Psychology Research and Behavior Management

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ORIGINAL RESEARCH

Organizational Error Tolerance and Change-Oriented Organizational Citizenship Behavior: Mediating Role of Psychological Empowerment and Moderating Role of Public Service Motivation

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Purpose: Error management is an important element of organizational management research, and organizational error tolerance has gradually received attention from researchers in recent years. Most previous studies concluded that organizational error tolerance positively affects both the perceived organizational support and job performance of public sector employees, but few have examined the relationship between organizational error tolerance and change-oriented organizational citizenship behavior.

Methods: This research examines how organizational error tolerance affects change-oriented organizational citizenship behavior using an experimental approach (Study 1, N = 162 and Study 2, N = 228) and a field survey approach (Study 3, N = 377).

Results: The results indicate that organizational error tolerance increases psychological empowerment, which in turn increases change-oriented organizational citizenship behavior. Public service motivation plays a moderating role in this process. Specifically, the positive mediating effect of organizational error tolerance on change-oriented organizational citizenship behavior through psychological empowerment was not significant when the level of public service motivation was high, while it was significant when the level of public service motivation was low.

Conclusion: This study clarifies the mechanism and boundary conditions of the effect of organizational error tolerance on change-oriented organizational citizenship behavior, provides a more comprehensive and dialectical perspective for research on organizational error tolerance, and extends research on psychological empowerment and change-oriented organizational citizenship behavior.

Keywords: organizational error tolerance, psychological empowerment, change-oriented organizational citizenship behavior, public service motivation, organizational management, employee behavior

Introduction

The digital economy presents new challenges and opportunities for the public sector, which must constantly adapt to changes in the socioeconomic and technological environment. Innovation is crucial for the public sector to adapt to a changing environment[1] and is a contributing factor to the quality of public services and problem-solving capabilities.[2] Effectively motivating change-oriented organizational citizenship behavior (OCB) among employees in the context of innovation is an important theoretical and practical issue to address the complex environment currently faced by the public sector.[3] Change-oriented organizational citizenship behavior (CO-OCB) involves employees' spontaneous participation in organizational change by proactively suggesting and taking positive actions to optimize the organization's work processes and methods.[4] The generation and realization of employee suggestions for optimization are beneficial for improving organizational performance,[5] enabling continuous organizational development,[6] and providing an effective

Received: 19 July 2023
Accepted: 7 October 2023
Published: 12 October 2023

response to increasing customer expectations and market changes.[7] Therefore, identifying and promoting employees' CO-OCB factors is crucial for the public sector.

Studies have examined the prediction of CO-OCB by workplace characteristics such as procedural justice[4] leader-member exchange relationships,[8] and perceived organizational support.[9] Choi[4] emphasizes that CO-OCB can be promoted within organizations through supportive leadership and an innovative atmosphere. Therefore, to improve employees' CO-OCB, this study argues that it is crucial to create an error-tolerant work climate in an organization to create a supportive and innovative work environment and to develop superior knowledge without fear of the consequences of making mistakes. Research has shown that in organizations with high error tolerance, employees are allowed to engage in innovative activities at work without fear of failure, thereby satisfying the need for employee support.[10] This shows that changes in employee attitudes and behaviors stem from the perception of organizational error tolerance. Therefore, this study concludes that there is a positive relationship between organizational error tolerance (OET) and CO-OCB.

CO-OCB is a risk-taking behavior in which employees may challenge the status quo and attempt to make constructive suggestions and changes in their work procedures and methods. Employees are motivated when they believe that the organization allows risky work behaviors and allows them to take risks,[11] when they believe that they are empowered and autonomous, and when they experience increased psychological empowerment.[12] Employees who believe they are empowered are also more articulate in their use of capabilities and resources, and they are more likely to engage in change-oriented behaviors at work.[13] Therefore, this study examined how organizational error tolerance affects CO-OCB through psychological empowerment. Complex interactions between individual characteristics and the work environment determine work outcomes.[14] In the public sector context, public service motivation (PSM) is often viewed as an important individual characteristic that leads to positive work outcomes (eg work engagement;[15] work performance[16]) for public sector employees and is an important factor influencing employees' organizational citizenship behavior.[17] Therefore, this study examined how PSM affects the relationship between organizational error tolerance and psychological empowerment (CO-OCB).

Based on the above discussion, we propose and test a theoretical framework (eg Figure 1) that explains how and when organizational error tolerance promotes CO-OCB among public sector employees. The theoretical and practical implications of this study are twofold: first, this study introduces organizational error tolerance as an organizational factor that predicts CO-OCB. Prior research found that error tolerance in error management cultures and environments has favorable effects on individual work-related behaviors such as innovation,[18] job performance,[19] but we still know little about how

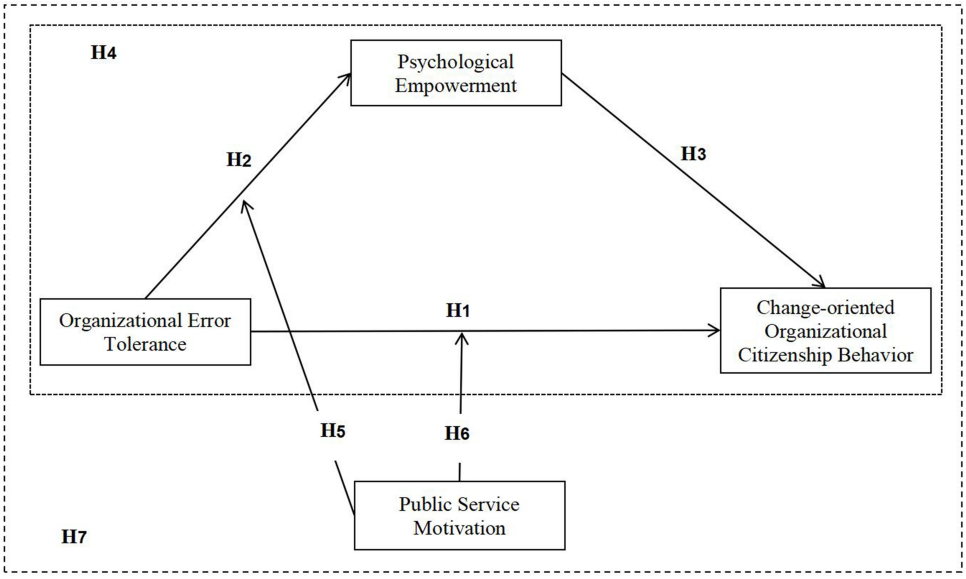

Figure 1 The theoretical model for this study.

employees' perceptions of organizational error tolerance affect important work attitudes and behaviors. This study used a scenario-based experimental approach to validate the mechanism of organizational error tolerance in CO-OCB, which is an extension and enrichment of the research area on the mechanism of CO-OCB influence. Second, research has shown that the degree of influence of the organizational environment on employee behavior may depend on individual differences,[20] and this study introduces PSM as a moderating variable based on the characteristics of the public sector. Thus, we tested the relationship between PSM and organizational error tolerance on CO-OCB, bridging the gap in the relationship between PSM and CO-OCB and expanding the boundary conditions of CO-OCB.

