

# The Moderating Effects of Trust and Felt Trust on the Nonlinear Relationship Between Compulsory Citizenship Behavior and Counterproductive Work Behavior

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**Purpose:** This study explored the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior of new generation employees, as well as the separate and joint moderating effects of trust and felt trust on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior.

**Methods:** Three waves of data were collected from 659 new generation employees in China. A self-report method was used to measure compulsory citizenship behavior, counterproductive work behavior, trust and felt trust. Then, based on the cognitive appraisal theory of stress and social information processing theory, a nonlinear model was constructed and tested.

**Results:** (1) Compulsory citizenship behavior had a J-shaped effect on job performance. That is, when the compulsory citizenship behavior level was lower, the effect of compulsory citizenship behavior on counterproductive work behavior was not significant; but when it increased to medium and higher levels, the effect was significant and stronger. (2) The moderating effect of trust (employees' perceived trust in leader) or felt trust (employees' perception of being trusted by leader) was significant. That is, when trust or felt trust was lower, the J-shaped effect was stronger; conversely, the J-shaped effect was weak. (3) The joint moderating effect of trust and felt trust was significant. That is, when trust was high, the moderation effect of felt trust was significant; conversely, the moderation effect of felt trust was not significant.

**Conclusion:** The results identify the nonlinear effect of compulsory citizenship behavior through exploring the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior and the boundary conditions in the nonlinear relationship. Meanwhile, the study provide implications for organizations regarding how to manage employees' work behavior.

**Keywords:** compulsory citizenship behavior, counterproductive work behavior, trust, felt trust

## Introduction

As marketing competition grows, employees have to perform more and more extra-role behaviors beyond the formal specifications of their duties under organizational pressure.<sup>1</sup> The extra-role behavior that employees have to engage in against their will is called compulsory citizenship behavior.<sup>2-4</sup> Existing studies have found that unlike voluntary organizational citizenship behavior, which boosts organizational performance,<sup>5</sup> compulsory citizenship behavior may have an effect on employee's negative work behavior, such as inducing counterproductive work behavior, which is the serious negative work behavior employees take the initiative to harm organizational performance.<sup>6</sup> For example, based on the social exchange theory, compulsory citizenship behavior had an effect on counterproductive work behavior through emotional exhaustion;<sup>7</sup> according to the moral disengagement theory,<sup>7</sup> compulsory citizenship behavior had an

effect on counterproductive work behavior through moral disengagement.<sup>8</sup> However, some studies pointed out that even when employees had to engage in compulsory citizenship behavior, they still did not perform counterproductive work behavior to harm organizational performance.<sup>9-11</sup>

Previous studies have laid a foundation for understanding the effect of compulsory citizenship behavior on counterproductive work behavior, but there is insufficient studies on how compulsory citizenship behavior impacts counterproductive work behavior, and the existing studies did not reach a consensus conclusion. There are still some gaps to bridge. Firstly, few studies explored the effect of compulsory citizenship behavior on new generation employees' negative work behavior. However, new generation employees have become the main workforce, and compared to old generation employees, they are more self-focused and tend to pursue more work autonomy.<sup>12,13</sup> Thus, when new generation employees engage in compulsory citizenship behavior, they may find the lack of autonomy unacceptable, generating negative attitude. Their negative attitude may then make them more likely to engage in counterproductive work behavior due to lower emotion regulation ability.<sup>14</sup> Therefore, it is necessary to pay more attention to the effect of compulsory citizenship behavior on new generation employees' counterproductive work behavior.

Secondly, existing studies have mainly explored the linear effect of compulsory citizenship behavior on counterproductive work behavior. However, is there only a simple linear relationship between them? According to the cognitive appraisal theory of stress, work demand can evokes individuals' appraisal of stress as a challenge or a hindrance, according to their perception of loss or benefit, subsequently leading to positive or negative effects on individual behavior.<sup>15,16</sup> Meanwhile, the degree to which work demand evokes individual appraisal of stress as challenge or hindrance may change depending upon the extent of the work demand.<sup>17,18</sup> Based on the theory, given that engaging in compulsory citizenship behavior, in accordance with the organization's requirements, brings rewards to new generation employees, while simultaneously leading to their loss of work autonomy, compulsory citizenship behavior may lead to both challenge stress appraisals and hindrance stress appraisals by new generation employees, resulting in both negative and positive effects on counterproductive work behavior. Furthermore, due to individual limit resource,<sup>19</sup> the degree to which compulsory citizenship behavior evokes employees' challenge stress appraisal or hindrance stress appraisal may also change depending upon the extent of the compulsory citizenship behavior, thus leading to a complex nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior. This may be why previous studies found both significant and insignificant effects of compulsory citizenship behavior on counterproductive work behavior. Therefore, only by revealing the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior can we understand the relationship completely.

Thirdly, existing studies have rarely explored the boundaries of the relationship between compulsory citizenship behavior and counterproductive work behavior from the perspective of leader-employee interactions, such as trust (employees' perceived trust in leader) or felt trust (employees' perception of being trusted by leader). However, the social information processing theory posits that when employees interpret events occurring in the work place, they are affected not only by the event, but also rely on the surrounding social information cues to interpret what happens at work.<sup>20-22</sup> Drawing on this theory, some studies have pointed out that employee's perceptions of trust in their leader and felt trust by their leader are all key social information clues that convey a lot of social information to help employees comprehend their job requirements.<sup>23,24</sup> Therefore, based on the social information processing theory, given that trust in leader and feeling trusted by leader provide important social information about whether employees can achieve a fair gain from their leaders,<sup>25</sup> thus trust and felt trust may influence new generation employees' challenge and hindrance appraisals of compulsory citizenship behavior, subsequently moderating the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior. Furthermore, since employees' trust in their leaders also influences employees' interpretation of their leaders' attitudes and behaviors, such as the felt trust by leaders,<sup>26</sup> thus, there may be a joint moderating effect of trust and felt trust on the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior. It is necessary to explore the separate and joint moderating effects of trust and felt trust on the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior.

