

Impact of Role Ambiguity on Counterproductive Work Behavior of Hotel Employees

1. Vaneeza Syed, 2. Nausheen Syed, 3. Sahar Khadim

1. Department of Business Administration, Government College Women University Faisalabad,
Pakistan

Vaneezasyed18@gmail.com

2. Department of Business Administration, Government College Women University Faisalabad,
Pakistan

nausheen@gcwuf.edu.pk

3. Department of Business Administration, Government College Women University Faisalabad,
Pakistan

saharkhadim@gcwuf.edu.pk

Abstract

Drawing on Affective Events Theory and JD-R model this study investigates how role ambiguity impacts counterproductive work behavior in the hotel industry while focusing on the mediating role of hostility and the moderating role of trait mindfulness. Data of 342 valid responses was collected from the employees of four-star hotels in Punjab, Pakistan. The data was analyzed using structural equation modeling (Smart PLS) and PROCESS macro. Findings reveal that role ambiguity is significantly associated with both interpersonal and organizational CWB, with hostility as a mediator. Moreover, trait mindfulness weakens the adverse impact of role ambiguity on CWB which highlights its protective role in stressful work environments. This study extends theoretical understanding of stress-behavior dynamics in hotel industry and offers practical

implications for hotel managers to enhance role clarity and adopt mindfulness-based interventions to reduce hostility and improve workplace behavior.

Keywords: Role Ambiguity, Hostility, Trait Mindfulness, Counterproductive workplace behavior

1. Introduction

The hotel industry plays an important role in economic growth by generating employment, promoting tourism and fostering cultural exchange. However, this industry continues to face persistent challenges in this modern era (such as high turnover rate, workload pressure and role ambiguity) which contributes to stress and dissatisfaction among staff (Alblihed and Alzghaibi, 2022). These negative behaviors heighten the risk of counterproductive work behavior which encompass harmful acts directed either towards colleagues (interpersonal CWB) or the organization (organizational CWB) involving aggression, theft or sabotage (Botone, 2020). These behaviors undermine service quality and erode employee morale and productivity.

Role ambiguity (referred to as the lack of clarity in job responsibilities and expectations) is especially an issue in industries like hospitality where teamwork and communication are important (Hassan, 2013). Previous studies indicate that unclear roles foster frustration, stress and interpersonal conflict which increase hostility and negative workplace behavior (Ahmad and Din, 2023). Affective Events Theory suggests that stressful workplace conditions such as role ambiguity trigger negative emotions (particularly hostility) that subsequently increase counterproductive behaviors.

Trait mindfulness is the tendency to remain attentive now in a non-reactive manner which enables employees to regulate their emotions and cope with stress (Brown and Ryan, 2003). Research shows that mindfulness can reduce hostility and mitigate the occurrence of CWB in high-stress environments (Reb et al., 2017). This aligns with Job Demands-Resources (JD-R) model which proposes that personal resources such as mindfulness can decrease the negative effect of job demands like role ambiguity (Bakker and Demerouti, 2007).

Moreover, studies have concentrated on stress, job dissatisfaction or emotional exhaustion as mediators which limited attention given to hostility as a core emotional pathway linking role ambiguity to CWB. Additionally, while coping mechanisms and resilience have been studied trait

mindfulness has received very little empirical attention as a moderator. Existing research predominantly examines five-star hotels in western/middle eastern context while overlooking the more resource-constrained environment of four-star hotels in South Asia.

This study investigates the relationship between role ambiguity and counterproductive workplace behaviors, where hostility serves as a mediator and trait mindfulness acts as a moderator, in four-star hotels of Punjab, Pakistan. This research advances theoretical understanding while offering practical insights for hotel managers to foster healthier working environment by integrating emotional (hostility) and cognitive (trait mindfulness) processes into the stressor behavior framework.

2. Research Framework and hypothesis development

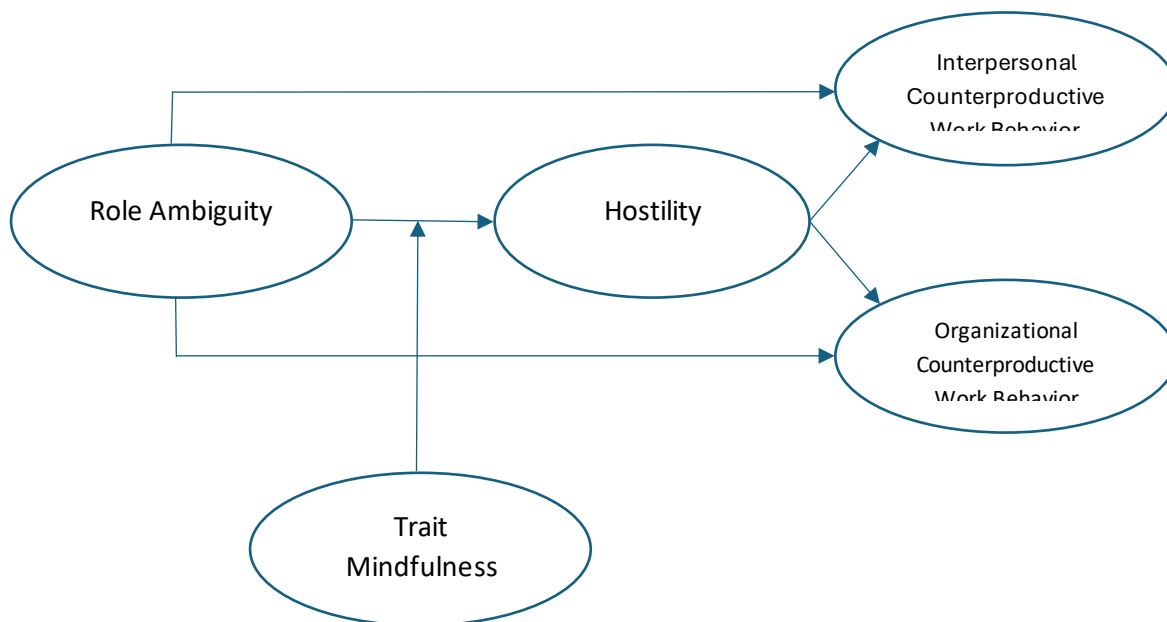


Figure 1: Research framework

2.1 Relationship between Role Ambiguity and Interpersonal Counterproductive Workplace Behavior

Role ambiguity creates tension and miscommunication among employees which escalates into interpersonal counterproductive workplace behavior such as bullying, aggression and incivility. Unclear job roles affect workplace relationships and trust which in turn increases hostility and conflict between colleagues (Bowling and Beehr, 2006; Baillien et al., 2011). There is also meta-

