The direct path is not consistent, however: Suardana and Surya (2023) found no significant effect of transformational leadership on OCB among distribution-company employees, with commitment carrying part of the influence. In a lean gym, supervisors work on the same floor as their staff, so their example and their requests for help are directly visible, which makes a direct path plausible and worth retesting.

Therefore: H2**:** Transformational leadership positively affects the organizational citizenship behavior of 3C Gym employees.

Teamwork is defined as the quality of coordination and collective work processes within the employee's work group, that is, how well members' interdependent actions are organized to get the work done (Marks, Mathieu, & Zaccaro, 2001). OCB refers to an individual's own discretionary contributions beyond formal requirements (Organ, 1997). The two differ in three respects: teamwork is a property of the group, whereas OCB is the behavior of one person; much teamwork, such as handing over a shift, is part of the required job, whereas OCB is not; and teamwork is the context employees experience, whereas OCB is one possible response to it. Cohesive groups nevertheless develop norms of mutual help, so that covering for a

colleague or assisting with tasks outside one's role becomes expected, and peers become exchange partners whose help is returned in kind (Banks et al., 2014). Work-group cohesiveness has been related to OCB at both the individual and the group level (Kidwell et al., 1997), and teamwork cohesion was related to OCB among insurance employees (Judeh, 2023). In shift-based gym operations, cooperation determines whether member service continues when workloads change.

Therefore: H3: Teamwork positively affects the organizational citizenship behavior of 3C Gym employees.

2.2. Effects on Organizational Commitment

Commitment does not arise only from the relationship with a supervisor; it also grows from how employees experience the way the organization is managed. Social exchange theory treats well-run practices as an investment by the organization, and one way of returning that investment is attachment to the organization itself (Blau, 1964). Settoon et al. (1996) found that exchange with the organization was tied mainly to organizational commitment, and the target similarity model generalizes this into the claim that employees direct their attitudes toward the party responsible for the treatment they receive (Lavelle et al., 2007). Clear rewards, fair allocation of work, and consistent appraisal give employees concrete reasons to identify with the organization and to want to stay. Among sport instructors, support perceived from the organization, supervisors, and co-workers increased affective commitment (Woo, 2016), and meta-analytic evidence identifies organizational support and fair treatment as antecedents of affective commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). In small gym branches, where the same practices apply to every shift, employees can readily attribute them to the organization rather than to any one person.

Therefore: H4: Perceived management practices positively affect the organizational commitment of 3C Gym employees.

Transformational leaders can strengthen attachment to the organization because they link employees' work to a shared vision and treat them as individuals, which builds trust in the leader that can extend to the organization the leader represents (Podsakoff et al., 1990). Meta-analytic evidence shows that transformational leadership is among the stronger correlates of affective commitment (Meyer et al., 2002), and Keskes, Sallan, Simo, and Fernandez (2018) showed that its effect on organizational commitment operates through the quality of leader–member exchange. Sport settings point the same way: the transformational leadership of immediate superiors increased the affective commitment of fitness-club employees (Lee & Cho, 2018), a similar pattern was found among athletic coaches (Lee et al., 2018), and Sari and Soliha (2016) found the same effect among public-sector employees. The multifoci view adds a caution, because treatment by a supervisor may be returned mainly to the supervisor rather than to the organization (Lavelle et al., 2007). In a gym with a lean structure, however, the supervisor is often the most visible representative of the organization, which makes a positive path from transformational leadership to commitment plausible.

Therefore: H5: Transformational leadership positively affects the organizational commitment of 3C Gym employees.

Relationships with co-workers are an often-overlooked source of attachment. Team–member exchange is an exchange relationship distinct from leader–member exchange, and meta-analytic evidence shows that it explains commitment beyond the supervisor relationship (Banks et al., 2014). Employees who receive help, information, and acceptance from their team experience the workplace as rewarding, and because the organization is where these

relationships exist, ties to colleagues can become a reason to remain attached to it. Group cohesiveness is one channel through which transformational leaders build committed work groups (Pillai & Williams, 2004), and co-worker support is among the forms of support that drive the affective commitment of sport instructors (Woo, 2016). Teamwork competencies have also been shown to affect organizational commitment, with the largest effect among the predictors in one tested model (Wulandari & Mila, 2023). In a gym, employees spend much of each shift with peers rather than with their supervisor, so the quality of teamwork is likely to shape how attached they feel to the workplace.

Therefore: H6: Teamwork positively affects the organizational commitment of 3C Gym employees.

2.3. Organizational Commitment and Organizational Citizenship Behavior

Organizational commitment is a psychological state that binds employees to the organization and comprises affective, continuance, and normative components (Meyer & Allen, 1991). Because the items administered follow this model, the construct concerns attachment to the organization, not commitment to a career, occupation, or job. The components rest on different mindsets: desire, perceived cost, and obligation. Employees who want to stay, or who feel obliged to, have reasons to contribute beyond their duties, whereas staying because leaving is costly carries no such motive. Meta-analytic evidence accordingly shows that affective commitment has the strongest positive correlation with OCB, normative commitment a weaker one, and continuance commitment none or a negative one (Meyer et al., 2002), and attitudinal predictors, commitment among them, explain OCB better than dispositional ones (Organ & Ryan, 1995). Commitment has been tested as a predictor of OCB since the early development of the construct (Williams & Anderson, 1991), but the link is not universal: Sari and Soliha (2016) found no effect of commitment on OCB among public-sector employees. The main model treats commitment as one construct, a choice justified in Section 3.2 and tested in Section 4.11.

Therefore: H7**:** Organizational commitment positively affects the organizational citizenship behavior of 3C Gym employees.

2.4. The Mediating Role of Organizational Commitment

If perceived management practices build commitment (H4) and commitment is associated with OCB (H7), commitment can carry part of the link between practices and OCB. This is the route that the multifoci view of social exchange predicts most directly for organizational treatment: benefits attributed to the organization are returned first as attachment to the organization (Lavelle et al., 2007; Settoon et al., 1996), and that attachment then motivates discretionary effort (Meyer et al., 2002). Supportive practices build the affective commitment of sport instructors (Woo, 2016), but Husin et al. (2012) examined only the direct link between management practices and OCB, so the mechanism has not been tested in sport services. Because the mediator is measured at the same time as the predictors and the outcome, an indirect path can show only that the data fit this mechanism, not that commitment develops first and OCB follows (Maxwell & Cole, 2007).

Therefore: **H8:** Organizational commitment mediates the effect of perceived management practices on the organizational citizenship behavior of 3C Gym employees.

Evidence on commitment as the mechanism between transformational leadership and OCB is mixed, which is why it needs retesting. Among athletic head coaches, affective commitment fully mediated the link (Lee et al., 2018); among bank salespeople, only the affective component mediated it (Novianti, 2021); and among distribution-company employees,

commitment carried part of the influence while the direct effect was not significant (Suardana & Surya, 2023). In contrast, Sari and Soliha (2016) found that transformational leadership raised commitment but that commitment did not affect OCB, so no indirect path could arise. The multifoci view offers a reason for these differences: if supervisor treatment is reciprocated mainly toward the supervisor (Lavelle et al., 2007), commitment to the organization may carry only part of the leadership effect, and the direct path may dominate where supervisors work alongside their staff.