As mentioned above, this paper aims to explore the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior, and the moderating effects of trust and felt trust on the nonlinear relationship. The main contributions are as follows. Firstly, this study analyzes the nonlinear effect of compulsory citizenship behavior on

counterproductive work behavior, which offers a new dynamic perspective to reveal the effect of compulsory citizenship behavior and integrates the inconsistent results of existing studies. Secondly, this study leverages the cognitive appraisal theory of stress and social information processing theory to explore the nonlinear relationship, enriching the theoretical mechanism underlying the effect of compulsory citizenship behavior on counterproductive work behavior from a new theoretical perspective. Thirdly, this study explores the separate and joint moderating effects of trust (employees' perceived trust in leader) and felt trust (employees' perception of being trusted by leader) on the nonlinear relationship, broadening the boundary conditions of the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior from a new perspective of leader-employee interactions.

## Theoretical Background and Hypothesis Development

### The Nonlinear Effect of Compulsory Citizenship Behavior on Counterproductive Work Behavior

According to the cognitive appraisal theory of stress, work demand that evokes stress can cause individuals' challenge stress appraisal or hindrance stress appraisal, then lead to positive or negative effects on individual behavior.<sup>27,28</sup> Specifically, when the demanding stressors cause individuals to perceive a loss of resources, those stressors will be evaluated as hindrance stressors and evoke individual hindrance stress appraisal, thus resulting in individual negative attitudes and behavioral responses; but conversely, when the demanding stressors bring benefits to individuals, they will be evaluated as challenge stressors and lead to individual challenge stress appraisal, thus resulting in individual positive attitudes and behavioral responses.<sup>29,30</sup> Related meta-analysis and empirical research results have shown that challenge stress appraisal induces employees' positive attitude, cognition and problem-solving stress coping strategies, thereby encouraging employees to perform more positive work behaviors; on the other hand, hindrance stress appraisal induces employees' negative attitude, cognition and more emotion-solving stress coping strategies, thereby making employees perform more negative work behaviors, such as counterproductive work behaviors.<sup>31,32</sup>

Based on the cognitive appraisal theory of stress, and given that compulsory citizenship behavior not only causes loss of work autonomy,<sup>33</sup> but also brings employees obtain more benefits from extra-role behaviors,<sup>34</sup> compulsory citizenship behavior may evoke both challenge stress appraisal and hindrance stress appraisal of new generation employees, thus having both positive and negative effects on counterproductive work behavior at the same time. However, the degree to which compulsory citizenship behavior evoke challenge stress appraisal or hindrance stress appraisal may vary depending on the extent of compulsory citizenship behavior. Specifically, when the frequency of compulsory citizenship behavior is low, since individuals have sufficient resources to coordinate the conflict between compulsory tasks and their own life, the perception of benefits accruing from engaging in compulsory citizenship behavior are likely to balance the perception of autonomy loss. That is, the way in which compulsory citizenship behavior increases counterproductive work behavior when it is perceived as a hindrance stressor will be masked by the way in which compulsory citizenship behavior decreases counterproductive work behavior when it is perceived as a challenge stressor, thus making the effect of compulsory citizenship behavior on counterproductive work behavior more likely to be insignificant. However, when the frequency of compulsory citizenship behavior is medium to high, individuals may have difficulty achieving work-life balance due to limited individual resources, resulting in a greater perception of autonomy loss compared to the benefits they hope to gain. In this condition, compulsory citizenship behavior will cause employees to appraise the stressor as a hindrance rather than a challenge, and thus will have a significantly stronger positive effect on counterproductive work behavior. To sum up, compulsory citizenship behavior may have a J-shaped effect on counterproductive work behavior. When the frequency of compulsory citizenship behavior is low, the effect of compulsory citizenship behavior on counterproductive work behavior may not be significant, but once the frequency rises to medium and high levels, the effect will be significant and strong. Therefore, the hypothesis can be proposed as follows:

Hypothesis 1: Compulsory citizenship behavior has a J-shaped effect on counterproductive work behavior: compared with low-level compulsory citizenship behavior, compulsory citizenship behavior at medium and high levels has a stronger effect on counterproductive work behavior.

## The Moderating Effect of Trust

Based on the social information processing theory, when employees interpret and respond to behavioral events occurring in the workplace, they will be affected not only by the event, but also by external social information, especially the social information related to their leaders.<sup>35</sup> Some studies have pointed out that employee's perception of trust in their leader conveys a lot of social information necessary for employees to comprehend what happens at work.<sup>36</sup> Specifically, Trust in their leader is the employees' overall judgment that their leader is trustworthy and that their leader's ability, kindness and integrity is reliable. This important social information influences employees' belief that their leader is acting in their best interest.<sup>37,38</sup> That is, when employees have a strong trust in their leaders, they believe that their leaders are reliable and can provide them enough support and reward their efforts fairly.<sup>39</sup> On the other hand, when employees do not trust their leaders, not only will they doubt the legitimacy of tasks assigned to them, but also may think that they are being squeezed unfairly for their labor.<sup>40,41</sup>

Therefore, following the theory, employees' trust in their leader may provide a key social information cue for new generation employees to shape their perception of the benefits and losses associated with compulsory citizenship behavior, thereby moderating the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior. Specifically, when the trust level is high, employees have a stronger belief that they can obtain fair compensation for compulsory citizenship behavior, leading them to perceive compulsory citizenship behavior as more of a challenge stressor. In this condition, even if compulsory citizenship behavior increases to medium and high levels, employees still have a stronger challenge stress appraisal, thus weakening the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior. Conversely, when the trust level is low, because employees think that they cannot obtain fair compensation and worry that they will suffer more losses than gains by engaging in compulsory citizenship behavior, compulsory citizenship behavior will be more likely seen as a hindrance stressor. In this condition, the effect of compulsory citizenship behavior on counterproductive work behavior becomes stronger once it increases to medium and high levels, thus strengthening the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior. Therefore, the hypothesis can be proposed as follows:

Hypothesis 2: The moderating effect of trust on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior is significant.