analysis that has been done on the relationship between role stressors and aggression at workplace; Bowling and Eschleman (2010) studied over 35 studies on this relationship. They identified a significant relationship between interpersonal CWB and role ambiguity especially where work environment is highly stressful. This meta-analysis shows that vague expectations do not only arouse negative emotions but also help to cross the boundaries of acceptable behaviors to one another in an organization. Researchers emphasized that role ambiguity often intensifies deviant interpersonal behaviors when employees perceive stress or unclear roles (Skarlicki et al., 2009). This subsequently results in the rise of the incidence of incivility, bullying and aggression. It was also indicated that workplace environment features, i.e., detachment of social support increases the influence of role ambiguity as a factor in interpersonal CWB.

H₀: Role ambiguity does not significantly influence interpersonal counterproductive work behavior.

H₁: Role ambiguity significantly influences interpersonal counterproductive work behavior.

2.2 Relationship between Role ambiguity and Organizational Counterproductive Workplace Behavior

Organizational CWB presupposes actions directly damaging the organization, including theft, deliberate sabotage and neglect of responsibilities (Duradoni et al., 2023). Role ambiguity can interfere with the working process and cause employees to perform less efficiently, which eventually decreases the overall productivity (Nugroho and Astuty, 2024). Furthermore, role ambiguity was found to cause more mental and emotional pressure on a worker, as one cannot comprehend their duties and requirements. Such strain usually leads to negative attitudes towards the organization that may manifest themselves in the deviant behaviors (De Clercq and Pereira, 2023). Similarly, research highlighted that organizational CWB is strongly linked to role related stressors, especially when employees feel unsupported in ambiguous environments (Skarlicki et al., 2009).

Moreover, role ambiguity and organizational CWB. were also observed to be directly related in a quantitative study of 300 corporate staffs (Eatough et al., 2011). The environments with supportive leadership demonstrated lower levels of organizational CWB even among employees experiencing role ambiguity, highlighting the possibility of organizational support in mitigating these behaviors.

This study works on different mediators and studies their effect on counterproductive workplace behaviors.

The reviewed research primarily utilized qualitative methodologies, mixed method approach, and meta-analyses, to examine the relationship between role ambiguity and counterproductive workplace behaviors. Although these methods allow for analyzing large samples, they may skip the refined experiences of individuals in ambiguous roles. This study incorporates quantitative methodology which could provide deeper insights into these mechanisms by which role ambiguity influences counterproductive workplace behaviors.

H₀: Role ambiguity does not significantly influence organizational counterproductive work behavior.

H₂: Role ambiguity significantly influences organizational counterproductive work behavior.

2.3 Relationship between Role Ambiguity and Hostility

Role ambiguity is a potent stressor that breeds frustration, anger and resentment which in turn increase hostility at workplace. When employees face unclear expectations, they perceive it as poor management which provokes defensive and aggressive responses (Baron and Neuman, 1996; Fox et al., 2001). Therefore, hostility acts as a direct emotional reaction to role ambiguity. Recent empirical research with a longitudinal data approach claims that sustained role ambiguity increases workplace stress over a multi-year span (Blomberg et al., 2024). Additionally, increased workplace incivility further amplifies role ambiguity and emotional exhaustion which creates conditions conducive to hostility (Biswas and Sengupta, 2025).

There are several theoretical models, which assist us in providing an explanation of the role ambiguity and its relationship to hostility. According to transactional model of stress and coping, employees appraise role ambiguity as an uncontrollable stressor, triggering hostile coping mechanisms (Lazarus and Folkman, 1984). Similarly, the affective events theory of Weiss and Cropanzano (1996) mentions that the employees observed behavioral outcomes are because of emotional reactions evoked by events in the workplace. An organization event, role ambiguity, can elicit an aversive emotional response, that is, hostility. These emotional responses are in turn translated into subsequent behaviors e.g. interpersonal conflicts or violence with others.

H₀: Role ambiguity does not have a significant influence on hostility.

H3: Role ambiguity has a significant influence on hostility

2.4 Relationship between Hostility and Interpersonal Counterproductive Workplace Behavior

Hostility is strongly related to interpersonal counterproductive workplace behavior which includes aggression, bullying and verbal abuse. When employees are directed to role ambiguity, they often channel their frustration towards their coworkers and supervisors which results in interpersonal conflicts (Fox et al., 2001). Recent studies also confirm that hostility predicts bullying and workplace aggression especially in work environments that lack support systems (Baillien et al., 2011; Deng et al., 2023).

The affective events theory by Weiss and Cropanzano (1996) suggests that emotions experienced at work play a critical role in shaping future attitudes and behaviors. When employees encounter stressors like role ambiguity, they experience emotional reactions such as frustration and hostility. These emotions influence future behavior, including interpersonal CWB, as employees react to their stressors by expressing aggression toward colleagues or supervisors.

H₀: Hostility does not have a significant influence on interpersonal counterproductive work behavior.

H₄: Hostility has a significant influence on interpersonal counterproductive work behavior.

H₀: Hostility does not mediate the relationship between role ambiguity and interpersonal counterproductive work behavior.

H₅: Hostility mediates the relationship between role ambiguity and interpersonal counterproductive work behavior.

2.5 Relationship between Hostility and Organizational Counterproductive Workplace Behavior

Hostility drives organizational counterproductive workplace behavior like theft, absenteeism and intentional inefficiency. Hostile individuals are more likely to engage in deviant behaviors aimed at their organization, especially when they feel their stressors are not adequately addressed (Spector and Fox, 2005). Employees who perceive a lack of support or fairness may resort to counterproductive workplace behaviors to get back at the organization or its perceived negligence

or injustice (Fox et al., 2001). Recent study shows that hostility mediates the relationship between workplace stressors and organizational counterproductive workplace behavior with employees using harmful acts as a reaction for unresolved anger and frustration (Duradoni et al., 2023; Blomberg et al., 2024).