Organizational Error Tolerance and CO-OCB

Errors in the service industry are often difficult to accept due to high customer expectations.[21] However, recent research has concluded that errors are inevitable and that effective error management is critical to organizational success.[22] This approach emphasizes the steps to be taken after an error occurs and suggests various error-handling behaviors.[23] An error management climate, on the other hand, applies the principles and practices of error management to processes in the organization, including discussing and sharing information about errors with colleagues, improving the ability to analyze and resolve errors, and asking for help when an error occurs,[24] and is critical to reducing negative errors and promoting positive error consequences.[25] Organizational error tolerance is at the heart of error management approaches[26] and is defined as the condition that exists in an organization that allows its members to take risks, seek innovative solutions, and develop superior knowledge without fear of the consequences of making a mistake,[27] with an emphasis on the organization's tolerance of errors. In organizations with high fault tolerance, mistakes are not perceived negatively and risk-taking is allowed. Error tolerance is characterized by a work environment that meets the needs of employees to protect vulnerability and supportiveness.[12]

The development of science and technology and the increase in public demand place higher demands on public organizations to be innovative,[28] which requires employees to display more CO-OCB.[29] Studies have shown that work environment characteristics significantly predict CO-OCB,[4] and we suggest that employees' CO-OCB is influenced by organizational error tolerance. This is evidenced by the fact that, on the one hand, leaders in organizations with high organizational error tolerance tend to be more inclusive in the workplace.[30] Research has shown that inclusive leadership promotes employees' CO-OCB.[31] In addition, organizational tolerance encourages employees to try new things and emphasizes the importance of pursuing innovative ideas without fear of failure or potential behaviors. The risk of risk-taking behavior of employees is reduced, which promotes CO-OCB.[32] On the other hand, according to social interaction theory,[33] the provision of resources by an organization induces rewarding behaviors in employees. Employees in organizations with high error tolerance experience greater discretion and trust in their work. As a result of reciprocity, employees actively participate in their work and suggest and adopt optimization measures as a reward to the organization.[24] Based on this, this study argues that a public sector with high organizational error tolerance is more likely to motivate employees to exhibit CO-OCB, and therefore proposes the following hypothesis:

H1: organizational error tolerance has a positive effect on CO-OCB.

The Mediating Role of Psychological Empowerment

Employee's psychological empowerment is influenced by an individual's perception of the organizational climate.[34] The concept of employee psychological empowerment comprises four fundamental dimensions aspects: meaning, competence, influence, and autonomy. Meaning refers to the extent to which employees perceive the value of the job or task; competence refers to the employee's belief that he or she has the skills necessary to perform different tasks; autonomy refers to the discretion employees have while working; and influence refers to the employee's perceived impact on the immediate work environment.[35] Research has shown that both organizational support and trust promote employee psychological empowerment.[14,36]

Thus, employees' perceptions of their organization are key factors in psychological empowerment. Organizational error tolerance is essentially an employee's perception of the organization's error tolerance. By creating an error-tolerant work environment, the organization makes employees feel supported and trusted by the organization, thus stimulating

their sense of psychological empowerment. Moreover, high organizational error tolerance allows employees to make mistakes to a certain extent, which means that more discretion is given to employees and increases their level of psychological empowerment. By allowing employees to speak up, organizations ensure that they have the resources to initiate and make novel suggestions, thus leading them to participate in work decisions and increasing their confidence in performing certain tasks.[37] Based on this, this study argues that public sector employees with high organizational error tolerance are more likely to experience psychological empowerment and therefore proposes the following hypothesis:

H2: organizational error tolerance has a positive effect on psychological empowerment.

Psychological empowerment, defined as intrinsic motivation,[38] argues that employees' intrinsic perceptions of empowering behaviors can have a motivational effect. The impact of psychological empowerment on employee's workplace behaviors has received considerable attention from scholars. Studies have shown that psychological empowerment enhances employees' work behaviors such as job performance,[12] work engagement,[39] and organizational citizenship behaviors.[40]

From a social exchange perspective, when employees have higher levels of psychological empowerment, their feelings toward the organization are more positive, and, in turn, they exhibit more organizational citizenship behaviors in return. Because empowered employees perceive themselves as having the ability to influence their work and work environment meaningfully, they are more likely to take the initiative to perform duties beyond the requirements of their jobs.[41] When employees have a higher perception of psychological empowerment, they have more freedom at work and are more inclined to solve difficulties.[42] In addition, psychological empowerment is a personal resource,[43] and when employees have high levels of perceived psychological empowerment, they have sufficient psychological resources to mitigate the depletion of intrinsic resources due to challenging behaviors. At the same time, employees with high psychological empowerment are more aware of the meaning of their work and their ability to get the job done, which can lead to an inspired work ethic and more confidence in taking charge and solving challenging tasks,[39] and employees are more likely to engage in transformative organizational citizenship behaviors. Based on this, this study argues that highly psychologically empowered public sector employees are more likely to exhibit high CO-OCB, and therefore proposes the following hypothesis:

H3: Psychological empowerment has a positive effect on CO-OCB.

In summary, this study argues that high organizational error tolerance allows employees to pursue innovative ideas and program implementation at work without fear of the consequences of making mistakes, which allows them to experience higher levels of psychological empowerment at work and to be more likely to generate and implement novel work ideas, thus effectively motivating their CO-OCB. In combination with H2 and H3, the following hypothesis is proposed:

H4: Psychological empowerment mediates the relationship between organizational error tolerance and employee's CO-OCB.

Moderating Effect of PSM

Public service motivation (PSM) is a universal altruistic motivation that refers to the tendency of individuals to be motivated primarily by the public sector or organization[44] and emphasizes the beliefs, values, and attitudes of individuals to serve the interests of society beyond personal and organizational interests.[45] Early research suggests that PSM consists of four dimensions: attraction to policymaking, commitment to the public good, self-sacrifice, and compassion.[46] Among them, attraction to politics is expressed as an individual's interest in politics and policy, commitment to the public interest is expressed as a strong willingness and desire to serve the public interest, compassion is expressed as an emotional response that motivates individuals to care for or protect others or society in a particular context, and self-sacrifice is expressed as a willingness to sacrifice personal interests for others or the public interest.[47] Public service motivation has

been demonstrated to be related to public sector employees' job performance, including job satisfaction,[48] job performance,[16] willingness to leave,[49] organizational citizenship behavior,[50] and innovative work behavior.[51]

This study argues that there is a moderating effect of PSM between organizational error tolerance and psychological empowerment. First, the perceived meaningfulness of work brought about by psychological empowerment will facilitate the fit between employees' personal values and organizational goals.[52] Employees with high PSM will emphasize the importance of meaningful work and service to society compared to those with low PSM,[53] and will tend to spend more time and energy working and finding and creatively solving problems. They tend to devote more time and energy to their work and identify and solve problems creatively. Therefore, employees with high PSM have a stronger perception of the meaning of their work and are less disturbed by organizational factors. Second, PSM reflects the intrinsic needs of individuals who desire to serve society[54] and create social value through their actions.[50] Public sector employees tend to believe that they are competent to provide public services. Third, in terms of the autonomy dimension, PSM is a key factor for public-sector employees to work autonomously and hard, be self-directed, and devote their energy to purposeful actions.[55] Fourth, in the influence dimension, public service-driven employees are willing to maximize their work efforts to enhance organizational goals when they feel that their actions are important in promoting organizational development,[56] and their perception of work influence does not diminish even when the organization's error-tolerance resources are insufficient. Based on the above analysis, this study proposes the following hypotheses:

H5: PSM moderates the relationship between organizational error tolerance and psychological empowerment; the positive relationship between organizational error tolerance and psychological empowerment is attenuated under the influence of high PSM relative to low levels of PSM.

It has been noted that there is a substitution effect between the influence of PSM on individuals in the organizational setting.[20] In other words, the principle of reciprocity has less influence on individuals with high PSM than on those with low PSM. This may be because employees with high PSM value the intrinsic rewards of their work more and can compensate for the lack of external incentives. In the public sector, PSM drives employees to work positively and energetically, even in the face of strict organizational procedures, and to try different options to solve problems.[57] Conversely, individuals with weak PSM are not sufficiently self-directed to contribute to the organization and are more dependent on the resources provided by the organization. Only when the organization provides sufficient error tolerance guarantees to ensure adequate resources for individuals, based on the principle of reciprocity, will individuals with low PSM exhibit more CO-OCB that drives organizational development. Additionally, employees with high PSM may overemphasize integration into public organizations and require a lot of energy to perform public service work at work, which will drain their enthusiasm,[58] leaving them feeling exhausted and stressed, thus making it difficult to have the energy and enthusiasm to perform CO-OCB.