Therefore: H9**:** Organizational commitment mediates the effect of transformational leadership on the organizational citizenship behavior of 3C Gym employees.

Teamwork may reach OCB through commitment because exchanges with peers make the workplace itself worth belonging to. Team–member exchange is associated with commitment beyond the supervisor relationship (Banks et al., 2014), and attachment built on these ties can motivate employees to protect the functioning of the place where the ties exist. Wulandari and Mila (2023) found that organizational commitment partially mediated the effect of teamwork competencies on OCB. Testing H8, H9, and H10 in one model allows the three sources of favorable treatment to be compared on the same mechanism, which is the comparison the multifoci argument requires: if commitment carries some exchanges but not others, the sources reach OCB through different routes.

Therefore: H10: Organizational commitment mediates the effect of teamwork on the organizational citizenship behavior of 3C Gym employees.

3. Methodology

3.1. Design, Population, and Sample

This study used an explanatory, cross-sectional survey design with the individual employee as the unit of analysis. The population comprised all permanent and contract employees of the five 3C Gym branches in Surabaya, Madiun, and Malang, 97 people according to branch headcounts (Table 1).

Table 1. Distribution of 3C Gym Employees by Branch

No.	Branch	City	Number of Employees
1	3C Gym Citraland	Surabaya	27
2	3C Gym Dharmahusada	Surabaya	22
3	3C Gym Ciliwung	Surabaya	19
4	3C Gym Madiun	Madiun	16
5	3C Gym Malang	Malang	13
	Total		**97**

Source: Employee records of each 3C Gym branch.

Because the population is small and fully reachable, saturated sampling was used. Respondents had to be active employees of one of the five branches, to have worked there for at least six months so that they could judge management, supervision, and teamwork, and to be willing to complete the questionnaire in full. All 97 employees returned complete questionnaires.

Sample adequacy was assessed with the inverse square root method (Kock & Hadaya, 2018), under which the minimum sample is $(2.486/|\beta_{min}|)^2$ at $\alpha = 0.05$ and 80% power. The ex-ante benchmark of $\beta_{min} = 0.30$ required 69 respondents. Because this benchmark is optimistic for several paths of interest, the calculation was reversed: with N = 97, the smallest detectable path

is 2.486/√97 ≈ 0.25. Perceived management practices → organizational commitment (β = 0.137), organizational commitment → OCB (β = 0.151), and transformational leadership → OCB (β = 0.175) would require about 330, 272, and 202 respondents. The study is therefore powered only for moderate or larger paths, and small non-significant paths are interpreted through their confidence intervals rather than as evidence of absence.

The 97 employees are nested in five branches of 13 to 27 employees who may share a supervisor, routines, and team composition, so responses need not be independent; transformational leadership and teamwork are the most exposed constructs. Five clusters are too few for multilevel modelling and each branch is too small for a separate analysis, so the main model pools the branches. Branch membership, taken from the data-entry order that follows Table 1, was used to compute branch means and ICC(1) values and to estimate a model with four branch dummies predicting commitment and OCB (Section 4.11).

3.2. Measures

All items used a five-point Likert scale (1 = strongly disagree; 5 = strongly agree) and are listed in Appendix A together with their loadings and highest cross-loadings. Perceived management practices (X1.1–X1.8) were adapted from Husin et al. (2012) and cover support at work, supervisory assistance, the reward system, and performance appraisal. The supervisory-assistance items refer to help from supervisors, whereas the others refer to organization-level systems. They were retained because they concern assistance with the work rather than the vision, role modelling, or individualized consideration of transformational leadership, and the HTMT ratio with transformational leadership (0.667) indicates distinct constructs. Transformational leadership (X2.1–X2.8) covered the six behaviors identified by Podsakoff et al. (1990), and teamwork (X3.1–X3.8) covered cooperation, communication, mutual help, and work-group cohesiveness (Kidwell et al., 1997). Organizational commitment comprised three items each for the affective (X4.1–X4.3), continuance (X4.4–X4.6), and normative (X4.7–X4.9) components (Meyer & Allen, 1991). OCB comprised interpersonal (OCB-I; Y1.1–Y1.5) and organizational (OCB-O; Y1.6–Y1.8) items (Williams & Anderson, 1991), a structure confirmed by exploratory factor analysis (eigenvalues 5.35 and 1.21); no item was directed at the supervisor. English-language source items were translated into Indonesian for administration. Two specification choices required particular care. First, the mutual-help facet of teamwork lies close to OCB-I, so this boundary was examined through discriminant validity tests and a post-hoc model without the teamwork items nearest to OCB. Second, combining the three commitment components in one reflective construct is contentious, because only the affective bond may qualify as commitment in the attitudinal sense (Solinger, van Olffen, & Roe, 2008). The main model retains one construct because the three-component model describes a single binding force experienced through several mindsets (Meyer & Herscovitch, 2001) and because three mediators would divide limited statistical power across nine indirect paths; an affective-only model tests this choice (Section 4.11).

3.3. Data Collection Procedure and Ethical Safeguards

The questionnaire was administered once to every employee of the five branches, with the permission of 3C Gym management, which also provided the branch headcounts that define the population (Table 1). It was anonymous: no names, employee numbers, or other identifying details were requested, and the items on management, supervisors, and co-workers were separated from those on the respondent's own commitment and citizenship. Participation was voluntary, as willingness to take part was an inclusion criterion, and responses were analyzed only in aggregate. All 97 employees returned complete

questionnaires. A full response in a workplace census may reflect felt pressure to participate and may encourage favorable self-description, a risk that anonymity reduces but does not remove; it is therefore considered in the common method analysis (Section 4.10) and the limitations.

3.4. Data Analysis

Data were analyzed with PLS-SEM in SmartPLS 4, which suits prediction-oriented models and modest samples (Hair, Hult, Ringle, & Sarstedt, 2022; Ringle, Wende, & Becker, 2024). The measurement model was assessed through outer loadings (≥ 0.708), Cronbach's alpha and composite reliability (≥ 0.70), average variance extracted (≥ 0.50), and heterotrait-monotrait ratios (< 0.85; < 0.90 for similar constructs) together with their bootstrap-based inference (Henseler, Ringle, & Sarstedt, 2015), complemented by cross-loadings and the Fornell-Larcker criterion (Fornell & Larcker, 1981). Confirmatory tetrad analysis (CTA-PLS) tested the reflective specification, retained when Bonferroni-adjusted bootstrap intervals of all non-redundant tetrads include zero, using at least four indicators per construct (Gudergan, Ringle, Wende, & Will, 2008). Common method bias was limited procedurally through anonymity, voluntary participation, and item separation (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), and assessed statistically with a full collinearity test (Kock, 2015).