Moreover, such employees may lack the ability to comprehend the expectations that they are subjected to since they experience that there is ambiguity regarding their tasks, and this may lead to hostilities towards management or the organization in general. Such animosity may subsequently augment in several detrimental actions like deliberate workers under achievement or even abandonment of duties in the workplace (Robinson and Bennett, 1995). Therefore, hostility serves as a retaliation towards organizational stress, and it raised the probability of organizational CWB.

H₀: Hostility does not have a significant influence on organizational counterproductive work behavior.

H₆: Hostility has a significant influence on organizational counterproductive work behavior.

H₀: Hostility does not mediate the relationship between role ambiguity and organizational counterproductive work behavior.

H₇: Hostility mediates the relationship between role ambiguity and organizational counterproductive work behavior.

2.6 Trait Mindfulness as a moderator between Role Ambiguity and Hostility

Role ambiguity has been cited far and wide, as one of the main causes of stresses in the workplace that leads to poor emotional and behavioral consequences such as hostility. Trait mindfulness is an individual style of staying alert and conscious of current moment experiences in an open and non-verdictive manner (Brown and Ryan, 2003). It is also examined more in organizational studies as a possible mediator between the effects of stressful job situations on the mind and predispositions to behave mind-blindly. This belief is shared by several recent studies that conclude that trait mindfulness has the potential to moderate the emotional effects of role ambiguity and thus minimize hostile responses.

Liang et al. (2022) showed in their study that mindfulness undermined the positive correlation between the stressors of the workplace, such as role ambiguity, and psychological distress, which

is a frequent precursor to hostile acts. These results are also reinforced by a study carried out by Youn and Kim (2023) which inferred that trait mindfulness could decrease the emotional dynamics of healthcare professionals and, as a result, their propensity towards anger and interpersonal discordance when dealing with unclear role requirements.

Meng et al. (2022) observed that mindfulness did not alleviate the negative emotional impact of confusion relating to the job expectations in the face of general stress in the workplace. Alternatively, Park and Lee (2023) further elaborate that trait mindfulness might perform better in moderating interpersonal or affective stressful events more than structural stressful factors such as role ambiguity and this poses the possibility that it is not universal in its moderating effects. Recently, Wang et al. (2024) found that mindfulness interventions alone could be inadequate in managing ambiguity-related hostility without any additional program in the organizations to ascertain good role clarity and communication.

H0: Trait mindfulness does not moderate the relationship between role ambiguity and hostility.

H8: Trait mindfulness moderates the relationship between role ambiguity and hostility.

3. Research Methodology

This research used a quantitative research approach to examine the effect of role ambiguity on counterproductive work behavior with hostility as a mediator and trait mindfulness as a moderator. A cross-sectional design was adopted due to time and resource constraints. Data was collected from 342 employees of four-star hotels in Punjab, Pakistan using random sampling technique. A structured questionnaire with 31-close ended items was distributed through online platforms. We used SPSS for descriptive Statistics, while SmartPLS was used for structural equation modeling (PLS-SEM) to test the measurement model, structural model and hypothesized relationships. The unit of analysis was individual hotel employees of four-star hotels in Punjab, Pakistan.

3.1 Research measures

This research utilized standardized measurement scales measuring the main construct in the research, which were role ambiguity, hostility, trait mindfulness, and counterproductive work behavior. It used both 5-point and 7-point scales of Likert type, based on the type of construct dependent on the scale. The 5-item scale had scores of 1 to 5 as Strongly Disagree to arranging as

5 Strongly Agree, whereas the same for the 7-item scale was 1 to 7 as Strongly Disagree to Strongly Agree. With both scales, the research was able to measure the reactions of the participants because of accuracy and sensitivity of the results obtained as in the previous studies.

3.1.1 Role Ambiguity

The measurement tool that measured role ambiguity was the Role Inventory Measure (RIM) (Blomberg and Rosander, 2021). The items of this scale are 6 representing the clarity of task, division of roles, the routines in the workplace and the clear areas of duties. An example case is: “In our place of work, we have clear roles.” The instruments were Standardized via the 7-point Likert scale where 1 = strongly disagree and 7 = strongly agree.

3.1.2 Counterproductive Work Behavior

Counterproductive Work Behavior was measured with Deviance Scale designed by Bennett and Robinson (2000). This scale has 19 questions in the following two sub-dimensions:

Organizational CWB (12 items), e.g., “*I have taken property from work without permission*”

Interpersonal CWB (7 items), e.g., “*I made fun of someone at work*”

Respondents reported the frequency of these behaviors over the past year using a 7-point Likert scale, ranging from 1 = never to 7 = daily.

3.1.3 Hostility

The hostility was based on the Positive and Negative Affect Schedule -Expanded Form (PANAS-X) that was created by Watson and Clark (1994) and the hostility subscale was used to assess whether they were hostile or not. The scale consists of several descriptors, such as “*angry*” and “*irritable*,” with participants rating the intensity of these feelings on a 5-point Likert scale, ranging from 1 = very slightly or not at all to 5 = extremely (Watson and Clark, 1999).

3.1.4 Trait Mindfulness

Trait mindfulness was measured using a 7-item subscale from the Maudsley Assessment of the Mind (MAAM) by Brown and Ryan (2003). Items were rated on a 7-point Likert scale, where 1 = almost always and 7 = almost never. A sample item is: “*I find myself doing things without paying attention.*” This scale is widely used to assess individual mindfulness tendencies in workplace settings.

3.2 Demographic Information

The demographic information indicates a dominant female sample (60.9%), showing the higher female representation within the hospitality sector in research area. Male participants constitute 33%, while 6.1 preferred not to disclose their gender.

While in terms of age, the largest group is between 18-24 years (53%), followed by 25-34 years (30.4%) suggesting that the hospitality sector is primarily young aligns with labor intensive and entry level nature of many hotel industry roles. Only a small proportion (1.7%) were aged 55 or above, indicating lower participation of older employees in this research sample.

Regarding education, nearly half of the participants have a bachelor's degree (49.6%), 25.2% have a master's degree which reflects a very well-educated workforce in this sample. A small proportion holds associate degree (8.4%) and doctoral degrees (4.1%), while only 3.2% have a high school education which shows that higher education is common among respondents working in the hospitality setting.