## The Moderating Effect of Felt Trust

Drawing on the social information processing theory, some studies have demonstrated that employees' perception of felt trust also conveys important social information for employees to comprehend what happens at work.<sup>42</sup> Specifically, felt trust by leaders is the degree to which an employee believes that he or she is trusted by his or her leader, which conveys important social information and directly affects the employees' belief that they are trusted by their leader, and their leader is acting in their best interest.<sup>43</sup> That is, when employees have stronger perception of felt trust by their leaders, they believe that their abilities or individual characteristics are recognized by their leaders, and that they will be fairly rewarded for their labor.<sup>44,45</sup> However, when employees do not feel trusted by their leaders, they may think that they are being ignored by their leaders and that it will be difficult for them to obtain fair treatment from the organization.<sup>46</sup>

Therefore, guided by social information processing theory, employees' felt trust by leader also provides new generation employees with key social information that shapes their perception of the benefits and losses associated with compulsory citizenship behavior, thereby moderating the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior. Specifically, when the level of felt trust is high, employees have a strong belief that they can obtain their leaders' support to cope with compulsory citizenship behavior and that they will receive more compensation for compulsory citizenship behavior. In this condition, even if compulsory citizenship behavior increases to higher levels, employees still have a stronger challenge stress appraisal, thus weakening the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior. Conversely, when employees do not feel trusted by leaders, they may suspect that they will not receive adequate support and fair compensation for compulsory citizenship behavior. In this condition, compulsory citizenship behavior is more likely seen as a hindrance stressor, and will have a stronger effect on counterproductive work behavior once compulsory citizenship behavior increases to higher

levels, thus strengthening the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior. Therefore, the hypothesis can be proposed as follows:

Hypothesis 3: The moderating effect of felt trust on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior is significant.

## The Joint Moderating Effect of Trust and Felt Trust

Existing studies have found that employees' image of their leader can affect their understanding and interpretation of their leader's attitude and behavior.<sup>47,48</sup> Following this viewpoint, some researches have pointed out that employees' trust in their leaders directly affects their understanding of felt trust by their leader, or in other words, the extent to which they feel trusted by their leaders.<sup>49</sup> Therefore, there may be a joint moderating effect of felt trust and trust. Specifically, when employees' trust is weak, they will believe that their leaders are less trustworthy and reliable.<sup>50</sup> In this condition, even though they feel trusted by their leader, they still have a negative interpretation of their leader's motivations and lack certainty about their supervisors' intention to reciprocate, thus making it difficult for felt trust to moderate the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior. Conversely, when employees' trust level is high, they will have a positive interpretation of their leaders' attitude and behaviors.<sup>51,52</sup> In this condition, the moderating effect of felt trust can still be significant. That is, when the level of felt trust is high, employees will build a stronger mutual trust bond with their leaders, leading the compulsory citizenship behavior to be perceived as more of a challenge stressor, thus weakening the J-shaped effect. But when the level of felt trust is low, compulsory citizenship behavior will more likely be viewed as a hindrance stressor, and the positive effect on counterproductive work behavior will be stronger, thus strengthening the J-shaped effect. Therefore, the hypothesis can be proposed as follows:

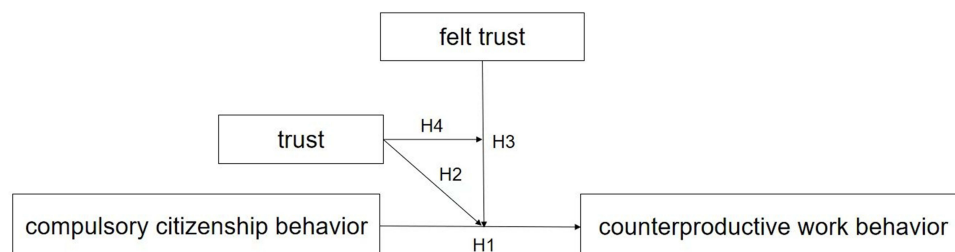
Hypothesis 4: The joint moderating effect of felt trust and trust on the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior is significant.

As mentioned above, a theoretical model can be proposed (see Figure 1), which can allow us to analyze the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior and the boundary conditions on the J-shaped relationship between them.

## Method

### Participants and Procedure

According to the definition of new generation employees in previous studies,<sup>12</sup> participants were all born after the 1980s. Due to the COVID-19 pandemic, it was difficult to collect data and implement face-to-face surveys in 2022, so the study conducted an online questionnaire survey at three points in time using a convenience sampling method. A total of 718 participants agreed to participate in the surveys. Participants worked in Hubei, Jiangsu, Henan, Zhejiang and other provinces in China, and all participants were full-time employees from retail, finance, services and other industries. There were three-phases surveys. Data on demographic variables (age, gender, educational level and organizational tenure) were collected in the first online questionnaire. The second online questionnaire collected information about compulsory



**Figure 1** Theoretical model. Hypotheses and conceptual model regarding the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior.



citizenship behavior, as well as trust and felt trust. A month later, a scale measuring counterproductive work behavior was sent to employees in the third online questionnaire. Finally, 59 participants were excluded from analyses due to missing data, and the final sample included 659 employees. Among them, the average age was 28.33, the average working life was 4.81 years, and 46.89% of the participants were males and 53.11% of the participants were females. Regarding the educational level, 113 participants had a junior college degree or below (15.3%), 477 participants had a bachelor's degree (72.38%), and 69 participants had a master's degree or above (10.47%).