The structural model was evaluated through VIF, R^2, f^2, SRMR, PLSpredict (Shmueli et al., 2019), and CVPAT against indicator-average and linear-model benchmarks (Liengaard et al., 2021). Paths and indirect effects were tested by percentile bootstrapping with 5,000 subsamples (two-tailed, $\alpha = 0.05$). One decision rule was used throughout: an effect is supported when its 95% percentile confidence interval excludes zero, which suits indirect effects with asymmetric sampling distributions (Zhao, Lynch, & Chen, 2010). The t and p values reported by SmartPLS assume symmetry and are given for information only. Indirect effects were classified as complementary, competitive, or indirect-only mediation (Zhao et al., 2010). IPMA with OCB as the target contrasted total effects with rescaled (0–100) latent scores after confirming uniform coding and positive outer weights (Ringle & Sarstedt, 2016). Hypothesis decisions are taken from the pre-specified main model only. Further analyses are post-hoc sensitivity checks on the same data, estimated with a replication script that reproduces the SmartPLS main model exactly: a model without the teamwork items cross-loading most on OCB, separate OCB-I and OCB-O outcomes, affective commitment as the only mediator, and branch controls. A finding is stable when its sign and decision hold across these checks and sensitive otherwise; a check can qualify a decision but not reverse it. Given the cross-sectional design, "effect" denotes a standardized estimate read as an association.

4. Result and Discussion

4.1. Respondent Profile and Descriptive Statistics

All 97 responses were analyzed; no duplicate cases or straight-lining patterns were found. Table 2 reports construct means of item scores. Using five equal intervals of 0.80, all constructs fall in the high category (3.41–4.20); OCB had the highest mean (3.76) and organizational commitment the lowest (3.47).

Table 2. Descriptive Statistics of Research Variables

Variable	Items	Mean	SD	Category
Perceived management practices (X1)	8	3.57	0.76	high
Transformational leadership (X2)	8	3.59	0.77	high
Teamwork (X3)	8	3.64	0.76	high
Organizational commitment (M)	9	3.47	0.85	high
Organizational citizenship behavior (Y)	8	3.76	0.85	high

Source: Primary data, processed by the authors.
Notes: SD = standard deviation; N = 97.

4.2. Measurement Model Assessment

Table 3 summarizes the measurement model, and Appendix A reports item loadings and cross-loadings. Thirty-seven of the 41 loadings exceeded 0.708; X1.6 (0.641), X1.7 (0.634), X1.8 (0.630), and X4.2 (0.696) were retained because their constructs already met the AVE and reliability thresholds and removal would narrow content coverage (Hair et al., 2022). All loadings were significant ($t \geq 6.84$; $p < 0.001$). Cronbach's alpha (0.886–0.929), rho_A (0.900–0.932), and rho_C (0.910–0.942) lay between 0.70 and 0.95, and AVE values (0.561–0.669) confirmed convergent validity. Two commitment indicators, X4.7 (6.57) and X4.9 (5.20), had outer VIF values above 5, signalling partial item redundancy. The nine commitment items loaded between 0.696 and 0.812 (AVE = 0.587), so they share enough variance to form one score; this does not make the components interchangeable, since an exploratory factor analysis gave two eigenvalues above 1 (5.29 and 1.31) rather than three and the items did not separate cleanly by component.

Table 3. Measurement Model Assessment

Construct	Loading range	α	rho_A	rho_C	AVE
Perceived management practices	0.630–0.852	0.886	0.900	0.910	0.561
Transformational leadership	0.731–0.861	0.922	0.927	0.936	0.646
Teamwork	0.737–0.856	0.924	0.928	0.938	0.654
Organizational commitment	0.696–0.812	0.912	0.918	0.927	0.587
Organizational citizenship behavior	0.736–0.873	0.929	0.932	0.942	0.669

Source: Primary data processed with SmartPLS 4.
Notes: α = Cronbach's alpha; rho_C = composite reliability; AVE = average variance extracted.

4.3. Discriminant Validity

Cross-loadings showed that every indicator loaded highest on its own construct (Appendix A). The Fornell-Larcker criterion (Fornell & Larcker, 1981) was not met for two pairs: perceived management practices and OCB ($r = 0.799 > \sqrt{AVE} = 0.749$) and teamwork and OCB ($r = 0.864 > 0.809$ and 0.818). Eight of the ten HTMT ratios were below 0.85 (Table 4); the perceived management practices–OCB ratio (0.875) was below the 0.90 limit for similar constructs, but

the teamwork–OCB ratio (0.925) exceeded it. Because every bootstrap upper bound was below 1 (highest = 0.990), discriminant validity holds under the inferential criterion (Henseler et al., 2015). The teamwork–OCB overlap is better described as content proximity than as construct identity: removing the four teamwork items closest to OCB lowered the HTMT to 0.832 (Table 10). Effects involving these two constructs nevertheless require caution.

Table 4. Heterotrait-Monotrait Ratio (HTMT) and 95% Confidence Intervals

Construct pair	HTMT	95% CI
Perceived management practices ↔ Transformational leadership	0.667	[0.412; 0.876]
Perceived management practices ↔ Teamwork	0.823	[0.645; 0.937]
Perceived management practices ↔ Organizational commitment	0.597	[0.412; 0.766]
Perceived management practices ↔ OCB	0.875	[0.712; 0.990]
Transformational leadership ↔ Teamwork	0.653	[0.413; 0.840]
Transformational leadership ↔ Organizational commitment	0.433	[0.248; 0.637]
Transformational leadership ↔ OCB	0.728	[0.507; 0.903]
Teamwork ↔ Organizational commitment	0.717	[0.542; 0.847]
Teamwork ↔ OCB	0.925	[0.845; 0.978]
Organizational commitment ↔ OCB	0.724	[0.560; 0.850]

Source: Primary data processed with SmartPLS 4.

Notes: CI = percentile bootstrap confidence interval (5,000 subsamples).

4.4. Confirmatory Tetrad Analysis

CTA-PLS used 10,000 bootstrap subsamples, a two-tailed significance level of 0.10, and Bonferroni-adjusted intervals (Gudergan et al., 2008). All 20 non-redundant tetrads vanished for teamwork, supporting its reflective specification, whereas a few differed from zero for perceived management practices (3 of 20), transformational leadership (2 of 20), organizational commitment (2 of 27), and OCB (2 of 20) (Table 5). These results do not fully corroborate the reflective specification of four constructs and, for commitment, add to the reservations noted in Section 3.2. The constructs were kept reflective because they were adapted from established reflective scales and met all reliability and validity criteria; the consequences for commitment and OCB are examined in Section 4.11, and the decision is reported as a limitation.

Table 5. Confirmatory Tetrad Analysis (CTA-PLS)

Construct	Tetrads tested	Non-vanishing tetrads	Specification
Perceived management practices	20	3	Not fully supported
Transformational leadership	20	2	Not fully supported
Teamwork	20	0	Reflective supported
Organizational commitment	27	2	Not fully supported
Organizational citizenship behavior	20	2	Not fully supported

Source: Primary data processed with SmartPLS 4.

Notes: A tetrad is non-vanishing when its Bonferroni-adjusted confidence interval excludes zero.