Moreover, considering workplace, most respondents (75.7%) fall under "Others," which indicates a diverse range of hospitality establishment beyond the listed major hotels, and it reflects a broader sectoral reach of this study. Among the workplaces mentioned Serena Hotel (5.2%), Circle Club and Raj one hotel (each 4.3%) were more notable in representation.

Lastly, in terms of designation, 18.3% of the respondents were junior workers with only 7.8% as senior workers and 9.3% as junior managers. A considerable portion (41.7%) fell under the "others" category which shows a wide range of job titles in the hotel industry. The presence of 25.3% at the manager level (general, executive, operational and finance managers combined) shows a reasonable managerial representation in the sample.

Table 1: Participants demographic information

Variables		Frequency	Percentage
Gender	Female	210	60.9
	Male	114	33
	Prefer not to say	21	6.1
Age	18-24	183	53

	25-34	105	30.4
	35-44	38	11
	45-54	13	3.8
	55 or above	6	1.7
Level of Education	High School	11	3.2
	Some college but no degree	12	3.5
	Diploma	20	5.8
	Associate degree	29	8.4
	Bachelor's Degree	171	49.6
	Master's degree	87	25.2
	Doctoral Degree	14	4.1
Work Experience	Less than 1 year	133	38.6
	1-2	68	19.7
	2-3	38	11
	3-4	40	11.6
	5-6	17	4.9
	6 or above	49	14.2
Designation	Junior Worker	63	18.3
	Senior Worker	27	7.8
	Junior Manager	32	9.3
	General Manager	25	7.2
	Executive Manager	14	4.1
	Operational Manager	22	6.4
	Finance Manager	18	5.2
	Others	144	41.7
Workplace	Pearl Continental	6	1.7
	Serena Hotel	18	5.2
	Nishat Hotel	8	2.3
	Avari Express	7	2
	Circle Club	15	4.3
	Chenab Club	10	2.9
	Titanic Resort	5	1.4
	Raj One Hotels	15	4.3
	Others	261	75.7

4. Results

4.1 Descriptive statistics and correlation analysis

Table 2 presents descriptive statistics and correlation analysis of my study, two essential preliminary steps in quantitative research for understanding the dataset before hypothesis testing. Firstly, it demonstrates the robust findings. The mean for role ambiguity is 5.09 (SD = 1.50), indicating a relatively high perception of unclear roles among employees. Hostility has a lower mean of 2.21 (SD = 1.14), suggesting lower but present levels of workplace hostility, while trait mindfulness shows a mean of 2.73 (SD = 1.64), reflecting varied mindfulness levels among employees. Interpersonal CWB and Organizational CWB have means of 2.18 (SD = 1.46) and 2.05 (SD = 1.39) respectively, showing moderate levels of counterproductive behaviors in the sample.

Additionally, the correlation matrix reveals several significant relationships, RA has significant negative correlation with hostility ($r = -0.517^{**}$), trait mindfulness ($r = -0.444^{**}$), interpersonal CWB ($r = -0.456^{**}$) and organizational CWB ($r = -0.506^{**}$), showing that higher role ambiguity is associated with lower hostility, trait mindfulness and counterproductive work behaviors in this sample.

Table 2: Descriptive statistics and correlation analysis

	Mean	Std. Deviation	RA	H	TM	IPCW B	OCWB
RA	5.091887	1.50322	0.957				
H	2.214076	1.146263	-.517**	0.921			
TM	2.734814	1.645394	-.444**	.722**	0.934		
IPCW B	2.18517	1.466822	-.456**	.679**	.706**	0.929	
OCWB	2.058651	1.395057	-.506**	.739**	.747**	.874**	0.963
**. Correlation is significant at the 0.01 level (2-tailed).							

Positive and strong correlations are found among Hostility, trait mindfulness, interpersonal and organizational CWB with correlations ranging from 0.679** to 0.874**, all significant at $p < 0.01$. For example, hostility correlates strongly with interpersonal CWB ($r = 0.679^{**}$) and organizational CWB indicating that while mindfulness is associated with positive outcomes, higher mindfulness in this context may be linked to increased awareness of workplace injustice, aligning with nuanced

findings in mindfulness literature. Furthermore, the diagonal values (0.929, 0.921, 0.934, 0.963) represent the square roots of AVE for each variable which are all well above the recommended 0.70 threshold which confirms that the convergent validity of the constructs is acceptable, and it aligns with the CFA results. Overall, these findings confirm that the dataset is statistically valid, demonstrating appropriate variability, strong construct interrelations, and significant associations necessary for moving forward with structural model testing.

4.2 Measurement Model

The current research utilized the Partial Least Squares Structural Equation Modeling (PLS-SEM) in assessing the connections linking role ambiguity, hostility, trait mindfulness, and counterproductive work behavior (CWB) among the employees of a hotel. The PLS-SEM calculation was performed with SmartPLS 3.2.9 software that is quite optimal to use in the case of exploratory studies or any complex models that may involve several mediators or moderators. It is also efficient in research that has small to average sample size, and it does not make rigid assumptions on normally distributed data.

4.3 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) was run to inform issues of reliability and validity of the measurement model prior to evaluating the structural model. There are three key standards applied to evaluate the measurement model, reliability, the convergent validity and the discriminant validity in this study. Two major indicators- Cronbach's Alpha and composite reliability (CR) were used to test reliability.

Convergent validity was evaluated by use of the Average Variance Extracted (AVE) indicating the volume of cross-sectional loads taken by a construct as opposed to measurement error. AVE values in this research were between 0.513 and 0.65 in all the constructs which means that indicators variance in each construct was discussed by the corresponding latent variable at least as 51.3 percent and more than 65 percent. Also, Outer loadings are an indication of the relationship between the observed item and a latent construct. In this research, all items demonstrated a pattern of outer loading that is between 0.71 to 0.89, which evidenced that the observed variables provided reliable contributions to the corresponding latent variables.