Based on the above analysis, this study proposes the following hypothesis:

H6: PSM moderates the relationship between organizational tolerance and CO-OCB; that is, the positive relationship between organizational tolerance and CO-OCB will be attenuated under the influence of high PSM relative to low levels of PSM.

In summary, because psychological empowerment mediates the relationship between organizational tolerance and CO-OCB (H4) and the relationship between organizational tolerance and psychological empowerment is moderated by PSM (Hypothesis H5), we expected PSM to play a moderating role in determining the strength of the indirect relationship between organizational tolerance and CO-OCB through psychological empowerment. This indirect relationship was expected to be weaker when PSM was high. Therefore, the research hypothesis pf this study includes a moderated mediation process. The specific hypotheses are as follows:

H7: The indirect effect of organizational error tolerance on CO-OCB through psychological empowerment is moderated by PSM; the indirect relationship is weaker when PSM is high but stronger when PSM is low.

Study 1 an Experimental Study of Organizational Error Tolerance on Psychological Empowerment, Change-Oriented Organizational Citizenship Behavior

Study 1 was a scenario-based experiment with a sample of public-sector employees. In Study 1, we tested whether psychological empowerment and CO-OCB increased by manipulating organizational error tolerance to test H1, H2, H3, and H4.

Research Methodology

Research Sample

To facilitate the survey, we recruited 162 public sector employees from different regions of China to complete the experiment through Credamo, an online survey platform in China that provides the functional equivalent of the MTurk platform and demonstrates the reliability of the data collected through the MTurk platform.[59] Of the participants, 53.1% were women, 55.6% were aged 35 years or younger, 57.4% had a bachelor's degree, and 42.6% had a graduate degree.

Experimental Design and Procedures

First, all participants completed a questionnaire that included measures of OET, psychological empowerment, CO-OCB, and participant demographic variables. Subsequently, all participants were randomly assigned to either a high OET group (n = 81) or a low OET group (n = 81), and participant in both groups OET scores ($t = -1.12$, $p = 0.265>0.05$), psychological empowerment scores ($t = -0.737$, $p = 0.462>0.05$), and CO-OCB scores ($t = -0.671$, $p = 0.503 >0.05$) were not significantly different. Participants in both groups were asked to read a passage of scenario material. After completing the reading task, participants were asked to recall and describe in detail the content of the material, followed by the completion of a questionnaire that included measures of OET, psychological empowerment, and CO-OCB.

Manipulation Procedure for Organizational Error Tolerance

In the high organizational error tolerance group, we provided a piece of material describing the work climate in Township A and asked participants to imagine as much as possible that they were the main character in the material: Chen, an employee in Township A. The content of the material was adapted from manipulation procedures in existing studies[60] and combined with organizational error tolerance scales[27] with questions such as "Leaders tolerate mistakes when employees pursue innovative solutions" and "The company understands that making mistakes is part of taking risks." Participants in the high organizational error tolerance condition received the following manipulated scenario:

> The atmosphere in your organization is very enlightened, where minor mistakes are understood as long as they are not matters of principle, and objections or dissenting opinions are accepted as long as these things are not intentionally or repetitively harmful to the organization. Your superior is a person who pays attention to pioneering and innovation, and he often encourages his subordinates not to be afraid of making mistakes on the road to change and innovation and to be brave enough to explore and try. Your colleagues around you are active and aggressive at work, always thinking of ways to get the job done, and can take on and solve problems together when they encounter difficulties and make mistakes in their work. You will get the understanding of your superiors and colleagues for some small shortcomings and mistakes in your work.

Participants in the low organizational error tolerance condition received the following manipulated scenario: "The management requirements of your organization are very strict, and employees are punished for small mistakes they make at work. Few people will object or disagree with the ideas proposed by the organization or the leader. Your superior is a careful and cautious person who often emphasizes that his subordinates should strictly follow the system norms at work and should not make mistakes at work. Your colleagues around you in the work uphold the "more is better than less" thinking, in the work of the rules, but also "crowd out" in the work of those who do not follow the rules, afraid to follow the bad luck. You are often criticized and blamed by your superiors and colleagues for some minor shortcomings and mistakes in your work."

Measurement Tools

We made slight modifications to the wording of the items, following Brislin's[61] two-way translation-back-translation procedure to ensure that the scales were adapted to research in our organizational context.

Psychological empowerment. The scale, proposed by Spreitzer[38] and translated by Li and Shi,[62] has been validated and applied by many scholars. The scale consists of 12 items, such as "In such an organization, I have a lot of autonomy in deciding how to do my job", and "In such an organization, I can acquire all the skills I need to do my job". The scale was scored on a 5-point Likert scale (1 = very non-conforming, 5 = very conforming), and the internal consistency coefficient α of the scale was 0.962.

CO-OCB: using the measurement tool developed by Vigoda-Gadot and Beeri,[63] including "In such an organization, I try to correct inappropriate or erroneous work processes and practices in my organization", "In such an organization, I try hard to adopt improved processes in my work", and other 9 items. A 5-point Likert scale was used (1 = very non-conforming, 5 = very conforming), and the internal consistency coefficient α of the scale was 0.976.

Manipulation test: Organizational error tolerance: the scale developed by Weinzimmer and Esken[27] was used to measure organizational tolerance for error, with five questions, including "In an organization where leaders tolerate mistakes as I/colleagues pursue innovative solutions" and "In an organization where leaders understand that making mistakes is part of the adventure". The scale is based on a 5-point Likert scale. A 5-point Likert scale was used (1 = strongly disagree, 5 = strongly agree), and the internal consistency coefficient α of the scale was 0.939.

Study Results

Manipulation Check

First, the experimental manipulation was tested. The *t*-test showed that participants in the high organizational error tolerance group had significantly higher organizational error tolerance scores after reading the material (M = 4.31, SD = 0.39) than before reading the material (M = 3.11, SD = 0.96), t(81) = 10.435, p = < 0.001, Cohen's d = 1.64. Participants in the low organizational error tolerance group had significantly lower organizational error tolerance scores after reading the material (M = 2.27, SD = 0.62) than before reading the material (M = 3.27, SD = 0.62), t(81) = 8.132, p =< 0.001, Cohen's d = 1.61.

After reading the material, participants in the high organizational error tolerance group had significantly different organizational error tolerance scores than those in the low organizational error tolerance group, t(162) = 25.180, p < 0.001, Cohen's d = 3.94. Thus, Study 1 successfully manipulated OET.

Hypothesis Testing

We used *t*-tests for the hypothesis analysis and found that Participants in the high organizational error tolerance group had significantly higher CO-OCB scores after reading the material (M = 3.98, SD = 0.80) than before reading the material (M = 3.46, SD = 1.14), t(81) = 3.356, p = < 0.001, Cohen's d = 0.53. Participants in the low organizational error tolerance group had significantly lower CO-OCB scores after reading the material (M = 2.79, SD = 0.98) than before reading the material (M = 3.58, SD = 1.09), t(81) = 4.823, p = < 0.001, Cohen's d = 0.76. In addition, participants in the high organizational error tolerance group scored significantly differently on CO-OCB than participants in the low organizational error tolerance group, t(162) = 8.582, p < 0.001, Cohen's d = 1.33.

Therefore, Hypothesis 1 was verified. Specifically, as shown in Figure 2.