4.5. Structural Model Assessment

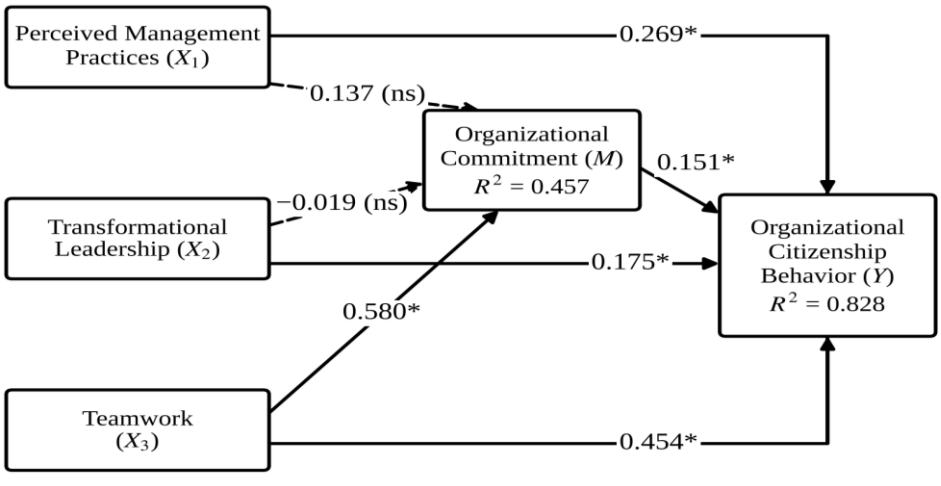
Inner VIF values ranged from 1.738 to 3.115, so collinearity did not bias the estimates (Hair et al., 2022). The model explained 82.8% of the variance in OCB (adjusted $R^2 = 0.821$) and 45.7% in organizational commitment (adjusted $R^2 = 0.440$). The R^2 for OCB needs caution, because all constructs are self-reported, the full collinearity VIF of OCB is high (Section 4.10), and teamwork and OCB overlap in content. Teamwork had a large effect on OCB ($f^2 = 0.385$) and a medium effect on commitment ($f^2 = 0.248$), perceived management practices a medium effect on OCB ($f^2 = 0.167$), and transformational leadership (0.103) and commitment (0.073) small effects on OCB; the effects of perceived management practices (0.014) and transformational leadership (0.0004) on commitment were negligible. The SRMR was 0.094, above the 0.08 convention and the 95% bootstrap quantile (0.073), and the NFI was 0.562. Although global fit in PLS-SEM is debated, these values show that model-implied and observed correlations differ more than is usually accepted, so the model is not presented as well specified.

4.6. Hypothesis Testing

Figure 2 and Table 6 present the path estimates. Perceived management practices ($\beta = 0.269$; 95% CI [0.090; 0.500]), transformational leadership ($\beta = 0.175$; [0.037; 0.355]), and teamwork ($\beta = 0.454$; [0.261; 0.635]) each had a positive path to OCB, supporting H1–H3, with teamwork the strongest. Teamwork was positively related to organizational commitment ($\beta = 0.580$; [0.331; 0.770]), supporting H6, and commitment to OCB ($\beta = 0.151$; [0.044; 0.257]), supporting H7. The paths from perceived management practices ($\beta = 0.137$; [−0.037; 0.372]) and transformational leadership ($\beta = -0.019$; [−0.171; 0.192]) to commitment were not significant, so H4 and H5 are not supported.

The intervals show how precisely the non-significant paths are estimated. For H4, the estimate of 0.137 lies below the minimum detectable path of about 0.25 (Section 3.1), and its interval includes both zero and a moderate positive association, so the result is not evidence that the relationship is absent. For H5, the estimate is close to zero, but the interval still allows small associations in either direction; only a moderate positive association can be ruled out. Two supported paths, transformational leadership → OCB (0.175) and commitment → OCB (0.151), also lie below the minimum detectable value, which the conservative inverse square root method permits; their lower limits (0.037 and 0.044) show that their size is imprecisely estimated.

Figure 2. Structural Model Results



** $p < 0.05$; ns = not significant; dashed line = non-significant path*

Source: Primary data processed with SmartPLS 4.

Notes: X1 = Perceived Management Practices; X2 = Transformational Leadership; X3 = Teamwork; M = Organizational Commitment; Y = OCB. Values on the arrows are standardized path coefficients; R^2 values are shown inside the endogenous constructs.

Table 6. Results of Direct Hypothesis Testing

H	Path	β	t	p	95% CI	f^2	Decision
H1	Perceived management practices → OCB	0.269	2.60	0.009	[0.090; 0.500]	0.167	Supported
H2	Transformational leadership → OCB	0.175	2.20	0.028	[0.037; 0.355]	0.103	Supported
H3	Teamwork → OCB	0.454	4.68	< 0.001	[0.261; 0.635]	0.385	Supported
H4	Perceived management practices → Organizational commitment	0.137	1.31	0.189	[−0.037; 0.372]	0.014	Not supported
H5	Transformational leadership → Organizational commitment	−0.019	0.20	0.838	[−0.171; 0.192]	0.000	Not supported
H6	Teamwork → Organizational commitment	0.580	5.21	< 0.001	[0.331; 0.770]	0.248	Supported
H7	Organizational commitment → OCB	0.151	2.76	0.006	[0.044; 0.257]	0.073	Supported

Source: Primary data processed with SmartPLS 4.

Notes: β = standardized path coefficient; CI = 95% percentile bootstrap confidence interval (5,000 subsamples). Decisions follow the confidence interval; t and p are based on the bootstrap standard error and are shown for information.

4.7. Mediation Analysis

Table 7 reports the indirect effects through organizational commitment, classified following Zhao et al. (2010) and decided by the 95% percentile interval. The indirect effect of teamwork was positive (β = 0.088; 95% CI [0.021; 0.163]), supporting H10; with a significant direct path of the same sign, the mediation is complementary and accounts for 16.2% of the total effect (0.542). The intervals for perceived management practices (β = 0.021; [−0.004; 0.067]) and transformational leadership (β = −0.003; [−0.026; 0.030]) included zero, so H8 and H9 are not supported; with significant direct paths, both show direct-only non-mediation. Because all constructs were measured at one time, these estimates show that the data fit commitment as a channel for teamwork, not that commitment preceded OCB (Maxwell & Cole, 2007).

Table 7. Results of Mediation Testing

H	Indirect path	β	t	p	95% CI	Decision; mediation type
H8	Perceived management practices → Organizational commitment → OCB	0.021	1.12	0.262	[−0.004; 0.067]	Not supported; direct-only (no mediation)
H9	Transformational leadership → Organizational commitment → OCB	−0.003	0.21	0.833	[−0.026; 0.030]	Not supported; direct-only (no mediation)
H10	Teamwork → Organizational commitment → OCB	0.088	2.44	0.015	[0.021; 0.163]	Supported; complementary (partial)

Source: Primary data processed with SmartPLS 4.

Notes: Decisions follow the 95% percentile bootstrap confidence interval (5,000 subsamples); t and p are based on the bootstrap standard error and are shown for information. Mediation type follows Zhao et al. (2010), based on the indirect and direct effects.

4.8. Predictive Power

PLSpredict used 10 folds and 10 repetitions (Shmueli et al., 2019). Q^2predict was positive for organizational commitment (0.420), OCB (0.796), and all 17 indicators (0.151–0.600). PLS-SEM had lower RMSE than the linear benchmark for 9 of 17 indicators, indicating medium predictive power, but for 8 of 9 commitment indicators and only 1 of 8 OCB indicators. CVPAT confirmed this pattern (Table 8; Liengaard et al., 2021). Loss differences against the indicator average were negative and significant for commitment, OCB, and the overall model; against the linear model they were negative and significant for commitment (−0.265; $p < 0.001$) and overall (−0.101; $p = 0.023$) but not for OCB (0.084; $p = 0.074$). The model thus predicts commitment better than both benchmarks but OCB no better than a linear model.