## Measures

Compulsory citizenship behavior was measured using a scale developed by Vigoda-Gadot.<sup>53</sup> The scale contained 5 items, such as “I feel that I am forced to help other colleagues beyond my formal obligations and even when I am short on time or energy”. The Cronbach's alpha coefficient was 0.83.

Counterproductive work behavior was measured using a scale developed by Dalal.<sup>54</sup> The scale contained 6 items, such as “Speak poorly about my supervisor to others”. The Cronbach's alpha coefficient was 0.87.

Trust was measured using a scale developed by Siegel and Brockner.<sup>55</sup> The scale contained 3 items, such as “I can usually trust my supervisor to do what is good for me”. The Cronbach's alpha coefficient was 0.80.

Felt trust was measured using a scale developed by Gillespie.<sup>56</sup> The scale contained 10 items, such as “My leader is willing to discuss about how he/her honestly feel about his/ her work with me, even negative feelings and frustration”. The Cronbach's alpha coefficient was 0.86.

## Results

### Common Method Bias and Validity Analysis

The study used Harman's single factor test to check common method bias. The results showed that the variation explained by the first factor was 24.651%, which is less than the critical value of 40%,<sup>57</sup> indicating that the effect of common method bias was not a major problem in this study. Further, the study performed a confirmatory factor analysis. As shown in Table 1, the four-factor model obtained good fits, which were better than those for other models, indicating that the discriminant validity between the research variables was acceptable and there was no prominent common method bias. Moreover, the results in Table 2 showed that the average extraction variance (AVE) values of all variables were higher than 0.5,<sup>58</sup> thus the convergent validity of each variable was good. Finally, the results in Table 3 showed that the

**Table 1** Confirmatory Factor Analysis Results

Model	Factor	$\chi^2$	$\chi^2/df$	CFI	GFI	RMSEA	SRMR
Four-factor model	CCB, T, FT, CWB	608.50	2.47	0.94	0.93	0.05	0.05
Three-factor model	CCB + T, FT, CWB	1364.91	5.48	0.80	0.78	0.08	0.11
Two-factor model	CCB + T + FT, CWB	1847.14	7.36	0.71	0.69	0.10	0.12
Single factor model	CCB + T + FT + CWB	3357.57	13.32	0.44	0.39	0.14	0.17

**Abbreviations:** CCB, compulsory citizenship behavior; T, trust; FT, felt trust; CWB, counterproductive work behavior; CFI, comparative fit index; GFI, goodness-of-fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean residual.

**Table 2** Reliability and Validity Analysis Results

Variable	KMO	CR	AVE	Cronbach's $\alpha$
Compulsory citizenship behavior	0.83	0.88	0.59	0.83
Counterproductive work behavior	0.88	0.90	0.61	0.87
Trust	0.71	0.88	0.72	0.80
Felt trust	0.90	0.89	0.45	0.86

**Abbreviations:** KMO, Kaiser-Meyer-Olkin; CR, composite reliability; AVE, average variance extracted.

**Table 3** Results of Factor Loadings and Cross Loadings

Variable	CCB	CWB	T	FT
Compulsory citizenship behavior 1	<b>0.75</b>	0.24	-0.25	0.09
Compulsory citizenship behavior 2	<b>0.77</b>	0.20	-0.24	0.15
Compulsory citizenship behavior 3	<b>0.81</b>	0.29	-0.33	0.12
Compulsory citizenship behavior 4	<b>0.75</b>	0.23	-0.10	-0.02
Compulsory citizenship behavior 5	<b>0.77</b>	0.24	-0.21	0.17
Counterproductive work behavior 1	0.18	<b>0.77</b>	-0.12	-0.14
Counterproductive work behavior 2	0.14	<b>0.75</b>	-0.12	-0.11
Counterproductive work behavior 3	0.36	<b>0.77</b>	-0.27	-0.02
Counterproductive work behavior 4	0.27	<b>0.83</b>	-0.18	-0.14
Counterproductive work behavior 5	0.34	<b>0.78</b>	-0.29	-0.01
Counterproductive work behavior 6	0.25	<b>0.76</b>	-0.16	-0.08
Trust 1	-0.16	-0.16	<b>0.84</b>	-0.52
Trust 2	-0.26	-0.17	<b>0.85</b>	-0.50
Trust 3	-0.29	-0.24	<b>0.85</b>	-0.55
Felt trust 1	-0.05	-0.07	-0.36	<b>0.57</b>
Felt trust 2	-0.01	-0.14	-0.30	<b>0.58</b>
Felt trust 3	0.03	-0.09	-0.40	<b>0.69</b>
Felt trust 4	0.06	-0.14	-0.39	<b>0.70</b>
Felt trust 5	0.15	-0.08	0.15	<b>0.67</b>
Felt trust 6	0.09	-0.03	0.09	<b>0.62</b>
Felt trust 7	0.21	0.03	0.21	<b>0.69</b>
Felt trust 8	0.14	-0.03	0.14	<b>0.73</b>
Felt trust 9	0.15	-0.05	0.15	<b>0.72</b>
Felt trust 10	0.11	-0.01	0.11	<b>0.73</b>

**Notes:** The bold values are standardized factor loadings and other values are cross loadings for each construct.

**Abbreviations:** CCB, compulsory citizenship behavior; T, trust; FT, felt trust; CWB, counterproductive work behavior.

factor loadings on each of the specified variable were higher than the loadings on any other variables. Therefore, each variable was a unidimensional measure with a good discriminant validity.

## Descriptive Statistics and Correlation Analysis

The mean, standard deviation and correlation coefficients of variables were shown in Table 4. Based on the results of the correlation analysis, the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior and its boundary conditions can be further tested.