Participants in the high organizational error tolerance group had significantly higher psychological empowerment scores after reading the material (M = 3.77, SD = 0.83) than before reading the material (M = 3.43, SD = 1.14), t(81) = 2.158, p = 0.032 < 0.05, Cohen's d = 0.34. Participants in the low organizational error tolerance group had significantly lower psychological empowerment scores after reading the material (M = 2.65, SD = 0.86) than before reading the material (M = 3.56, SD = 1.08), t(81) = 5.955, p = < 0.001, Cohen's d = 0.93. Additionally, participants in the high organizational error tolerance group scored significantly differently on psychological empowerment than participants in the low organizational error tolerance group, t(162) = 8.457, p < 0.001, Cohen's d = 1.33.

Therefore, Hypothesis 2 was confirmed. This is specifically shown in Figure 3.

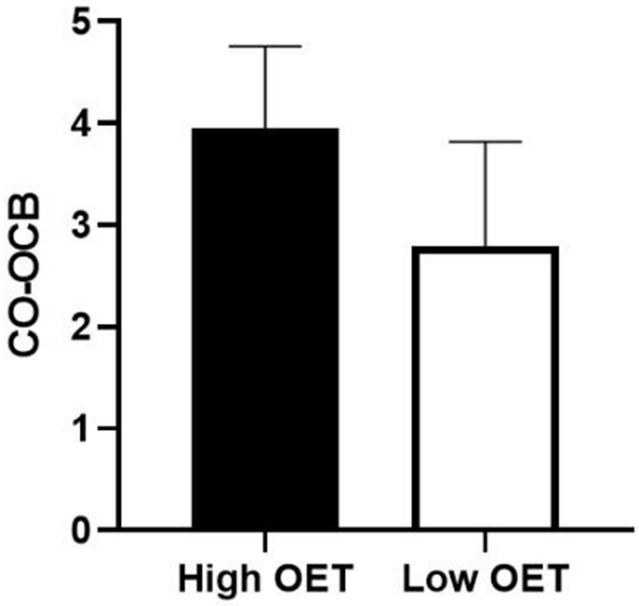

Figure 2 Effect of organizational error tolerance on CO-OCB.
Abbreviations: OET, Organizational error tolerance; CO-OCB, Change-oriented organizational citizenship behavior.

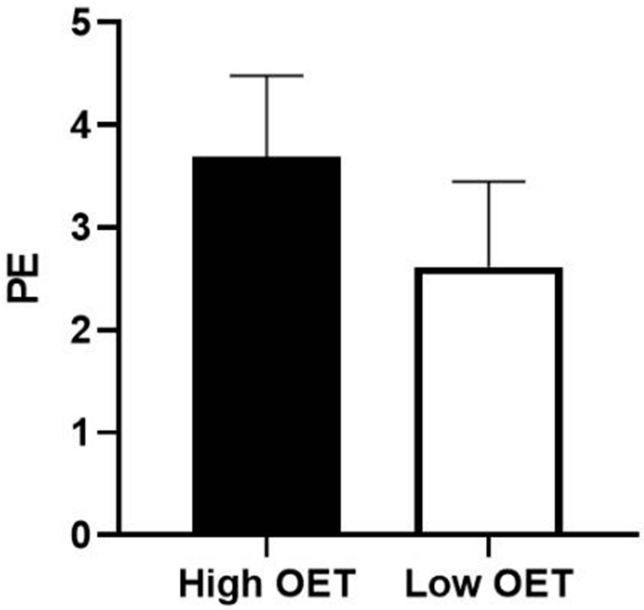

Figure 3 Impact of organizational error tolerance on psychological empowerment.
Abbreviations: OET, Organizational error tolerance; PE, Psychological empowerment.

Correlation analyses of psychological empowerment and CO-OCB showed that $r = 0.89$, $p < 0.001$, indicating a significant correlation. General linear regression analysis was used to test H3 and H4, and the results are shown in Table 1. From Model 1, psychological authorization significantly affected CO-OCB ($b = 0.945$, $p < 0.001$), and H3 was verified. From Model 2, the dependent variable CO-OCB regressed on both the independent variable OET and the mediator variable psychological empowerment, with a significant coefficient on OET ($b = 0.187$, $p < 0.05$) and a significant coefficient on psychological empowerment ($b = 0.893$, $p < 0.001$). Psychological authorization partially mediated between OET and CO-OCB and H4 was supported. In addition, this study applied the SPSS plug-in PROCESS

Table 1 General Linear Regression Results (Study 1)

Variables	CO-OCB	
	M1	M2
Constants	0.354**	0.799**
OET		0.187*
PE	0.945***	0.893***
R^2	0.796	0.801
F	624.047***	320.395***

Notes: n = 162. High organizational tolerance group = 1; low organizational tolerance group = 0; * p < 0.05, ** p < 0.01, *** p < 0.001.
Abbreviations: OET, Organizational error tolerance awareness; PE, Psychological empowerment; CO-OCB, Change-oriented organizational citizenship behavior.

macro to test the mediating role, with a bootstrap replicated sampling number of 5000. the run results showed that psychological empowerment was included in the model analysis, and the direct effect of organizational error tolerance on CO-OCB = 0.187, SE = 0.091, with a 95% confidence interval CI = [0.0071, 0.3663] (excluding zeros); indirect effect = 1.003, SE = 0.128, 95% confidence interval CI = [0.7568, 1.2673] (excluding zeros). The results suggest that psychological empowerment mediates the relationship between OET and CO-OCB.

Study 2 Experimental Study to Investigate the Regulatory Effect of PSM

To clarify the moderating role of PSM, we examined whether the interaction between organizational error tolerance and PSM affects psychological empowerment and CO-OCB. Study 2 was a scenario-based experiment with a sample of public-sector employees. In Study 2, we manipulated organizational error tolerance and PSM to test whether their interaction increased psychological empowerment and CO-OCB, thus testing H5, H6, and H7.

Research Methodology

Research Sample

We recruited 380 public sector employees from different regions of China and completed an experiment using Credamo, an online survey platform. Of the participants, 51.1% were women, 56.8% were aged 35 years or younger, 63.7% had a bachelor's degree or less, and 36.3% had a graduate degree.

Experimental Design and Procedures

A 2×2 two-factor between-subject design was used. All participants were first asked to complete the PSM measurement questionnaire and were then ranked according to their PSM scores; the top 30% of participants with PSM scores (n = 114) were selected as the high PSM group and participants in the bottom 30% of PSM scores (n = 114) were selected as the low-PSM group. The *t*-test results showed that the scores in the high PSM group (M = 4.57, SD = 0.17) were significantly higher than those of the participants in the low PSM group (M = 2.64, SD = 1.01), t(228) = 20.181, p < 0.001, Cohen's d = 2.66.

Then, participants in the high PSM group were randomly assigned to either the high (n = 57) or the low (n = 57) organizational error tolerance group. Participants in the low PSM group were randomly assigned to either the high (n = 57) or low (n = 57) organizational error tolerance groups. All four groups were asked to read a piece of material.

Manipulation of organizational error tolerance: The manipulation of organizational error tolerance is divided into high and low organizational error tolerance groups. This manipulation procedure was consistent with that used in Study 1.

Measurement Tools

Psychological Empowerment: Consistent with Study 1. The internal consistency coefficient α of the scale was 0.970.

Change-oriented organizational citizenship behavior: Consistent with Study 1. The internal consistency coefficient α of the scale was 0.962.

PSM: The 5-item scale developed by Wright et al[64] was used to measure motivation for public service, with representative items such as "It is more important for me to be able to contribute to society than to achieve personally" and "I will fight for the rights of others even if I am ridiculed". The scale was scored on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), and the internal consistency coefficient α of the scale was 0.935.