Table 8. Out-of-Sample Predictive Power (PLSpredict and CVPAT)

Construct	Q^2predict	Δ loss vs IA	p	Δ loss vs LM	p
Organizational commitment	0.420	−0.298	0.009	−0.265	< 0.001
Organizational citizenship behavior	0.796	−0.570	< 0.001	0.084	0.074
Overall	–	**−0.426**	**< 0.001**	**−0.101**	**0.023**

Source: Primary data processed with SmartPLS 4.

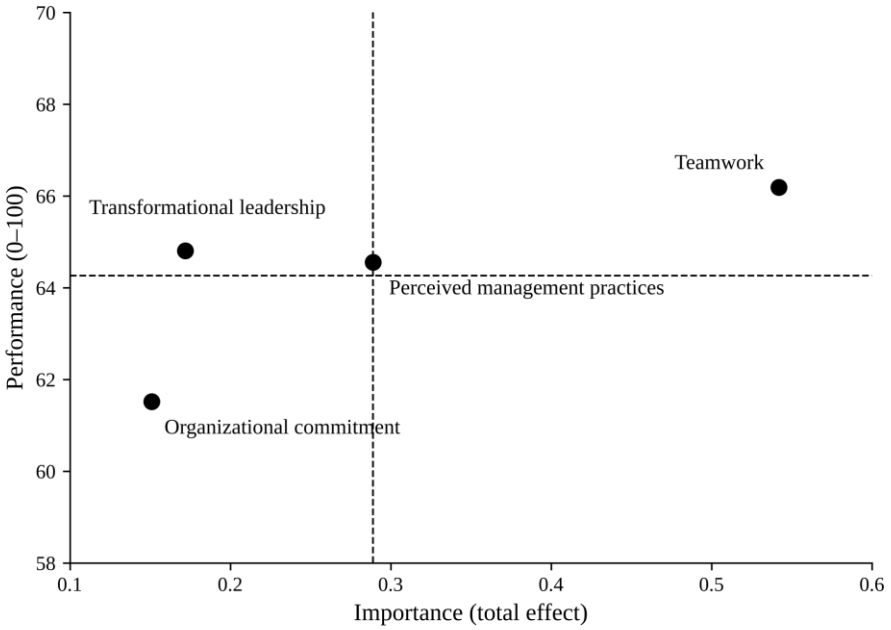
Notes: IA = indicator average; LM = linear model; Δ loss = average loss difference (a negative value favors PLS-SEM).

4.9. Importance-Performance Map Analysis

IPMA used OCB as the target, whose performance was 69.09 (Ringle & Sarstedt, 2016); all outer weights were positive and all indicators shared the same coding. In the main model, teamwork had the highest importance (total effect = 0.542) and performance (66.19) among the

antecedents, followed in importance by perceived management practices (0.289; 64.56), transformational leadership (0.172; 64.81), and organizational commitment (0.151; 61.52) (Figure 3; Table 9). Because importance values are total effects, they inherit the sensitivity of the paths: in the reduced specification, the total effect of teamwork falls to about 0.340 and that of perceived management practices rises to about 0.435, so their ranking is not stable, although both remain more important than transformational leadership and commitment. Items with above-average importance and below-average performance were X3.3 (0.072; 61.60), X3.2 (0.068; 63.40), and X1.5 (0.058; 62.89). X3.2 and X3.3 are retained in the reduced teamwork measure, and X1.5 belongs to a construct whose path to OCB held in every specification, so these priorities rest on the most stable paths.

Figure 3. Importance-Performance Map for OCB (Construct Level)



Source: Primary data processed with SmartPLS 4.

Notes: Dashed lines mark the mean importance (0.289) and mean performance (64.27) of the four antecedents.

Table 9. Importance-Performance Map Analysis (Target: OCB)

Construct	Importance (total effect)	Performance (0–100)
Perceived management practices	0.289	64.56
Transformational leadership	0.172	64.81
Teamwork	0.542	66.19
Organizational commitment	0.151	61.52

Source: Primary data processed with SmartPLS 4.

Notes: Performance is the mean latent variable score rescaled to 0–100.

4.10. Common Method Bias and Robustness Analysis

Because all constructs came from one self-report instrument, a full collinearity test was run on the latent scores (Kock, 2015). VIF values were 2.932 for perceived management practices, 1.917 for transformational leadership, 4.315 for teamwork, 1.977 for organizational commitment, and 5.825 for OCB. The values for teamwork and OCB exceeded 3.3, so common method

variance, together with their conceptual proximity, cannot be ruled out, and such diagnostics do not measure how far it inflates each path (Podsakoff, MacKenzie, & Podsakoff, 2012). A shared response tendency would raise all associations, yet transformational leadership was unrelated to commitment (β = −0.019; HTMT = 0.433), so the pattern is selective. This shows that method variance does not explain every result, not how much it contributes to the others, and no marker variable allowed that estimate. A full response in a workplace census may also encourage favorable self-description, which the anonymity safeguards (Section 3.3) limit but do not remove. Associations involving teamwork and OCB, and the R^2 of OCB, are therefore upper-bound estimates.

To examine the teamwork–OCB overlap, the model was re-estimated without the four teamwork indicators cross-loading most on OCB (X3.4, X3.6, X3.7, X3.8). This post-hoc respecification uses the same data that identified the items, so it may capitalize on sample features and does not validate the shortened scale. The reduced measure remained reliable (α = 0.865; rho_C = 0.908; AVE = 0.713), and its HTMT with OCB fell to 0.832. Several conclusions changed (Table 10): teamwork → OCB fell from 0.454 to 0.246, perceived management practices → OCB rose from 0.269 to 0.375, and perceived management practices → commitment (H4) became significant (β = 0.266; 95% CI [0.047; 0.523]). For H8, the indirect effect had an interval of [0.006; 0.145]. Because a product of two paths has a skewed sampling distribution, a t-based p-value can disagree with this interval; Table 10 therefore reports a bootstrap p-value from the same 5,000 estimates, which for H8 is 0.021 and agrees with the interval. As a post-hoc check, this result does not reverse the main-model decisions: H4 and H8 remain not supported and are classified as sensitive to the teamwork measure.