**Table 4** Descriptive Statistics and Correlations of Variables

Variables	M	SD	1	2	3	4	5	6	7	8
1. Gender	1.53	0.50	I							
2. Age	28.33	4.31	-0.06	I						
3. Education level	1.93	0.52	0.01	0.05	I					
4. Organizational tenure	4.81	3.08	-0.13**	0.59***	0.05	I				
5. Compulsory citizenship behavior	3.04	0.93	-0.06	-0.07 <sup>+</sup>	-0.07 <sup>+</sup>	-0.03	I			
6. Counterproductive work behavior	2.42	0.93	-0.08*	-0.00	0.01	0.03	0.32***	I		
7. Trust	3.12	0.92	-0.05	0.05	-0.01	0.04	-0.28**	-0.22**	I	
8. Felt trust	3.03	0.67	0.11**	-0.10**	-0.02	-0.09*	0.14**	-0.08 <sup>+</sup>	-0.61**	I

**Notes:** \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$ , <sup>+</sup> $p < 0.10$ .

**Abbreviations:** M, mean; SD, standard deviation.

## Hypothesis Testing

Firstly, following existing studies,<sup>59,60</sup> the study tested the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior. As shown in Model 1 of Table 5, the results indicated that compulsory citizenship behavior ( $b=0.34, p=0.00$ ) and compulsory citizenship behavior<sup>2</sup> ( $b=0.18, p=0.00$ ) both had significant positive effects on counterproductive work behavior. These results indicated that compulsory citizenship behavior had a J-shaped effect on counterproductive work behavior. As shown in Figure 2, the effect of compulsory citizenship behavior on counterproductive work behavior increased as compulsory citizenship behavior increased. Specifically, referring to existing studies,<sup>61</sup> the turning point of the J shape was 2.17. Subgroup analysis results showed that the effect of compulsory citizenship behavior on counterproductive work behavior was not significant ( $b=0.02, p=0.96$ ) when the level of compulsory citizenship behavior was lower ( $X<2.17$ ), but was significantly positive ( $b=0.46, p=0.00$ ) when the compulsory citizenship behavior level was higher ( $X>2.17$ ). Hypothesis 1 was supported.

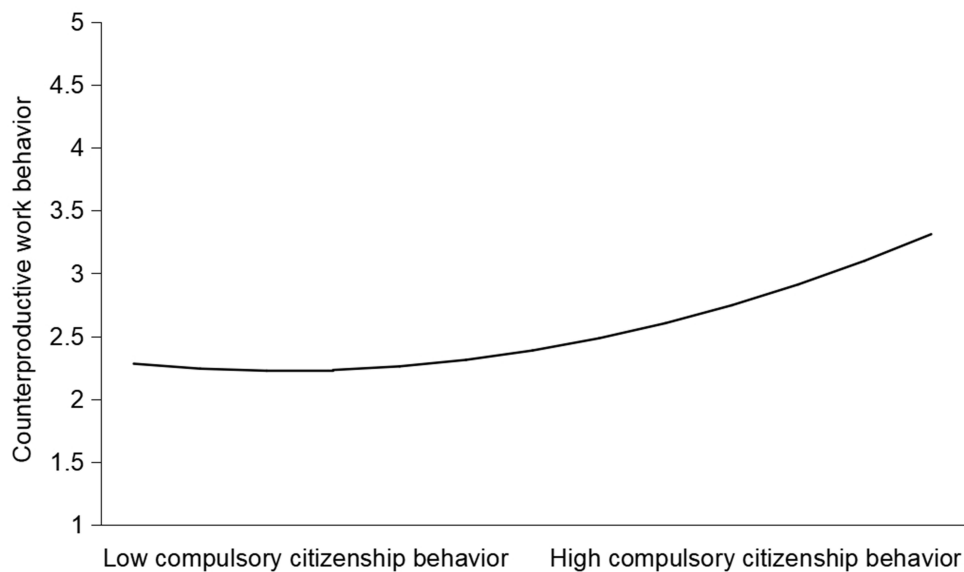
Secondly, the study tested the moderating effect of trust on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior. As shown in Figure 3 and Model 2 of Table 5, the interaction between compulsory citizenship behavior<sup>2</sup> and trust had a significant negative effect ( $b=-0.05, p=0.09$ ) on counterproductive work behavior, indicating that trust had a significantly negative moderating effect on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior. Specifically, the subgroup analysis results showed that: (1) When the level of trust was lower (Mean-1SD), both compulsory citizenship behavior ( $b=0.52, p=0.00$ ) and compulsory citizenship behavior<sup>2</sup> ( $b=0.32, p=0.00$ ) had a significant positive effect on counterproductive work behavior. The results showed that there was a significantly strong J-shaped effect of compulsory citizenship behavior on counterproductive work behavior. The turning point of the J shape was 2.63. Before the J-shaped turning point ( $X<2.63$ ), compulsory citizenship behavior had no significant effect on counterproductive work behavior ( $b=-0.09, p=0.85$ ), but after that ( $X>2.63$ ), it had a significant positive effect on counterproductive work behavior ( $b=1.00, p=0.00$ ). (2) When the level of trust was higher (Mean+1SD), the effect of compulsory citizenship behavior ( $b=0.24, p=0.06$ ) was significant, while compulsory citizenship behavior<sup>2</sup> ( $b=0.11, p=0.20$ ) had no significant negative effect on counterproductive work behavior. Therefore, the results showed that the J-shaped effect was not significant, and compulsory citizenship behavior always had a weak effect on counterproductive work behavior. Hypothesis 2 was supported.