Manipulation test: Organizational error tolerance is consistent with Study 1. The internal consistency coefficient α of the scale was 0.979.

Study Results

Manipulation Check

First, the experimental manipulation was tested. Participants in the high organizational error tolerance group scored significantly higher (M = 3.73, SD = 1.11) than those in the low organizational error tolerance group (M = 3.06, SD = 1.29; t(114) = 4.219, $p < 0.001$, Cohen's d = 1.12). Thus, Study 2 was successful in manipulating organizational error tolerance.

Hypothesis Testing

The four experimental groups were subjected to descriptive statistics and ANOVA with post hoc analysis, and the results are shown in Table 2. The results showed that the four experimental groups differed significantly in psychological empowerment (F = 147.956, $p < 0.001$, partial eta squared = 0.665) and CO-COB (F = 190.155, $p < 0.001$, partial eta squared = 0.718).

Correlation analyses of psychological empowerment and CO-OCB showed that r = 0.73, $p < 0.001$, indicating a significant correlation. General linear regression analysis was used to test H5 and H6, and the results are presented in Table 3. As shown in Table 3, Model 2, the interaction term between organizational error tolerance and PSM significantly affected psychological empowerment (b = −0.885, $p < 0.001$). When PSM was low, the psychological empowerment score of the high organizational error tolerance group (M = 2.94, SD = 1.16) was significantly higher than that of the low organizational error tolerance group (M = 2.02, SD = 0.63), t(114) = 5.241, $p < 0.001$, Cohen's d = 0.99; when PSM was high, the psychological empowerment score of the high organizational error tolerance group (M = 4.26, SD = 0.19) was not significantly different from the low organizational error tolerance group (M = 4.23, SD = 0.19), t(114) = 0.865, $p = 0.392 > 0.05$, Cohen's d = 0.16. This is shown in Figure 4. Thus, Hypothesis 5 was verified.

As shown in Model 4 of Table 3, the interaction terms of organizational error tolerance and PSM significantly affected CO-OCB (b = −1.481, $p < 0.001$). When the PSM was low, the CO-OCB score was significantly higher in the high organizational error tolerance group (M = 3.90, SD = 0.54) than in the low organizational error tolerance group (M = 2.02, SD = 0.57), t(114) = 18.081, $p < 0.001$, Cohen's d = 3.39; when PSM was high, the CO-OCB scores were significantly higher in the high organizational error tolerance group (M = 4.33, SD = 0.19) than in the low organizational

Table 2 Analysis of Variance Results

	Experimental Grouping				Mean Difference					
	High OET×High PSM(A)	High OET×Low PSM(B)	Low OET×high PSM(C)	Low OET×Low PSM(D)	A-B	A-C	A-D	B-C	B-D	C-D
PE	4.26(0.19)	2.94(1.16)	4.23(0.19)	2.02(0.63)	1.32***	0.03	2.24***	−1.29***	0.92***	2.20***
CO-OCB	4.33(0.19)	3.90(0.54)	3.93(0.80)	2.02(0.57)	0.43***	0.40***	2.32***	−0.04	1.88***	1.92***

Notes: n = 228. *** $p < 0.001$.

Abbreviations: OET, organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation; CO-OCB, Change-oriented organizational citizenship behavior.

Table 3 General Linear Regression Results (Study 2)

Variables	PE		CO-OCB	
	M1	M2	M3	M4
Constants	2.245***	2.023***	2.286***	2.016***
OET	0.473***	0.915***	1.140***	1.881***
PSM	1.762***	2.205***	1.175***	1.916***
OETx PSM		−0.885***		−1.481***
R^2	0.628	0.665	0.596	0.718
F	189.703***	147.956***	166.034***	190.155***

Notes: n = 228. High organizational tolerance group = 1; low organizational tolerance group = 0; high PSM = 1; low PSM = 0. Table *** p < 0.001.
Abbreviations: OET, organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation; CO-OCB, Change-oriented organizational citizenship behavior.

error tolerance group (M = 3.93, SD = 0.80), t(114) = 3.674, p < 0.001, Cohen's d = 0.69. as shown in Figure 5. Thus, Hypothesis 6 was confirmed.

In this study, the SPSS PROCESS macro was applied to test H7, and the results are shown in Table 4, the running results show that the mediated effect index with moderation is −0.3043, SE = 0.0832, 95% confidence interval CI = [−0.4847, −0.1579] (excluding 0), which means that there is a significant mediated effect with moderation in favor of H7.

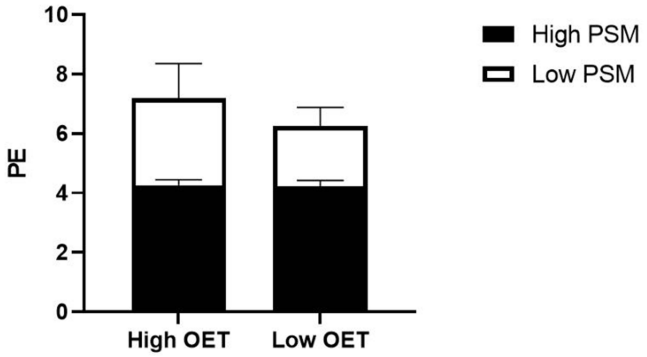

Figure 4 Moderating the role of PSM between organizational error tolerance and psychological empowerment (Study 2).
Abbreviations: OET, Organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation.

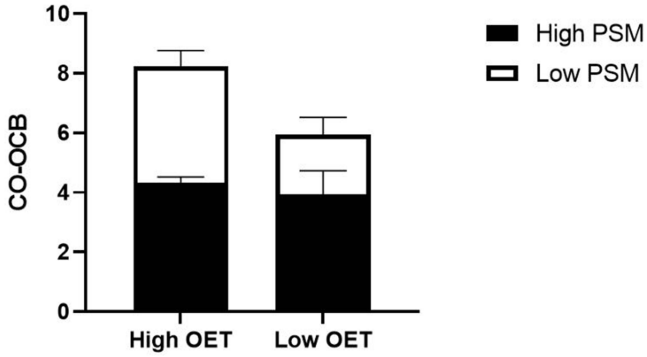

Figure 5 Moderating role of PSM between organizational error tolerance and CO-OCB (Study 2).
Abbreviations: OET, Organizational error tolerance; PSM, Public service motivation, CO-OCB, Change-oriented organizational citizenship behavior.

Table 4 Mediation Tests with Moderation (Study 2)

Conditional indirect effects					
	Moderating variable (PSM)	Effect	BootSE	BootLLCI	BootULCI
Mediating variables (PE)	(M-SD)	0.3148	0.0830	0.1684	0.4942
	(M+SD)	0.0106	0.0125	−0.0132	0.0359
There is a moderating mediating effect					
		Index	BootSE	BootLLCI	BootULCI
Moderating the mediator index (the effect of PSM on the mediator model)		−0.3043	0.0832	−0.4847	−0.1579

Notes: n = 228. High organizational tolerance group = 1; low organizational tolerance group = 0; high PSM = 1; low PSM = 0.
Abbreviations: PE, Psychological empowerment; PSM, Public service motivation.

Study 3 Full Model Questionnaire Research

Studies 1 and 2 provided strong causal evidence for the role of organizational error tolerance in psychological empowerment and CO-OCB and tested the moderating effect of PSM on the relationship between organizational error tolerance, psychological empowerment, and CO-OCB. Both studies validated the internal validity of the theoretical model but were limited in terms of external validity. Therefore, we extend the external validity of our findings to Study 3 by testing the overall research model using a multi-source questionnaire.