Table 3: Confirmatory factor analysis

CONSTRUCTS	CA	CR	AVE	FACTOR LOADING
Role Ambiguity	0.929	0.944	0.738	
RA1				0.822
RA2				0.881
RA3				0.856
RA4				0.893
RA5				0.867
RA6				0.833
Hostility	0.921	0.94	0.759	
H1				0.855
H2				0.867
H3				0.877
H4				0.89
H5				0.868
Trait mindfulness	0.934	0.95	0.791	
T1				0.842
T2				0.918
T3				0.914
T4				0.906
T5				0.865
Organizational counterproductive workplace behavior				
	0.963	0.967	0.709	
O-CWB1				0.791
O-CWB2				0.836
O-CWB3				0.838
O-CWB4				0.865
O-CWB5				0.857
O-CWB6				0.812
O-CWB7				0.906
O-CWB8				0.846
O-CWB9				0.805
O-CWB10				0.884
O-CWB11				0.81
O-CWB12				0.85
Interpersonal counterproductive workplace behavior				
	0.929	0.943	0.759	

IPCWB1				0.805
IPCWB2				0.781
IPCWB3				0.905
IPCWB4				0.844
IPCWB5				0.776
IPCWB6				0.896
IPCWB7				0.857

4.4 Discriminant validity

Discriminant validity reassures that construct, which are conceptualized to be dissimilar, are dissimilar to each other. Three methods were used to evaluate discriminant validity namely (i) the Fornell and Larcker measure technique, (ii) the Heterotrait-Monotrait Ratio (HTMT), as well as (iii) cross-loadings. Among these, the Fornell and Larcker method is most widely accepted and was used in this study to confirm discriminant validity. As shown in Table 2, the square root of AVE for each construct was higher than its correlation with other constructs, confirming satisfactory discriminant validity. Since both convergent and discriminant validity were confirmed, the structural model was analyzed to test the proposed hypotheses. Table 4 presents both direct and indirect effects, which were used to test mediation and moderation hypotheses.

Table 4: Fornell and Larcker

	HOS	IPCWB	OCWB	RA	TM
HOS	0.871				
IPCWB	0.681	0.839			
OCWB	0.661	0.797	0.842		
RA	-0.517	-0.458	-0.47	0.859	
TM	0.722	0.685	0.642	-0.45	0.89

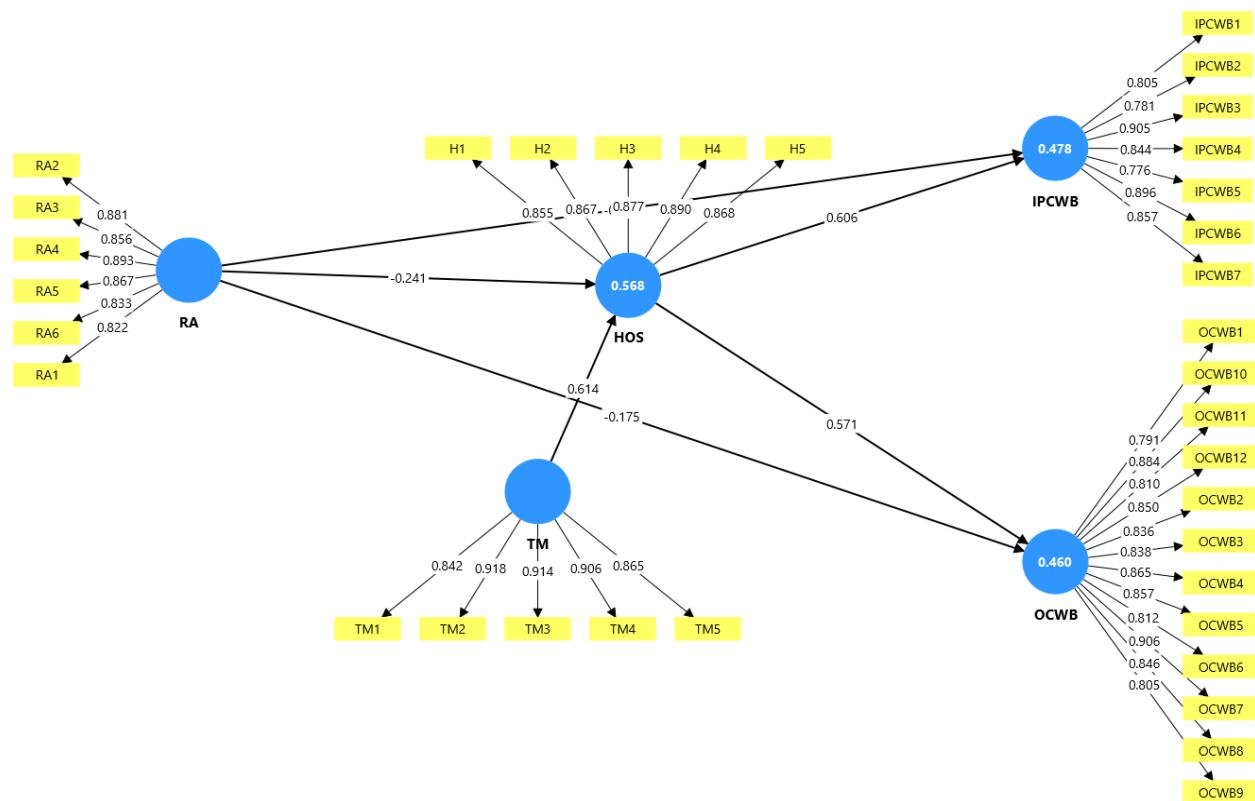


Figure 2: Results from structural equation modeling (SEM)

After confirming the validity and reliability of the measurement model through Confirmatory Factor Analysis (CFA), the structural model was assessed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via Smart PLS 3.2.9. The purpose of this analysis was to test the direct, indirect and moderating effects hypothesized in the study, specifically the relationships among role ambiguity, hostility, trait mindfulness and CWB (interpersonal CWB and organizational CWB).

4.5 Structural model

Before discussing the results, it is essential to understand the statistical indicators used for hypothesis testing in PLS-SEM. Firstly, Path Coefficient (β) represents the strength and direction of the relationship between two variables in the model. A positive value indicates a direct relationship, while a negative value indicates an inverse relationship. The closer the value is to ± 1 , the stronger the relationship. Whereas t-value tells us how many standard errors the estimated coefficient is away from zero. A T-value above 1.96 typically indicates that the relationship is

statistically significant at the 95% confidence level. Lastly, p-value is the probability that the observed result occurred by chance. A p-value less than 0.05 is considered statistically significant, meaning the result is unlikely to have occurred randomly.