**Table 5** Analyses Predicting Counterproductive Work Behavior

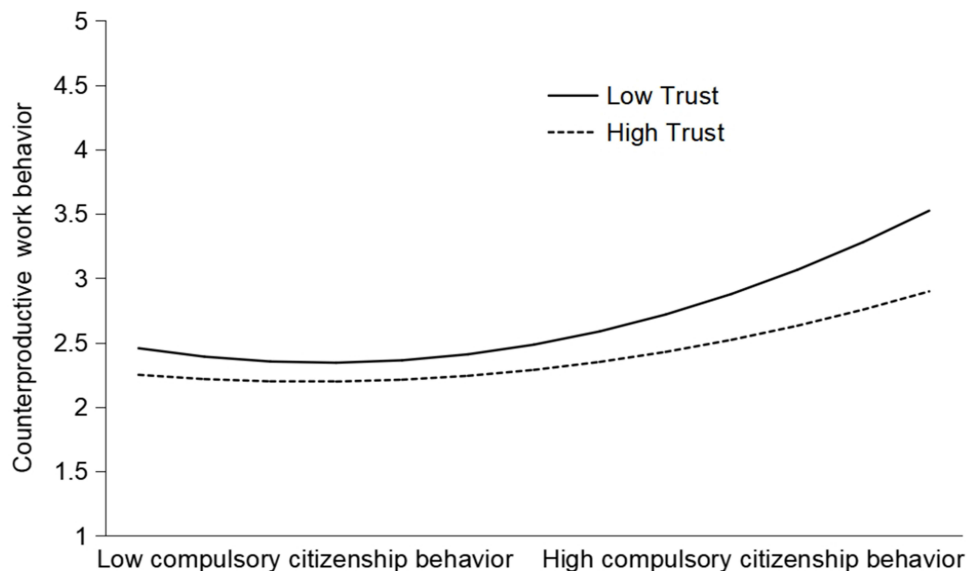
Variables	Model 1		Model 2		Model 3		Model 4	
	B	SE	B	SE	B	SE	B	SE
Gender	-0.11	0.07	-0.12 <sup>+</sup>	0.07	-0.09	0.07	-0.08	0.06
Age	-0.01	0.01	-0.00	0.01	-0.01	0.01	-0.01	0.01
Educational level	0.05	0.07	0.03	0.06	0.06	0.06	0.01	0.06
Organizational tenure	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01
Compulsory citizenship behavior	0.34***	0.04	0.29***	0.04	0.36***	0.04	0.19***	0.04
Compulsory citizenship behavior <sup>2</sup>	0.18***	0.03	0.18***	0.03	0.19***	0.03	0.14***	0.03
Trust			-0.01*	0.05			-0.17**	0.05
Felt trust					-0.04	0.05	-0.14**	0.05
Compulsory citizenship behavior × Trust			-0.07*	0.04			-0.16***	0.04
Compulsory citizenship behavior <sup>2</sup> × Trust			-0.05 <sup>+</sup>	0.03			-0.16***	0.04
Compulsory citizenship behavior × Felt trust					-0.12***	0.03	-0.27***	0.04
Compulsory citizenship behavior <sup>2</sup> × Felt trust					-0.06*	0.03	-0.19***	0.04
Compulsory citizenship behavior × Trust × Felt trust							-0.17***	0.03
Compulsory citizenship behavior <sup>2</sup> × Trust × Felt trust							-0.08***	0.02
Intercept	2.39***		2.39***	0.29	2.38***	0.29	2.47***	0.27
R <sup>2</sup>	0.15		0.18		0.18		0.32	
F	19.05***		15.78***		15.26***		21.14***	

Notes: \*\*\* $p<0.001$ , \*\* $p<0.01$ , \* $p<0.05$ , + $p<0.10$ .



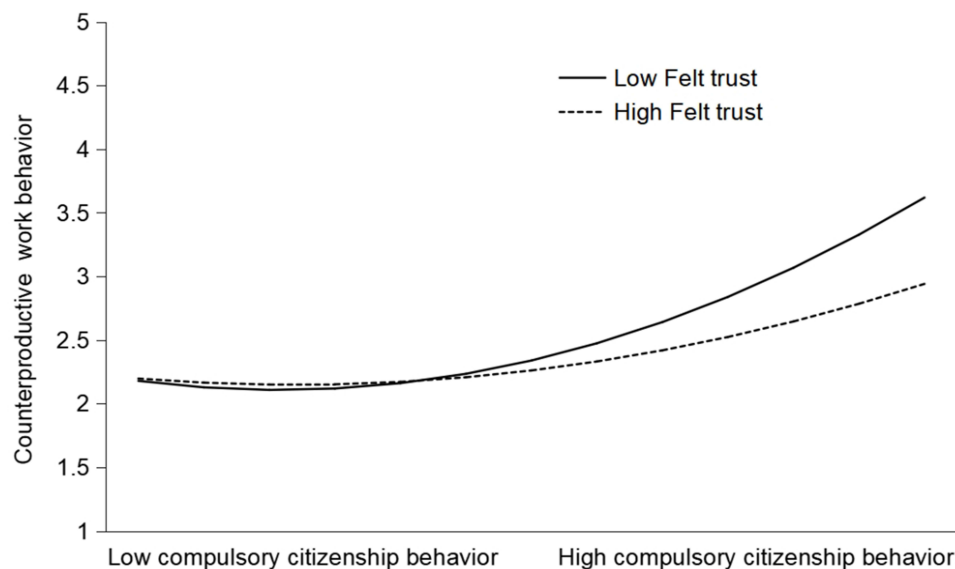


**Figure 2** The nonlinear effect of compulsory citizenship behavior on counterproductive work behavior.



**Figure 3** The Moderating effect of trust on the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior. Low and high trust means 1 SD below the mean and 1 SD above the mean, respectively.