Research Sample

The survey was distributed electronically to public sector employees in China, and 1000 questionnaires were distributed to them. After eliminating questionnaires with missing data, identical answers to scale questions, and those with a short response time (less than 500 s), 937 valid questionnaires were returned, for a valid response rate of 93.7%. All questionnaires were completed anonymously and voluntarily, and a strict confidentiality system was implemented to ensure the truthfulness and objectivity of the data obtained. Among the participants, 459 (49.0%) were male and 478 (51.0%) were women; in terms of age, 94 (10.0%) were under 25 years old, 380 (40.6%) were 26–35 years old, 286 (30.5%) were 36–45 years old, 146 (15.6%) were 46–55 years old, and 31 people (3.3%); 124 people (14.3%) had less than bachelor's degree, 499 people (53.3%) had a bachelor's degree, and 304 people (32.4%) had a postgraduate degree.

Measurements

1. Organizational error tolerance. Consistent with Study 1. The internal consistency coefficient α of the scale was 0.939.
2. Psychological empowerment. Consistent with Study 1. The internal consistency coefficient α of the scale was 0.954.
3. Change-oriented organizational citizenship behavior. Consistent with Study 1. The internal consistency coefficient α of the scale was 0.933.
4. PSM was consistent with Study 2. The internal consistency coefficient α of the scale was 0.931.

Statistical Analysis Methods

In this study, SPSS 25.0, PROCESS plug-in, and AMOS 24.0 were used to analyze the sample data. First, the discriminant validity among the variables was tested by validating factor analysis, and the homophily bias problem was tested by Harman's one-way test and the common method latent factor method. Then, the effect of organizational error tolerance on CO-OCB, the mediating effect of psychological empowerment, and the moderating effect of PSM were tested by stratified regression analysis. Finally, the bootstrap method was used to estimate the 95% confidence interval effect values to test the moderated mediation.

Analysis and Results

Validation Factor Analysis and Common Method Deviation Test

This study used Amos 24.0, to perform a validated factor analysis on four variables: organizational error tolerance, psychological empowerment, CO-OCB, and PSM; the results are shown in Table 5. The data from the four-factor model fit best compared to the other three competing models (X^2 /df = 1.415, CFI = 0.992, GFI = 0.961, RMSEA = 0.021, SRMR = 0.0258), indicating that the four variables examined in this study have good discriminant validity and are four distinct constructs.

In this study, all variables were measured using a self-reported questionnaire; therefore, there may have been common method bias. To ensure rigor, we used Harman's one-way test, and the results showed that there were four factors with characteristic roots greater than one. The variance explained by the largest factor was 38.757% (less than 40%); therefore, there was no serious common method bias. In addition, this study tested the changes in the model fit indicators after adding the common method latent factor. As shown in Table 5, the decreases in RMSEA and SRMR after adding CMV were much less than 0.5, and there was no significant change in the five-factor model fit index. The above analysis indicated that the common method bias was not significant in this study.

Descriptive Statistics and Correlation Analysis of Each Variable

Correlation analysis was conducted for organizational error tolerance, psychological empowerment, CO-OCB, and PSM. The correlation values and significance levels between the variables are shown in Table 6.

SPSS (version 25.0) was used to perform a stratified regression analysis of the data, and the results are presented in Table 7. Model 4 showed a significant positive effect of organizational error tolerance on CO-OCB (b = 0.264, $p < 0.001$), supporting H1. Model 1 showed a significant positive effect of organizational error tolerance on psychological empowerment (b = 0.282, $p < 0.001$), supporting H2. Model 5 shows a significant positive effect of psychological empowerment on CO-OCB (b = 0.346, $p < 0.001$), and hypothesis H3 was supported.

Model 6 showed that the dependent variable CO-OCB was regressed on both the independent variable error tolerance and the mediating variable psychological, with significant coefficients for organizational error tolerance (b = 0.183, $p < 0.001$) and psychological empowerment (b = 0.286, $p < 0.001$). Psychological empowerment partially mediates the relationship between organizational error tolerance and CO-OCB, and H4 was supported. In addition, the SPSS plug-in PROCESS macro was used to test the mediating role, with a bootstrap repeated sample of 5000. The results showed that psychological empowerment was included in the model analysis, with a direct effect of organizational error tolerance on CO-OCB of 0.218, SE = 0.028, 95% confidence interval CI = [0.1622, 0.2735] (excluding 0), and an indirect effect of 0.110, SE = 0.020, 95% confidence interval CI = [0.0750, 0.1495] (excluding 0). These results suggest that psychological empowerment mediates the relationship between organizational error tolerance and CO-OCB. H4 was supported.

To test the moderating effect of PSM on the relationship between organizational tolerance and psychological empowerment, the interaction term was obtained by first centralizing organizational error tolerance and PSM, multiplying centralized organizational error tolerance by PSM, and then conducting a stratified regression test. The results are presented in Model 3 of Table 7. After controlling for the main effects of organizational error tolerance and psychological

Table 5 Validity Analysis Table

Models		X^2 /df	CFI	GFI	RMSEA	SRMR
Five-factor model	OET; PE; CO-OCB; PSM; CMV	1.199	0.996	0.969	0.015	0.0260
Four-factor model	OET; PE; CO-OCB; PSM	1.415	0.992	0.961	0.021	0.0258
Three-factor model	OET; PE+CO-OCB; PSM	11.586	0.788	0.549	0.106	0.1309
Two-factor model b	OET+PE+CO-OCB; PSM	21.363	0.591	0.447	0.147	0.1537
Two-factor model a	OET; PE+CO-OCB+PSM	14.319	0.732	0.495	0.119	0.1383
One-factor model	OET+PE+CO-OCB+PSM	24.011	0.537	0.411	0.157	0.1586

Abbreviations: OET, Organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation; CO-OCB, Change-oriented organizational citizenship behavior; CMV, common approach latent factor.

Table 6 Descriptive Statistical Results and Correlation Analysis of the Main Variables

	1	2	3	4	5	6	7
1 Sex							
2 Age	0.021						
3 Education	0.001	−0.412***					
4 OET	−0.019	0.230***	−0.113***				
5 PE	−0.022	0.267***	−0.130***	0.345***			
6 PSM	0.014	0.270***	−0.131***	0.279***	0.402***		
7 CO-OCB	0.009	0.368***	−0.147***	0.354***	0.424***	0.410***	
M	1.510	2.620	2.18	3.717	3.776	3.707	3.595
SD	0.500	0.974	0.662	0.994	0.937	0.921	0.908

Notes: N = 937; *** P < 0.001. Sex coded as 1 means male and 2 means female; Age coded as 1 means less than 25 years old, 2 means 25–35 years old, 3 means 36–45 years old, 4 means 46–55 years old, 5 means 46–55 years old; Education coded as 1 means less than 25 years old, 2 means 25–35 years old, 3 means 36–45 years old, 4 means 46–55 years old, 5 means older than 55 years old; Education coded as 1 means college and below, 2 means undergraduate, 3 means education coded as 1 means college and below, 2 means undergraduate, and 3 means postgraduate.
Abbreviations: OET, organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation; CO-OCB, Change-oriented Organizational citizenship behavior.

Table 7 Stratified Regression Analysis

Variables	PE			CO-OCB				
	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8
Sex	−0.037	−0.057	−0.016	0.015	0.020	0.026	−0.003	0.033
Age	0.185***	0.159***	0.078**	0.291***	0.264***	0.238***	0.267***	0.194***
Education	−0.025	−0.023	−0.032	0.016	0.019	0.023	0.018	0.010
OET	0.282***		0.139***	0.264***		0.183***		0.136***
PE					0.346***	0.286***		
PSM		0.367***	0.219***				0.340***	0.205***
OETx PSM			−0.269***					−0.234***
R^2	0.157	0.190	0.333	0.212	0.250	0.284	0.239	0.358
F	43.474***	54.596***	77.386***	62.745***	77.571***	73.696***	73.203***	86.268***

Notes: N = 377; ** p < 0.01, *** P < 0.001.
Abbreviations: OET, organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation; CO-OCB, Change-oriented organizational citizenship behavior.

empowerment, the interaction between both organizational error tolerance and PSM has a significant effect on psychological empowerment (b = −0.269, p < 0.001), indicating that the moderating effect of PSM on the relationship between organizational error tolerance and psychological empowerment is significant. H5 was supported.