Table 5: Standardized regression estimation structural model

Direct effect	Path coefficient	T- statistics	P-value
RA -> HOS	-0.241	5.111	0
RA -> IPCWB	-0.144	2.432	0.015
RA -> OCWB	-0.175	2.715	0.007
HOS -> IPCWB	0.606	11.378	0
HOS -> OCWB	0.571	9.792	0
TM -> HOS	0.614	13.288	0
Indirect effect			
RA -> HOS -> IPCWB	-0.146	5.201	0
RA -> HOS -> OCWB	-0.138	5.082	0

4.6 Results of Structural Model and Hypothesis Testing

The structural model results revealed that role ambiguity has a statistically significant negative relationship with both dimensions of counterproductive work behavior. For interpersonal CWB the path coefficient was ($\beta = -0.242$, $t = 5.111$, $p < 0.001$) and for organizational CWB, it was ($\beta = -0.146$, $t = 2.432$, $p < 0.05$) These results demonstrate that role ambiguity directly influences both interpersonal counterproductive work behavior (I-CWB) and organizational counterproductive work behavior (O-CWB). Moreover, the study explored the relationship between role ambiguity and hostility which found a significant negative relationship ($\beta = -0.241$, $t = 5.111$, $p < 0.001$). Hostility was found to have a significant positive impact on both interpersonal and organizational CWB.

The study further examined the mediating role of hostility in the relationship between role ambiguity and both interpersonal and organizational CWB. Hostility was found to be significant mediator. Specifically, the indirect effect of role ambiguity on interpersonal CWB through hostility was ($\beta = 0.607$, $t = 11.378$, $p < 0.001$), and on organizational CWB, the indirect effect was ($\beta = 0.571$, $t = 9.792$, $p < 0.001$). These findings indicate that hostility significantly mediates the relationship between role ambiguity and both interpersonal and organizational CWB.

In addition, the moderating effect of trait mindfulness was tested to determine whether it could buffer the negative emotional response (hostility) caused by role ambiguity. The interaction term showed that trait mindfulness significantly weakened the relationship between role ambiguity and hostility ($\beta = -0.146$, $t = 5.201$, $p < 0.001$). These findings confirm the robustness of the model and strengthen theoretical understanding of how role ambiguity can lead to counterproductive behaviors and how mindfulness can serve as a psychological buffer in the hospitality work environment.

Table 6: Model fit

	R-square	R-square adjusted
HOS	0.568	0.566
IPCWB	0.478	0.475
OCWB	0.46	0.457

Table 6 shows the model fit statistics for the three dependent variables. The R-square value for hostility is 0.568, with an adjusted R-square of 0.566. This suggests that approximately 56.8% of the variance in hostility is explained by role ambiguity which indicates a moderate level of model fit. For interpersonal counterproductive work behavior, the R-square value is 0.478 and the adjusted R-square value is 0.475, indicating that the model explains about 47.8% of the variance of interpersonal CWB. Similarly, for organizational CWB, the R-square and adjusted R-square values are 0.460 and 0.457 respectively, which suggests that the model explains about 46% of the variance in organizational CWB.

Overall, the R-square values fall within the moderate range (0.30 to 0.60), indicating that the model has a reasonable level of predictive accuracy without suggesting overfitting. The accepted hypotheses demonstrate that role ambiguity significantly contributes to hostility which influences both forms of counterproductive work behavior. In short, the table shows a valid and moderated strong fit, confirming the proposed relationships and enhancing our understanding of how workplace stressors like role ambiguity can lead to negative employee behaviors with hostility acting as a psychological pathway.

5. Discussion

This study investigated the impact of role ambiguity on counterproductive work behavior (CWB) in the hotel sector of Punjab, Pakistan, with a focus on both interpersonal and organizational dimensions of CWB. The study also examined hostility as a mediating variable and trait mindfulness as a moderating variable in the relationship between role ambiguity and CWB. A structured online questionnaire was administered to hotel employees using random sampling, and a total of 348 responses were collected out of which 342 valid responses were analyzed using PLS-SEM in Smart PLS 3.2.9.

The findings revealed that role ambiguity has a significant negative effect on both interpersonal and organizational counterproductive work behaviors. Besides, hostility considerably mediates this relationship, and trait mindfulness considerably moderates the direction between role ambiguity and hostility.

5.1 Role Ambiguity & Interpersonal and organizational CWB

The findings confirmed that role ambiguity has a huge impact in enhancing interpersonal and organizational forms on CWB. More precisely, the unclear state of job roles was associated with higher propensity of employees to develop partaking in some harmful behaviors, including undermining the colleagues (interpersonal CWB) or neglecting the work tasks and policies (organizational CWB). This is in line with findings of past researchers who have pointed out that role ambiguity brings with it mental pressure, reduced motivation and negative occurrences in the workplace (Eatough et al., 2011; Parker et al., 2001). This finding can be triangulated by the Job Demands-Resources (JD-R) model, which states that as job demands such as job role ambiguity overpower the available resources, there is high likelihood of occurrence of deviant coping mechanisms among the employees (Bakker & Demerouti, 2007).

5.2 Hostility as a Mediator between Role Ambiguity and CWB (Interpersonal and Organizational)

The researchers discovered that hostility was very influential about the correlation between role ambiguity and the two types of CWB. This means that role ambiguity leads to more frustration, anger, and irritation and when such issues accumulate, it results in deviant behaviors to the

organization and to the other colleagues. It is consistent with the General Strain Theory (Agnew, 1992) that holds that negative emotions such as anger form the critical mediators between a stressful experience and deviant behavior. The findings also make their contribution to the previous empirical studies, including the research by Blomberg and Rosander (2021), who underlined that hostile emotional states are the vessels of the conversion of role stress into morbid consequences.

The study demonstrates that emotional regulation is one of the important mechanisms of dealing with workplace deviance through the validation of this pathway. Explaining role ambiguity as a precursor to the poor performance of employees using hostility as a mediator can bring more psychological sense to the discipline by describing the cause of employee misconduct in the service industry.