Thirdly, the study tested the moderating effect of felt trust on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior. As shown in Figure 4 and Model 3 of Table 5, the interaction between compulsory citizenship behavior<sup>2</sup> and felt trust had a significant negative effect ( $b=-0.06, p=0.04$ ) on counterproductive work behavior, indicating that felt trust had a significant moderating effect on the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior. The subgroup analysis results showed that: (1) When the level of felt trust was lower, both compulsory citizenship behavior ( $b=0.82, p=0.00$ ) and compulsory citizenship behavior<sup>2</sup> ( $b=0.53, p=0.00$ ) had significant positive effects on counterproductive work behavior. The results showed that there was a significantly strong J-shaped effect of compulsory citizenship behavior on counterproductive work behavior and the turning point of the J shape was 1.831. Before the J-shaped turning point ( $X<1.831$ ), compulsory citizenship behavior had no significant effect on counterproductive work behavior ( $b=-1.27, p=0.12$ ), but after that



**Figure 4** The Moderating effect of felt trust on the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior. Low and high felt trust means 1 SD below the mean and 1 SD above the mean, respectively.

( $X > 1.83$ ), it had a significant positive effect on counterproductive work behavior ( $b = 1.05, p = 0.00$ ). (2) When the level of felt trust was higher, both compulsory citizenship behavior ( $b = 0.30, p = 0.00$ ) and compulsory citizenship behavior<sup>2</sup> ( $b = 0.24, p = 0.00$ ) had significant positive effects on counterproductive work behavior. These results showed that compulsory citizenship behavior had a relatively weaker J-shaped effect on counterproductive work behavior and the turning point of the J-shape was 2.603. Before the J-shaped turning point ( $X < 2.60$ ), compulsory citizenship behavior had no significant effect on counterproductive work behavior ( $b = -0.10, p = 0.79$ ), but after that ( $X > 2.60$ ), it had a significant effect on counterproductive work behavior ( $b = 0.78, p = 0.00$ ). Hypothesis 3 was supported.

Finally, the study tested the joint moderating effect of trust and felt trust on the relationship between compulsory citizenship behavior and counterproductive work behavior. As shown in Model 4 of Table 5, the three-way interaction among compulsory citizenship behavior,<sup>2</sup> trust and felt trust had a significant positive effect ( $b = -0.08, p = 0.00$ ) on counterproductive work behavior, indicating that trust and felt trust had a significant joint moderating effect on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior. Furthermore, the study conducted a subgroup analysis. The subgroup analysis results showed that: (1) When the level of trust was lower, the interaction between compulsory citizenship behavior<sup>2</sup> and felt trust had not significant effect ( $b = 0.07, p = 0.31$ ) on counterproductive work behavior, indicating that the moderating effect of felt trust was not significant. (2) When the level of trust was higher, the interaction between compulsory citizenship behavior<sup>2</sup> and felt trust had a significant negative effect ( $b = -0.38, p = 0.00$ ) on counterproductive work behavior, indicating that the moderating effect of felt trust perception was significant.

Furthermore, the subgroup analysis results showed that: (1) When the level of felt trust was lower, both compulsory citizenship behavior ( $b = 1.23, p = 0.00$ ) and compulsory citizenship behavior<sup>2</sup> ( $b = 0.63, p = 0.01$ ) had significant positive effects on counterproductive work behavior. Therefore, compulsory citizenship behavior had a J-shaped effect on counterproductive work behavior. Before the J-shaped turning point ( $X < 1.27$ ), compulsory citizenship behavior had no significant effect on counterproductive work behavior ( $b = -1.22, p = 0.29$ ), but after that ( $X > 1.27$ ), it had a significant positive effect on counterproductive work behavior ( $b = 0.53, p = 0.00$ ). (2) When the level of felt trust was higher, the effect of compulsory citizenship behavior ( $b = -0.14, p = 0.47$ ) was not significant, while compulsory citizenship behavior<sup>2</sup> ( $b = -0.23, p = 0.11$ ) had not significant negative effect on counterproductive work behavior. Therefore, compulsory citizenship behavior had no significant effect on counterproductive work behavior. Hypothesis 4 was supported.

## Discussion

Based on the cognitive appraisal theory of stress and social information processing theory, the study explored the J-shaped effect of compulsory citizenship behavior on new generation employees' counterproductive work behavior. All hypotheses were supported. Firstly, the results showed that compulsory citizenship behavior had a J-shaped effect on counterproductive work behavior. When the frequency of compulsory citizenship behavior was lower than the J-shaped turning point value, the effect was relatively weak, but once it reached the turning point, the effect was significant and increased sharply. Secondly, trust or felt trust significantly moderated the J-shaped effect. That is, when the level of trust or felt trust was low, the J-shaped effect was strong, and compulsory citizenship behavior had a stronger effect on counterproductive work behavior after the turning point; but when trust or felt trust was perceived to be high, the J-shaped effect was weak. Finally, the joint moderating effect of trust and felt trust was significant. That is, the moderating effect of felt trust was not significant when the trust level was low, but the moderating effect of felt trust was significant when the trust level was high.

## Theoretical Contribution

Firstly, existing studies have mainly analyzed the linear relationship between compulsory citizenship behavior and counterproductive work behavior,<sup>7,8</sup> and no in-depth theoretical analysis nor empirical research had been carried out to test the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior. Compared to existing studies, the current study explored the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior from a new nonlinear perspective, which can provide a more comprehensive understanding of the effect of compulsory citizenship behavior. In addition, existing studies did not reach consensus on whether the effect of compulsory citizenship behavior on counterproductive work behavior is significant.<sup>9,10</sup> By revealing the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior, this paper integrates existing inconsistent research results. That is, whether or not compulsory citizenship behavior had a significant effect on counterproductive work behavior depending on the level of compulsory citizenship behavior. Specifically, when the level of compulsory citizenship behavior was lower, the effect was not significant, but when it increased to a higher level, the effect was significant. Moreover, existing studies called for more researches to explore the complex nonlinear effects of work stress, such as the J-shaped effect.<sup>62,63</sup> Based on the cognitive appraisal theory of stress, the study examine the J-shaped effect of compulsory citizenship behavior on new generation employees' counterproductive work behavior, responding to previous research calls and deepening the understanding of the nonlinear effect of work stress.