A further simple slope analysis was conducted to plot the interaction of the moderating variable public service motivation at high and low levels (mean plus or minus one standard deviation, respectively). As shown in Figure 6, at low levels of PSM, the positive predictive coefficient of organizational error tolerance for psychological empowerment was (b = 0.662, p < 0.001), while at high levels of PSM, the positive predictive coefficient of organizational error tolerance for psychological empowerment was not significant (b = 0.029, p = 0.723>0.05). These results suggest that this negative relationship is attenuated as the level of PSM increases.

Model 8 in Table 7 presents the results of examining the moderating effect of PSM on the relationship between organizational error tolerance and CO-OCB. After controlling for the main effects of organizational error tolerance and CO-OCB, the interaction of both organizational error tolerance and PSM had a significant effect on CO-OCB (b = −0.234, p < 0.001), indicating the moderating effect of PSM on the relationship between organizational error tolerance and CO-OCB. The moderating effect is significant. H6 was supported.

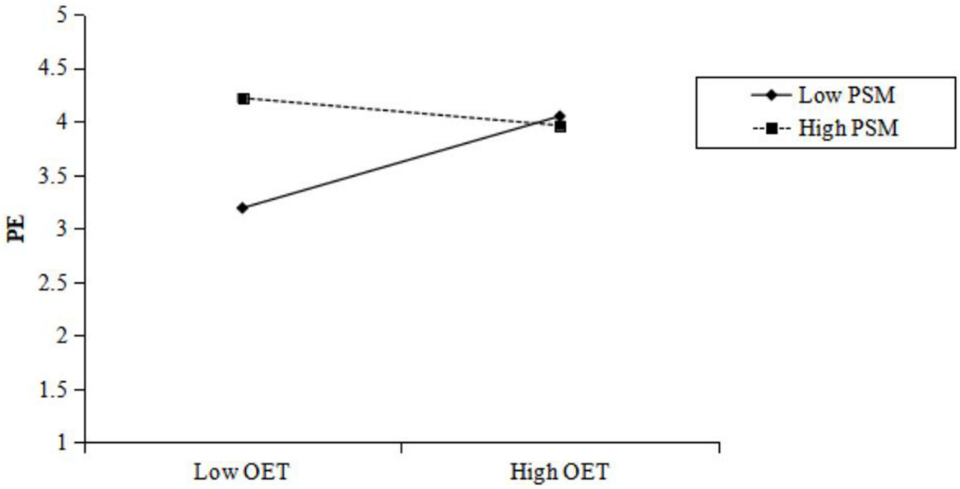

Figure 6 Moderating the role of PSM between organizational error tolerance and psychological empowerment (Study 3).
Abbreviations: OET, organizational error tolerance; PE, Psychological empowerment; PSM, Public service motivation.

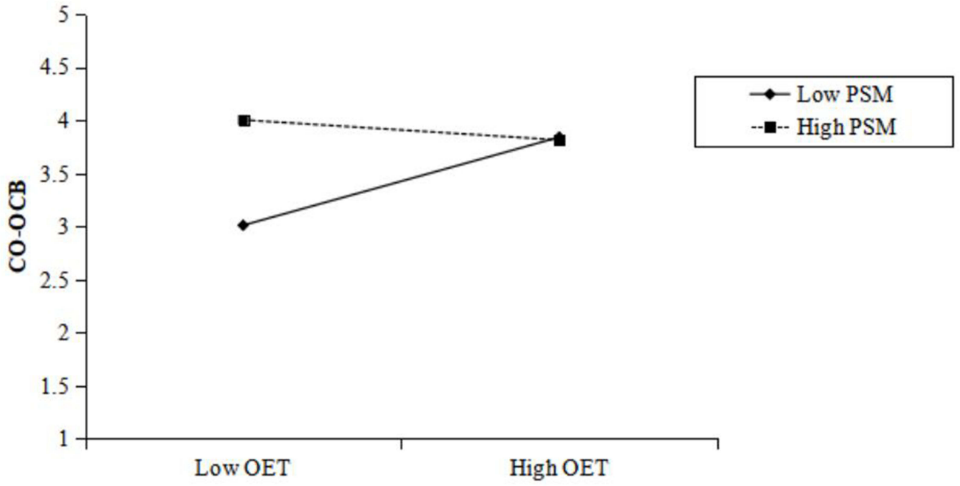

Figure 7 The moderating role of PSM between organizational error tolerance and CO-OCB (Study 3).
Abbreviations: OET, organizational error tolerance; PSM, Public service motivation; CO-OCB, Change-oriented organizational citizenship behavior.

A further simple slope analysis was conducted to plot the interactions by dividing the moderating variable public service motivation into high and low levels (mean plus or minus one standard deviation, respectively). As shown in Figure 7, at low levels of PSM, the positive predictive coefficient significantly ($b = 0.637$, $p < 0.001$) predicted a positive effect of organizational error tolerance on CO-OCB; at high levels of PSM, the positive predictive coefficient of organizational error tolerance on CO-OCB was not significant ($b = -0.031$, $p = 0.695 > 0.05$). These results suggest that at increasing levels of PSM, the positive relationship between organizational error tolerance and CO-OCB was attenuated.

In addition, this study used the SPSS PROCESS macro to test the mediation effect with moderation. The results are shown in Table 8, which shows that the mediation effect index with moderation is −0.0456, SE = 0.0132, 95% confidence interval CI = [−0.0723, −0.0199] (excluding 0), which indicates that the mediation effect with moderation is significant and supports H7.

Discussion

This study constructed a moderated mediation model for public sector employees through two experimental studies and one questionnaire study to examine the effects of organizational error tolerance on CO-OCB, the mediating role of

Table 8 Mediation Tests with Moderation

Conditional indirect effects					
	Moderating variable (public service motivation)	Effect	BootSE	BootLLCI	BootULCI
Mediating variables (psychological empowerment)	(M-SD)	0.0638	0.0190	0.0273	0.1017
	(M)	0.0224	0.0081	0.0086	0.0404
	(M+SD)	−0.0190	0.0076	−0.0353	−0.0054
There is a moderating mediating effect					
		Index	BootSE	BootLLCI	BootULCI
Moderating the mediator index (the effect of public service motives on the mediator model)		−0.0456	0.0132	−0.0723	−0.0199

psychological empowerment, and the moderating role of PSM. High organizational error tolerance was found to enable employees to experience higher psychological empowerment and exhibit higher CO-OCB. The positive effect of high organizational error tolerance on psychological empowerment and CO-OCB was moderated by individual characteristics of high PSM, while the indirect effect of organizational error tolerance on CO-OCB was attenuated.

Theoretical Contributions

First, it attempts to link organizational error tolerance with CO-OCB to create new working conditions for promoting CO-OCB among public sector employees. The results showed that organizational error tolerance can significantly and positively predict CO-OCB. Previous studies have shown that workplace characteristics such as team emotion[65] and innovation climate[4] can effectively promote CO-OCB; however, few efforts have been made to investigate the effect of organizational error tolerance on CO-OCB. Moreover, it has been widely verified that organizational error tolerance can enhance positive work attitudes, such as employee engagement[66] and turnover propensity[67] has been widely verified. Predictors of CO-OCB have also been studied, including organizational identity,[8] empowering leadership,[68,] and the impact of organizational error tolerance on CO-OCB. However there is a lack of research on the relationship between organizational error tolerance and CO-OCB, which have developed independently, and both organizational error tolerance and CO-OCB contribute to positive work outcomes in the public sector, such as improved organizational performance.[4,27] Therefore, this study extends the research on CO-OCB in the public sector by examining the possible predictive role of organizational error tolerance on CO-OCB in an organizational context, a finding that helps elucidate the underexplored relationship between organizational error tolerance and CO-OCB.