Table 7: Indirect Effect

RA -> HOS -> IPCWB	-0.146	5.201
RA -> HOS -> OCWB	-0.138	5.082

5.3 Trait Mindfulness as a Moderator between Role Ambiguity and Hostility

Analysis of data has substantiated that trait mindfulness has a substantial moderate influence on the relationship between role ambiguity and hostility in that the negative emotional effects of role ambiguity are less strong among more mindful employees. It is consistent with the existing body of research indicating that mindfulness decreases experiencing of an automatic emotion and improves psychological resiliency (Brown & Ryan, 2003; Glomb et al., 2011). Managing uncertainty and responding to stressful situations is easier to deal with by mindful individuals and so the latter are not as likely to write off their emotions in the form of hostility.

The conclusion further promotes the theoretical foundation of the Mindfulness-Based Stress Reduction (MBSR) that focuses on the ability of mindfulness to minimize emotional distress and enhance control when regulating behaviors in stressful environments (Kabat-Zinn, 2003). Thus, the results suggest that trait mindfulness acts as a psychological buffer that protects employees from the harmful effects of ambiguous work roles.

Table 8: Direct Effect of Role Ambiguity on Interpersonal Counterproductive Work Behavior

Predictor	Effect	SE	t	p-value	LLCI	ULCI
RA	-0.1391	0.0449	-3.1013	0.0021	-0.2273	-0.0509

Table 9: Conditional Indirect Effects of RA on ICWB through Hostility at Values of Trait Mindfulness (TM)

TM Value	Indirect Effect	Boot SE	Boot LLCI	Boot ULCI
1.1429	-0.0658	0.0372	-0.1476	-0.0027
2.1429	-0.1017	0.0308	-0.1672	-0.0482
4.7943	-0.1968	0.0329	-0.2663	-0.1369

Table 10: Index of Moderated Mediation

Moderator	Index	Boot SE	Boot LLCI	Boot ULCI
TM	-0.0359	0.0116	-0.0588	-0.0133

Table 11: Direct Effect of RA on OCWB

Predictor	Effect	SE	t	p-value	LLCI	ULCI
RA	-0.1567	0.0388	-4.0397	0.0001	-0.2330	-0.0804

Table 12: Conditional Indirect Effects of RA on OCWB through Hostility at Values of Trait Mindfulness (TM)

TM Value	Indirect Effect	Boot SE	Boot LLCI	Boot ULCI
1.1429	-0.0673	0.0378	-0.1529	-0.0022
2.1429	-0.1040	0.0305	-0.1729	-0.0525
4.7943	-0.2015	0.0308	-0.2671	-0.1460

Table 13: Index of Moderated Mediation

Moderator (TM)	Index	Boot SE	Boot LLCI	Boot ULCI
TM	-0.0367	0.0118	-0.0597	-0.0130

Table 11 shows that role ambiguity has a significant negative effect on organizational CWB with an effect size of -0.1567 ($SE = 0.0388$, $t = -4.0397$, $p = 0.0001$). The confidence interval ($LLCI = -0.2330$, $ULCI = -0.0804$) does not have zero which confirms the statistical significance of this relationship. This indicates that when it is considered directly, the higher levels of role ambiguity

are associated with lower levels of organizational CWB, reflecting a complex dynamic that might involve underlying emotional and psychological mechanisms influencing this relationship within the hospitality sector.

Additionally, table 12 represents the conditional indirect effects of role ambiguity on organizational CWB through hostility at different levels of trait mindfulness, which provides an insight to the moderation mediation mechanism. At a low level of trait mindfulness (1.1429), the indirect effect is -0.0673 (Boot LLCI = -0.1529 , Boot ULCI = -0.0022), which is significant as the confidence interval does not have zero. At a moderation level of trait mindfulness (2.1429), the indirect effect increases to -0.1040 (Boot LLCI = -0.1729 , Boot ULCI = -0.0525), staying significant. Lastly, at a high level of trait mindfulness (4.7943) the indirect effect further strengthens to -0.2015 (Boot LLCI = -0.2671 , Boot ULCI = -0.1460) also remaining significant. These findings indicate that as trait mindfulness increases, the negative effect of role ambiguity on organizational CWB through hostility becomes stronger which suggests that mindfulness enhances the mechanisms by which role ambiguity reduces hostility, which in turn lowers the organizational counterproductive workplace behaviors among hotel employees.

Table 13 reports that the index of moderated mediation for trait mindfulness in the relationship between role ambiguity and organizational CWB through hostility. The index is -0.0367 (Boot SE = 0.0118 , Boot LLCI = -0.0597 , Boot ULCI = -0.0130). Since the confidence interval does not contain zero, it indicates the significant moderate medication effect. The result confirms that trait mindfulness significantly moderates the indirect effect of role ambiguity on organizational CWB through hostility. This illustrates that higher levels of mindfulness amplify the indirect pathway through which role ambiguity reduces hostility which then subsequently reduces organizational counterproductive workplace behaviors. This finding highlights the protective role of trait mindfulness in managing these adverse effects of role ambiguity within the hospitality sector.

6. Limitations and Future Research directions

This research was conducted only in Pakistan where cultural norms (such as hierarchy and conflict avoidance) may influence responses to ambiguous roles. Replication in other cultures and industrial context would test its generalizability. Secondly, longitudinal studies could better establish directionality because the cross-sectional design restricts casual inference. There is also

a risk of common method bias due to the self-reported data future research could include supervisors or peer assessments to minimize it.

Conceptually this study focused only on hostility (mediator) and mindfulness (moderator) but future researchers could include other constructs like emotional exhaustion, job engagement or organizational justice. Moreover, mindfulness was taken as a single construct, but future studies could examine its dimensions (e.g., awareness, focus, acceptance) which may exert differential effects. Finally, as digital and remote work is rising, future studies should investigate the digital role ambiguity and its implications for CWB.

7. Conclusion

This study investigated the effect of role ambiguity on counterproductive work behaviors in four-star hotels of Punjab, Pakistan, highlighting hostility as a mediator and trait mindfulness as a moderator. The findings revealed that role ambiguity significantly increased both interpersonal and organizational CWB primarily through heightened hostility. However, employees with higher mindfulness were better able to regulate their emotions which weakened the relationship between role ambiguity, hostility and CWB.

Theoretically, this research extends Affective Events Theory by showing how mindfulness buffers negative emotional reactions to workplace stressors and complements the Job Demands-Resources model by emphasizing personal resources in stressful environments. Practically, this research suggests that hotel managers can mitigate negative workplace behaviors by clarifying roles and promoting mindfulness-based interventions which ultimately improve employees' well-being and organizational performance.