Table 10. Robustness Analysis: Main Model versus Reduced Teamwork Measure

H	Path	β main	p main	β reduced	p reduced (bootstrap)	Reading (reduced, post-hoc)
H1	Perceived management practices → OCB	0.269	0.009	0.375	< 0.001	Supported
H2	Transformational leadership → OCB	0.175	0.028	0.226	0.002	Supported
H3	Teamwork → OCB	0.454	< 0.001	0.246	0.006	Supported
H4	Perceived management practices → Organizational commitment	0.137	0.189	0.266	0.020	Significant (post-hoc only)
H5	Transformational leadership → Organizational commitment	−0.019	0.838	0.037	0.638	Not supported
H6	Teamwork → Organizational commitment	0.580	< 0.001	0.416	< 0.001	Supported
H7	Organizational commitment → OCB	0.151	0.006	0.225	0.001	Supported
H8	Perceived management practices → Organizational commitment → OCB	0.021	0.262	0.060	0.021	CI excludes zero (post-hoc only)
H9	Transformational leadership → Organizational commitment → OCB	−0.003	0.833	0.008	0.639	Not supported
H10	Teamwork → Organizational commitment → OCB	0.088	0.015	0.094	0.001	Supported

Source: Primary data processed with SmartPLS 4.
Notes: Reduced model excludes X3.4, X3.6, X3.7, X3.8. Main-model values are SmartPLS 4 estimates (p from the bootstrap t statistic). Reduced-model values come from the replication script with 5,000 percentile bootstrap subsamples; p is the two-sided percentile bootstrap p-value from the same subsamples as the confidence interval. Hypothesis decisions are taken from the main model; the last column describes the post-hoc estimate only.

Table 11 combines the results; decisions come from the main model, and the reduced model indicates their robustness. Six conclusions held in both models with the same sign and decision: H1–H3, H6, H7, and H10, whose indirect effect was almost identical (0.088 and 0.094). Two paths were stable in direction but not in size: teamwork–OCB fell from 0.454 to 0.246 and management practices–OCB rose from 0.269 to 0.375, suggesting that part of the variance first credited to teamwork is shared with management practices. H4 and H8, not supported in the main model, are sensitive because they became significant only after respecification, and H5 and H9 were not supported in either model. The further checks in Section 4.11 qualify H2, H7, and H10.

Table 11. Stability of Findings across the Main and Robustness Models

H	**Path**	Main model (decision)	Reduced model (post-hoc)	**Evidence status**
H1	Perceived management practices → OCB	Supported	Supported	Stable (size increased)
H2	Transformational leadership → OCB	Supported	Supported	Stable across teamwork measures; not significant with branch controls (Table 12)
H3	Teamwork → OCB	Supported	Supported	Stable in direction; size sensitive
H4	Perceived management practices → Organizational commitment	Not supported	Significant	Not supported; sensitive to teamwork measure
H5	Transformational leadership → Organizational commitment	Not supported	Not supported	Stable (no relationship)
H6	Teamwork → Organizational commitment	Supported	Supported	Stable
H7	Organizational commitment → OCB	Supported	Supported	Stable across teamwork measures; OCB-I only, not with affective commitment alone (Table 12)
H8	Perceived management practices → Organizational commitment → OCB	Not supported	CI excludes zero	Not supported; sensitive to teamwork measure
H9	Transformational leadership → Organizational commitment → OCB	Not supported	Not supported	Stable (no mediation)
H10	Teamwork → Organizational commitment → OCB	Supported	Supported	Stable across teamwork measures; OCB-I only, not with affective commitment alone (Table 12)

Source: Primary data processed with SmartPLS 4.
Notes: Decisions are those of the pre-specified main model. Stable = same sign and decision in both models; sensitive = the post-hoc reduced model gives a different result. Reduced model excludes X3.4,

X3.6, X3.7, X3.8 (Table 10). Qualifications from the further sensitivity models in Section 4.11 are noted where they apply.

4.11. Supplementary Sensitivity Analyses: Target-Specific OCB, Affective Commitment, and Branch Dependence

Three further post-hoc models address the main specification choices (Table 12). First, OCB-I (α = 0.935; AVE = 0.794) and OCB-O (α = 0.918; AVE = 0.859) were entered as separate outcomes, and the difference between each predictor's two paths was bootstrapped. Target similarity predicts stronger links from management practices to OCB-O and from teamwork to OCB-I; the data did not show this. Perceived management practices were associated with OCB-I (β = 0.315; 95% CI [0.145; 0.531]) but not OCB-O (β = 0.116; [−0.108; 0.352]), a significant difference (0.199; [0.031; 0.454]). Teamwork related to both, with a larger point estimate for OCB-O (0.509 vs. 0.354; difference −0.154; [−0.409; 0.063]), and transformational leadership related similarly to both (0.153 and 0.171). Commitment was associated with OCB-I (β = 0.200; [0.076; 0.321]) but not OCB-O (β = 0.033; [−0.137; 0.201]), so the teamwork indirect path held only for OCB-I (0.117; [0.035; 0.203]). Supervisor-directed citizenship was not measured.

Second, the model was re-estimated with affective commitment (α = 0.814; AVE = 0.728) as the only mediator, since the mediation argument rests mainly on this component (Meyer et al., 2002). Teamwork remained associated with affective commitment (β = 0.525; [0.247; 0.748]) and transformational leadership remained unrelated to it (β = −0.003; [−0.167; 0.237]), but affective commitment → OCB (β = 0.095; [−0.010; 0.198]) and the teamwork indirect path (0.050; [−0.004; 0.117]) were not significant. Support for H7 and H10 therefore depends on the combined measure.

Third, construct means differed across branches for every construct (Table 13; one-way ANOVA, all $p < 0.05$), with ICC(1) values from 0.085 for perceived management practices to 0.276 for transformational leadership. With four branch dummies predicting commitment and OCB, the paths from management practices and teamwork to OCB, from teamwork to commitment, and from commitment to OCB kept their sign and significance. Transformational leadership → OCB fell from 0.175 to 0.115 and lost significance ([−0.019; 0.324]), and perceived management practices → commitment rose to 0.211 ([0.021; 0.460]), with an indirect path only marginally above zero (0.027; [0.000; 0.079]). With five clusters these diagnostics are imprecise, but they indicate that the H2 result partly reflects differences between branches.

Table 12. Post-hoc Sensitivity Models: Target-Specific OCB, Affective Commitment, and Branch Controls

Path	Main model (OCB)	OCB-I as outcome	OCB-O as outcome	Affective commitment as mediator	With branch controls
Perceived management practices → OCB	0.269*	0.315*	0.116	0.283*	0.287*
Transformational leadership → OCB	0.175*	0.153*	0.171*	0.172*	0.115
Teamwork → OCB	0.454*	0.354*	0.509*	0.491*	0.449*
Perceived management	0.137	0.130	0.130	0.080	0.211*

practices → Commitment					
Transformational leadership → Commitment	−0.019	−0.020	−0.020	−0.003	−0.056
Teamwork → Commitment	0.580*	0.584*	0.584*	0.525*	0.473*
Commitment → OCB	0.151*	0.200*	0.033	0.095	0.130*
Perceived management practices → Commitment → OCB	0.021	0.026	0.004	0.008	0.027*
Transformational leadership → Commitment → OCB	−0.003	−0.004	−0.001	0.000	−0.007
Teamwork → Commitment → OCB	0.088*	0.117*	0.019	0.050	0.062*
R^2 of the outcome	0.828	0.769	0.552	0.822	0.840

Source: Primary data; replication script (main model reproduced from SmartPLS 4).