Second, this study verifies the effect of organizational error tolerance on employees' psychological empowerment and CO-OCB using scenario-based tests and questionnaires.

Previous research has often focused on how employees react after an error occurs,[23] that is, how errors are handled in the workplace.[69] Error management encourages employees to communicate errors promptly, share their knowledge of errors, and learn from their own or others' failures.[70] However, little is known about how employees' perceptions of organizational error tolerance affect their work attitudes. The present study is consistent with Frese and Keith's[26] study, which considers organizational error tolerance as the core of organizational error management and emphasizes employees' perceptions of organizational error tolerance. Wang et al's[24] findings suggest that employees in organizations with high error tolerance generate positive psychological resources through perceived organizational support, which in turn has a positive impact. Organizations with high error tolerance can provide employees with opportunities to learn from their mistakes and reward open communication of errors, rather than punishing those who disclose or admit them.[25] This allows employees to perceive more discretion and psychological safety in the organization, thereby promoting their perception of psychological empowerment. In other words, tolerating mistakes at work not only allows employees to feel comfortable speaking up or taking risks but also enhances their self-confidence in their ability to do their jobs (eg Wang et al[23]). According to social exchange theory, when employees perceive organizational support, they feel obligated to

return it through positive attitudes and behaviors. Furthermore, based on the job demand-resource model, employees with higher job autonomy have more job resources[71] and can improve their innovative work behaviors.[72]

Third, we examined how individual characteristics interact with organizational factors to influence psychological empowerment and CO-OCB by introducing PSM. In this study, we validated H5, and H6, and PSM as moderators in the process of organizational error tolerance influencing psychological empowerment and CO-OCB. Previous research suggests that when employees' attributes and preferences match the characteristics of their work environment, they tend to produce more positive work attitudes and outcomes.[73] That is, the work environment is important for public service-motivated employees; as employees' personal-organizational fit increases, employees will have more opportunities to meet their PSM needs, and these PSM needs become a key component of their hard work in the public sector.[74] However, some findings suggest that PSM has a substitution effect between the effects of the organizational environment on individuals.[21] Our findings suggest that PSM buffers the positive effect of organizational error tolerance on CO-OCB. We argue that employees with high PSM have positive attitudes (eg organizational commitment[75]) and behaviors (organizational citizenship behaviors[18]) that tend to be internally driven and less influenced by the external environment, and that employees with high PSM emphasize the importance of meaningful work and service to society;[53] they tend to spend more time and energy on the job and identify and creatively solve problems.

Moreover, some researchers have argued that public service motivation may have negative effects on public organizations,[76] for example, higher public service motivation among employees is associated with lower job satisfaction due to increased stress.[77] That is, employees with higher PSM are more likely to be overburdened in the pursuit of public service, triggering energy depletion, and no excess energy or attention to exhibit OCB.[78] Although PSM affects employees' work attitudes and behaviors, it is still unclear how the interaction between organizational factors and PSM affects them. Therefore, this study clarifies the mechanisms underlying the role of PSM and validates the relationship between PSM moderating organizational error tolerance and psychological empowerment, and the CO-OCB relationship, improving our understanding of this complex relationship.

Management Insights

This study has important practical implications for the public sector. First, creating a good organizational error-tolerant climate is an effective way to promote CO-OCB. First, organizations should create an error-tolerant climate in terms of "recovery from failure" and "learning and improvement",[23] emphasizing that organizational error management is a work process and method that motivates employees to pursue innovation. At the same time, support from leaders and colleagues for error management[79] is advocated to facilitate employees' timely reporting and sharing of errors. Second, organizations should create an organizational culture that supports innovation,[5] so that employees can think positively about problems, develop new ideas and solutions, and receive praise and appreciation. Organizations should also provide opportunities for employees to provide feedback so that they can see their contributions and modify and improve their behavior based on feedback. In addition, organizations should ensure, both verbally and in action, that employees know they are empowered and trusted to make decisions. In an organizational culture, employees can listen to each other, offer perspectives, and tolerate when things go wrong. Organizations should support trial and error, encourage employees to try new things, provide maximum autonomy, and encourage employees to be innovative and creative thinkers.

Second, the results show that psychological empowerment is a contributing factor to employee performance in CO-OCB. Increasing the psychological empowerment of employees is crucial in the public sector.[80] Leadership style is the best predictor of psychological empowerment[81]. Therefore, organizational leaders should make conscious attempts to trust employees, encourage their participation in the decision-making process, and empower them psychologically. Psychological empowerment does not rely solely on the influence of organizational leaders; there is evidence that employees' psychological security[82] is necessary to promote employees' psychological empowerment. The complementary nature of employees and leaders can increase the overall effectiveness of psychological empowerment.

Finally, this study also discusses the positive effects of organizational tolerance on psychological empowerment; the CO-OCB of public sector employees is buffered by PSM. A dialectical perspective is needed to understand the role of PSM in public service motivation. These findings suggest that employees with high PSM can adapt to different organizational characteristics, and organizations should focus on PSM development in the long run. This is because

public servants with low levels of PSM may not be able to cope well with job demands such as bureaucracy.[83] The public sector can activate and develop PSM of employees through management approaches such as organizational support,[84] organizational commitment,[85] thematic training, learning, and education. More importantly, attention should be paid to selecting employees with high levels of PSM during the recruitment process.[86]

Research Gaps and Outlook

First, the experiments in Studies 1 and 2 lacked a neutral control group for the OET manipulation, while actual behavior was not measured. Further future research could involve participants in real work tasks and measure their actual behaviors or conduct actual training interventions in organizations. Second, to accurately understand employees' psychological states and situational perceptions, all data were obtained from participants' self-reports, which may subject the findings to homogeneous data, common method bias, and social approval effects. Subsequent studies can improve measurement validity by examining the evaluations of other members within the organization to increase the rigor of the study findings. Meanwhile, because organizational tolerance, psychological empowerment levels, and public service motivation vary over time, the causal relationships among the variables cannot be accurately assessed using data collected during the same period. Subsequent studies can verify the relationship between organizational tolerance and CO-OCB through longitudinal follow-up surveys. In addition, the sample of this study was limited to government employees in China, which has some external validity problems, and the findings cannot be generalized to other cultural backgrounds or industries. Therefore, future studies should be conducted in different cultural contexts or industries to confirm the hypothesized causal relationship.

Research Findings

Our situational experiments and full-model questionnaires suggest that organizational error tolerance increases psychological empowerment and enhances CO-OCB. This study provides new evidence on the working conditions that enhance CO-OCB and shows that organizational error tolerance can effectively enhance employees' CO-OCB by increasing psychological empowerment. PSM provides a new perspective for analyzing this process while providing the public sector with management efforts by providing theoretical recommendations and practical guidance.

Data Sharing Statement

The data that support the findings of this study are available on request from the corresponding author.

Ethical Approval

The original study has been performed in accordance with the Declaration of Helsinki. The studies involving human participants were reviewed and approved by the Institutional Review Board at Chongqing University.

Informed Consent

Informed consent was obtained from all individual participants included in this study.

Acknowledgments

We are grateful to all the researchers for data collection and processing. We also thank all the survey participants in our study. We would like to thank Editage for English language editing.

Disclosure

The authors declare that they have no conflicts of interest in this work.

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