Secondly, existing studies mainly analyzed the effect of compulsory citizenship behavior on counterproductive work behavior based on social identity theory, social exchange theory and moral disengagement theory, but seldom examine the effect from the theoretical perspective of stress.<sup>7,8</sup> Based on the cognitive appraisal theory of stress and social information processing theory, the study explains why compulsory citizenship behavior has a nonlinear effect on counterproductive work behavior from a new theoretical perspective of psychological stress. On one hand, the cognitive appraisal theory of stress provides a theoretical perspective to explain the "double-edged sword" effect of compulsory citizenship behavior through challenge stress appraisal or hindrance stress appraisal, and reveal that why the dual effect of compulsory citizenship behavior on counterproductive work behavior varies as compulsory citizenship behavior increases. On the other hand, the social information processing theory provides a theoretical framework for understanding how the challenge and hindrance stress assessment of compulsory citizenship behavior by employees varies under different trust and felt trust conditions. The results deepen the understanding of the theoretical mechanism underlying the nonlinear effect of compulsory citizenship behavior on counterproductive work behavior, and provide a beneficial supplement to existing literature using a new theoretical lens of stress by integrating the cognitive appraisal theory of stress and social information processing theory.

Thirdly, existing studies mainly explored the boundaries of the relationship between compulsory citizenship behavior and counterproductive work behavior from the perspective of individual characteristics.<sup>9,10</sup> Compared with previous studies, the study examines the moderating effect of trust (employee's perceived trust in leader) and felt trust (employee's perception of being trusted by leader) from a new perspective of leader-employee interactions. The results indicate that

trust and felt trust are key factors impacting the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior, affecting not only the effect sizes, but also the shape of the J-shaped effect. The results expand the boundaries of the nonlinear relationship between compulsory citizenship behavior and counterproductive work behavior from a new perspective of leader-employee interactions. In addition, few studies explored how mutual trust between employees and leaders impact employees' work behavior in the workplace. This study also improves the research area by exploring the joint moderating effect of trust and felt trust on the J-shaped relationship between compulsory citizenship behavior and counterproductive work behavior, revealing the complex functional interaction between trust in leader and felt trust by leader in the workplace.

## Implications for Management

The results of this study have implications for organizations regarding how to manage new generation employees' work behavior. Firstly, organizations should be aware that the effect of compulsory citizenship behavior on new generation employees' counterproductive work behavior will increase sharply once the compulsory citizenship behavior frequency rises past a point. Thus, organizations should take various ways to give the new generation employees more work autonomy, and be careful not to demand excessive compulsory citizenship behaviors for them.

Secondly, organizations should pay more attention to the psychological stress experienced by new generation employees. Based on the cognitive appraisal theory of stress, this study found that once compulsory citizenship behavior is more likely seen as a hindrance stressor by employees, it will have a significant and stronger effect on counterproductive work behavior. Therefore, leaders should maintain communication with employees to prevent them from experiencing stress as a psychological hindrance, thus reducing the deleterious effects of compulsory citizenship behavior.

Finally, leaders should cultivate employees' perception of trust and felt trust to reduce the negative effects of compulsory citizenship behavior as much as possible. The results indicate that employees' perception of trust in their leaders, as well as feeling trusted by their leader, can buffer the effect of compulsory citizenship behavior on counterproductive work behavior. Therefore, Leaders should takes a significant amount of time and effort to develop reciprocal trust relationships with employees, which can strengthen the trust bond between leaders and employees, subsequently minimizing the negative effects of compulsory citizenship behavior.

## Limitations and Suggestions for Future Research

Firstly, although this study adopted a multi-time survey to control common method bias, and the results showed that there is no serious common method bias in the study, it still remains to improve the research method in the future to minimize potential measurement errors. Secondly, the study verified the J-shaped nonlinear effect of compulsory citizenship behavior on counterproductive work behavior based on data derived from questionnaires. Future studies can conduct nonlinear meta-analysis by including more relevant literature to improve the reliability and validity of the results. Finally, the study explored the effect of compulsory citizenship behavior at the individual level. However, compulsory citizenship behavior in the workplace also exists at the organizational level. Therefore, the effect of compulsory citizenship behavior should be further explored using multi-level analysis.

## Conclusion

This study explored the nonlinear effect of compulsory citizenship behavior on new generation employees' counterproductive work behavior. The results showed that: (1) Compulsory citizenship behavior had a J-shaped effect on counterproductive work behavior, in which the effect of compulsory citizenship behavior on counterproductive work behavior was not significant at the beginning but became significantly positive after reaching the J-shaped turning point; (2) The moderating effect of trust and felt trust was significant: when the level of trust or felt trust was high, the J-shaped effect of compulsory citizenship behavior on counterproductive work behavior was weaker; but when the trust level was low, the J-shaped effect was stronger; (3) The joint moderating effect of trust and felt trust was significant: when the trust level was high, the moderating effect of felt trust was significant; but when the trust level was low, the moderating effect of felt trust was not significant. These findings contribute to answering how and why

compulsory citizenship behavior may have a J-shaped effect on counterproductive work behavior, providing important contributions to the literature on compulsory citizenship behavior. In addition, the findings also provide implications for organizations aiming to minimize the negative effect of compulsory citizenship behavior and improve job performance.

## Data Sharing Statement

The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

## Compliance with Ethical Standards

All the methods were performed in accordance with the Declaration of Helsinki. The study was approved by the Ethical Committee of Zhengzhou University. Informed consent was obtained from all individual participants included in the study.

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## Disclosure

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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