*Notes: Standardized path coefficients; * 95% percentile bootstrap CI excludes zero (5,000 subsamples). Commitment = organizational commitment (affective commitment, X4.1–X4.3, in the fifth column). OCB-I = Y1.1–Y1.5; OCB-O = Y1.6–Y1.8; both outcomes were estimated in one model. Branch controls = four branch dummy variables predicting commitment and OCB. Main-model values are identical to the SmartPLS 4 estimates.*

Table 13. Construct Means by Branch and Intraclass Correlations

Branch	n	PMP	TL	TW	OC	OCB
3C Gym Citraland	27	3.43	3.27	3.45	3.33	3.43
3C Gym Dharmahusada	22	3.31	3.20	3.30	2.97	3.31
3C Gym Ciliwung	19	4.02	4.18	3.76	3.59	4.16
3C Gym Madiun	16	3.64	3.96	4.04	3.85	4.20
3C Gym Malang	13	3.59	3.62	3.99	3.93	4.07
All branches	97	3.57	3.59	3.64	3.47	3.76
F (4, 92)	–	2.77	8.29	3.90	4.50	6.31
ICC(1)	–	0.085	0.276	0.132	0.155	0.217

Source: Primary data, processed by the authors.

Notes: PMP = perceived management practices; TL = transformational leadership; TW = teamwork; OC = organizational commitment. Values are construct means (1–5). F = one-way ANOVA across branches (all $p < 0.05$). ICC(1) = proportion of variance attributable to branch membership. Branch membership follows the order of data entry.

4.12. Discussion

The positive association between perceived management practices and OCB (H1) supports the view that the way practices are run is a source of voluntary behavior. Earlier work mostly examined organizational effectiveness as a unit-level consequence of OCB (Podsakoff et al., 2000; Rego & Cunha, 2008; Setiawan et al., 2022); the present construct is a perception of practices, so the result adds evidence on the input side of the exchange rather than reversing that link. It agrees with Husin et al. (2012) and with the social exchange view that orderly and fair practices are an investment employees return (Blau, 1964). The association grew when the teamwork measure was narrowed, suggesting that teamwork absorbed part of it in the main model. A reverse reading, in which employees who contribute more judge management more favorably, cannot be excluded.

Transformational leadership was associated with OCB in the main model (H2), consistent with Podsakoff et al. (1990) but not with Suardana and Surya (2023). It is, however, the result most affected by branch structure: transformational leadership had the largest share of between-branch variance (ICC(1) = 0.276), and its association with OCB lost significance once branch was controlled. Because employees in a branch share a supervisor, part of the association appears to operate between branches, with branches led by more transformational supervisors also showing more citizenship; whether supervisors shape individual citizenship within a branch cannot be judged with five branches. In a lean gym, supervisors work on the same floor as their staff, so their example may be repaid in effort rather than through attachment to the organization (Settoon et al., 1996), but without supervisor-directed OCB items this account cannot be tested.

Teamwork showed the strongest association with OCB (H3) and was related to organizational commitment (H6) in every specification, consistent with the links of group cohesiveness to OCB (Judeh, 2023; Kidwell et al., 1997) and to commitment (Pillai & Williams, 2004; Woo, 2016; Wulandari & Mila, 2023). Shift-based operations make co-workers the exchange partners employees meet most often: a colleague who covers a class or leaves the floor in order provides a benefit the next employee feels at once and can return in kind, and repeated over many shifts such exchanges can become a norm of mutual help and a sense of belonging. Three alternative explanations qualify this account. Teamwork and OCB overlap in content; employees who help others may also receive help and rate teamwork more favorably; and a shared response tendency could raise the association. The reduced model addresses the first: teamwork remained related to OCB, but considerably less strongly. The other two cannot be separated from the proposed explanation with these data, so teamwork is best described as a stable correlate of OCB whose contribution is uncertain in size.

Transformational leadership was unrelated to organizational commitment (H5) in every specification, unlike earlier findings among fitness-club employees, coaches, and public-sector staff (Lee & Cho, 2018; Lee et al., 2018; Sari & Soliha, 2016). The possibility that a combined measure dilutes an affective link (Meyer et al., 2002) was tested and not supported, since the path to affective commitment alone was also near zero. Two explanations remain: the effect of leadership on commitment may require high-quality leader–member exchange (Keskes et al., 2018), and supervisor treatment may be returned mainly to the supervisor rather than the organization (Lavelle et al., 2007). With teamwork in the model, attachment to the workplace appears to be shaped more by co-workers than by supervisors.

The path from perceived management practices to commitment (H4) should be read differently. The coefficient was positive, below the minimum detectable size, and its interval

included moderate positive values; it became significant in the reduced and branch-controlled models but not with affective commitment alone. These signals point to a modest positive association consistent with Woo (2016), but because they come from post-hoc specifications they do not rescue H4 or H8, which remain not supported and should be retested with a larger sample.

Organizational commitment was associated with OCB in the main model (H7), consistent with meta-analytic evidence (Meyer et al., 2002; Organ & Ryan, 1995) and early tests (Williams & Anderson, 1991). Two results limit this conclusion. The association held for interpersonal but not organization-directed citizenship, the opposite of what attachment to the organization would most obviously predict, and it lost significance with affective commitment alone, although the affective component is the strongest meta-analytic correlate of OCB. The combined measure may capture a general sense of being bound to the workplace, including continuance and normative elements, that is expressed in helping colleagues. This reading is tentative; the association is also smaller than that of teamwork and agrees only in part with Sari and Soliha (2016).

Commitment therefore does not carry the three exchanges equally. It carried part of the teamwork–OCB association (H10), consistent with Wulandari and Mila (2023), stably across the reduced and branch-controlled models but only for OCB-I and not with affective commitment alone. For transformational leadership the pattern was direct-only (H9), unlike the mediation by affective commitment reported by Lee et al. (2018) and Novianti (2021) but in line with Sari and Soliha (2016); for perceived management practices, mediation was not supported in the main model (H8). These results show a source-specific pattern, in which the three sources relate differently to commitment and OCB (Settoon et al., 1996), not target-specific reciprocity: the target similarity model (Lavelle et al., 2007) would predict management practices to be returned as organization-directed citizenship, yet they were associated with interpersonal citizenship only. In a small gym, the most visible way to repay a well-run workplace may be to help the colleagues who keep it running. Significant indirect paths show only that the data fit the mechanism, not that commitment preceded OCB (Maxwell & Cole, 2007), and they depend on how commitment is measured.

The model is not strongly predictive: it predicts commitment better than both benchmarks but OCB no better than a linear model (Liengaard et al., 2021; Shmueli et al., 2019), and the SRMR indicates limited fit, so the high in-sample R^2 of OCB partly reflects shared method and content. Because IPMA importance values are total effects, priorities are useful only where paths are stable (Ringle & Sarstedt, 2016). Teamwork and perceived management practices were the most important antecedents in both specifications, although their order changed, and the priority items X3.2, X3.3, and X1.5 belong to measures whose associations with OCB held throughout. Commitment had the lowest performance of all constructs.

The setting helps explain why co-workers mattered more than supervisors for commitment. In a small, shift-based gym, employees spend more time with peers than with the person who appraises them, and the organization is experienced largely through the team on duty (Johns, 2006). Where supervisory structures are stronger, teams larger, or shifts less interdependent, the supervisor route may be more visible. All five constructs also differed between branches, most of all transformational leadership and OCB, so part of what the pooled model attributes to individuals reflects branch differences. The findings therefore describe this organization and can suggest hypotheses for, but not conclusions about, other fitness or service firms.

5. Conclusion and Suggestion

This study examined whether perceived management practices, transformational leadership, and teamwork are linked to OCB through organizational commitment in the five branches of one fitness-center organization. Six of the ten hypotheses were supported in the pre-specified model. Across all checks, management practices and teamwork were associated with OCB, teamwork was associated with commitment, and transformational leadership was unrelated to commitment. Three results depend on specification: the leadership–OCB association (H2) did not survive branch controls; the commitment–OCB association (H7) and the teamwork indirect path (H10) held for interpersonal citizenship only and not with affective commitment alone; and H4 and H8 became significant only in post-hoc models. Time order, supervisor-directed reciprocity, and generalization beyond these branches remain open.

5.1. Theoretical Implications

The study offers three bounded contributions. First, employees' perceptions of management practices are associated with their OCB alongside, and distinct from, transformational leadership and teamwork. Second, commitment is not a general carrier of social exchange: it carried part of the co-worker exchange, for interpersonal citizenship only, and none of the supervisor exchange, which supports a source-specific reading of the multifoci view (Settoon et al., 1996). Third, management practices were linked to interpersonal rather than organization-directed citizenship, contrary to target similarity (Lavelle et al., 2007), which suggests that in small, flat service units reciprocity toward the organization may be expressed as help to co-workers, a boundary condition that deserves testing. These contributions rest on cross-sectional, self-reported data from one organization and require designs with time order and other-rated, target-specific citizenship.

5.2. Managerial Implications

For 3C Gym, the evidence suggests priorities rather than proven interventions. Teamwork and management practices, both associated with OCB in every model, are the most promising areas: clarifying coordination and handovers between shifts, giving teams room to solve service problems together, and keeping rewards and appraisal consistent across branches, starting with the IPMA priority items. Because transformational leadership and OCB were lowest in the Citraland and Dharmahusada branches (Table 13), supervisor development could be targeted at specific branches. Commitment had the lowest performance and also deserves attention. Given the single-organization, single-source, cross-sectional data, changes could be piloted in one or two branches and evaluated with supervisor- or member-reported OCB before being extended.

6. Limitations and Future Research

Several limitations apply. First, the cross-sectional, single-source design precludes causal conclusions; all constructs, including OCB, were self-reported in a workplace census with a full response rate, common method variance cannot be ruled out for teamwork and OCB, and the R^2 of OCB is an upper bound. Second, the OCB-O dimension had only three items and no item was supervisor-directed, so target-specific reciprocity was examined only in part. Third, teamwork–OCB discriminant validity held only under the inferential criterion, the teamwork association and H4 and H8 depend on how teamwork is measured, and the shortened scale is not validated. Fourth, commitment was modelled as one first-order construct whose results did not hold for the affective component alone; CTA-PLS did not fully support four reflective specifications, and the SRMR exceeded the convention. Fifth, perceived management practices

include supervisory assistance, narrowing their distance from transformational leadership. Sixth, with 97 respondents only paths of about 0.25 or larger are detectable with 80% power. Seventh, employees are nested in five branches identified from data-entry order, the branch diagnostics rest on five clusters, and the leadership result did not survive branch controls.
Future research should sample several fitness organizations so that branch and organization effects can be modelled with multilevel methods, separating within- and between-branch leadership effects. OCB should be rated by supervisors, peers, or members, and organization-directed, interpersonal, and supervisor-directed citizenship should be measured to test target similarity directly. Time-lagged designs would clarify whether teamwork and commitment precede OCB. The coordination-focused teamwork scale needs validation in independent samples, and a marker variable would allow method variance to be estimated (Podsakoff et al., 2012). Leader–member and team–member exchange deserve testing as foci-specific mediators, and the three commitment components could be modelled separately or as a higher-order construct in larger samples.

Ethics statement

The study used an anonymous questionnaire completed voluntarily by employees of 3C Gym with the permission of the organization's management. No names, employee numbers, or other identifying information were collected, and the data were analyzed and reported only in aggregate.

Declaration of AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used Claude (Anthropic) in order to assist with drafting, structuring, and language editing of the manuscript. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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Appendix A. Item-Level Loadings and Cross-Loadings

Items are listed in the order administered, with the construct and facet to which each belongs. Loadings are from the main model; the last column gives the item's highest loading on any other construct. The four teamwork items removed in the post-hoc reduced model are marked.

Code	Construct	Facet / dimension	Loading	Highest cross-loading (construct)
X1.1	Perceived management practices	Support, assistance, rewards, appraisal	0.814	0.649 (OCB)
X1.2	Perceived management practices	Support, assistance, rewards, appraisal	0.736	0.538 (TW)
X1.3	Perceived management practices	Support, assistance, rewards, appraisal	0.824	0.663 (OCB)
X1.4	Perceived management practices	Support, assistance, rewards, appraisal	0.852	0.690 (OCB)
X1.5	Perceived management practices	Support, assistance, rewards, appraisal	0.817	0.683 (OCB)
X1.6	Perceived management practices	Support, assistance, rewards, appraisal	0.641	0.508 (OCB)
X1.7	Perceived management practices	Support, assistance, rewards, appraisal	0.634	0.538 (OCB)
X1.8	Perceived management practices	Support, assistance, rewards, appraisal	0.630	0.517 (TW)
X2.1	Transformational leadership	Leader behavior	0.778	0.517 (OCB)
X2.2	Transformational leadership	Leader behavior	0.833	0.547 (OCB)
X2.3	Transformational leadership	Leader behavior	0.809	0.615 (OCB)
X2.4	Transformational leadership	Leader behavior	0.861	0.565 (OCB)
X2.5	Transformational leadership	Leader behavior	0.826	0.571 (OCB)
X2.6	Transformational leadership	Leader behavior	0.822	0.580 (OCB)
X2.7	Transformational leadership	Leader behavior	0.731	0.438 (OCB)
X2.8	Transformational leadership	Leader behavior	0.762	0.500 (OCB)
X3.1	Teamwork	Retained in reduced model	0.835	0.667 (OCB)
X3.2	Teamwork	Retained in reduced model	0.737	0.528 (OCB)
X3.3	Teamwork	Retained in reduced model	0.774	0.641 (OCB)
X3.4	Teamwork	Removed in reduced model	0.797	0.730 (OCB)

X3.5	Teamwork	Retained in reduced model	0.793	0.673 (OCB)
X3.6	Teamwork	Removed in reduced model	0.839	0.770 (OCB)
X3.7	Teamwork	Removed in reduced model	0.856	0.773 (OCB)
X4.8	Organizational commitment	Normative	0.805	0.594 (OCB)
X4.9	Organizational commitment	Normative	0.770	0.467 (OCB)
Y1.1	OCB	OCB-I	0.873	0.724 (TW)
Y1.2	OCB	OCB-I	0.847	0.738 (TW)
Y1.3	OCB	OCB-I	0.831	0.699 (TW)
Y1.4	OCB	OCB-I	0.828	0.720 (TW)
Y1.5	OCB	OCB-I	0.860	0.758 (TW)
Y1.6	OCB	OCB-O	0.736	0.647 (TW)
Y1.7	OCB	OCB-O	0.773	0.676 (TW)
Y1.8	OCB	OCB-O	0.787	0.682 (TW)