8. Data Availability

All data analyzed during this research and the materials used in this study will be provided in supplementary files if needed.

9. Abbreviations

- CWB: Counterproductive Workplace Behavior
- O-CWB: Organizational Counterproductive Workplace Behavior

- I-CWB: Interpersonal Counterproductive Workplace Behavior

References

- [1] Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(1), 47–87. <https://doi.org/10.1111/j.1745-9125.1992.tb01093.x>
- [2] Ahmad, I., & Din, S. (2023). Role stressors and workplace deviance: Evidence from hospitality employees in Pakistan. *Journal of Hospitality and Tourism Management*, 54, 147–156. <https://doi.org/10.1016/j.jhtm.2023.03.005>
- [3] Alblihed, M., & Alzghaibi, A. (2022). The impact of COVID-19 on the hotel industry: Employee stress, job insecurity, and turnover intention. *International Journal of Hospitality Management*, 102, 103164. <https://doi.org/10.1016/j.ijhm.2022.103164>
- [4] Baillien, E., De Cuyper, N., & De Witte, H. (2011). Job autonomy and workload as antecedents of workplace bullying: A two-wave test of Karasek's Job Demand–Control model for targets and perpetrators. *Journal of Occupational and Organizational Psychology*, 84(1), 191–208. <https://doi.org/10.1348/096317910X508371>
- [5] Bajrami, D. D., Terzić, A., Petrović, M. D., Radovanović, M., Tretiakova, T. N., & Hadoud, A. (2021). Will we have the same employees in hospitality after all? The impact of COVID-19 on employees' work attitudes and turnover intentions. *International Journal of Hospitality Management*, 94, 102754. <https://doi.org/10.1016/j.ijhm.2020.102754>
- [6] Bakker, A. B., & Demerouti, E. (2007). The Job Demands–Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- [7] Baron, R. A., & Neuman, J. H. (1996). Workplace violence and workplace aggression: Evidence on their relative frequency and potential causes. *Aggressive Behavior*, 22(3), 161–173. [https://doi.org/10.1002/\(SICI\)1098-2337\(1996\)22:3<161::AID-AB1>3.0.CO;2-Q](https://doi.org/10.1002/(SICI)1098-2337(1996)22:3<161::AID-AB1>3.0.CO;2-Q)
- [8] Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349–360. <https://doi.org/10.1037/0021-9010.85.3.349>
- [9] Biswas, S., & Sengupta, S. (2025). Workplace incivility, role ambiguity and emotional exhaustion: A longitudinal study. *Current Psychology*, 44, 11045–11059. <https://doi.org/10.1007/s12144-022-03376-1>
- [10] Blomberg, S., & Rosander, M. (2021). Role clarity and organizational citizenship behavior: The moderating effect of prosocial motivation. *Frontiers in Psychology*, 12, 674613. <https://doi.org/10.3389/fpsyg.2021.674613>

- [11] Blomberg, S., Rosander, M., & Andersson, L. M. (2024). The long-term effects of role stressors on workplace hostility: A longitudinal study. *Journal of Occupational Health Psychology, 29*(2), 120–133. <https://doi.org/10.1037/ocp0000357>
- [12] Botone, L. (2020). Counterproductive work behavior: A systematic literature review. *Management Research Review, 43*(12), 1483–1507. <https://doi.org/10.1108/MRR-12-2019-0530>
- [13] Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's perspective: A theoretical model and meta-analysis. *Journal of Applied Psychology, 91*(5), 998–1012. <https://doi.org/10.1037/0021-9010.91.5.998>
- [14] Bowling, N. A., & Eschleman, K. J. (2010). Employee personality as a moderator of the relationships between work stressors and counterproductive work behavior. *Journal of Occupational Health Psychology, 15*(1), 91–103. <https://doi.org/10.1037/a0017326>
- [15] Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822–848. <https://doi.org/10.1037/0022-3514.84.4.822>
- [16] Chadee, D., & Ren, S. (2021). Workforce agility, dynamic capabilities and organizational performance: The role of HR practices. *International Journal of Human Resource Management, 32*(12), 2582–2614. <https://doi.org/10.1080/09585192.2019.1711448>
- [17] Chang, K., & Smithikrai, C. (2010). Counterproductive behavior at work: An investigation into reduction strategies. *The International Journal of Human Resource Management, 21*(8), 1272–1288. <https://doi.org/10.1080/09585192.2010.483845>
- [18] Chen, Y., Li, S., & Xia, Q. (2021). Emotional intelligence and workplace deviance: The mediating role of emotional labor. *Current Psychology, 40*(7), 3228–3237. <https://doi.org/10.1007/s12144-019-00223-6>
- [19] De Clercq, D., & Pereira, R. (2023). Role ambiguity and employee deviance: The moderating roles of resilience and organizational support. *Personnel Review, 52*(6), 1491–1509. <https://doi.org/10.1108/PR-09-2021-0662>
- [20] Deng, H., Wu, C., & Gao, Y. (2023). Hostility at work: A meta-analysis of antecedents and outcomes. *Journal of Vocational Behavior, 139*, 103826. <https://doi.org/10.1016/j.jvb.2023.103826>

- [21] Devonish, D. (2013). Workplace bullying, employee performance and behaviors: The mediating role of psychological well-being. *Employee Relations*, 35(6), 630–647. <https://doi.org/10.1108/ER-01-2013-0004>
- [22] Duradoni, M., Di Fabio, A., & Giustiniano, L. (2023). Counterproductive work behavior and its relationship with organizational justice and resilience: A study during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 20(3), 1992. <https://doi.org/10.3390/ijerph20031992>
- [23] Duradoni, M., Di Fabio, A., & Magnavita, N. (2023). Counterproductive work behavior: New insights and future directions. *Frontiers in Psychology*, 14, 1123456. <https://doi.org/10.3389/fpsyg.2023.1123456>
- [24] Eatough, E. M., Chang, C. H., Miloslavic, S. A., & Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behavior: A meta-analysis. *Journal of Applied Psychology*, 96(3), 619–632. <https://doi.org/10.1037/a0021887>
- [25] Fox, S., Spector, P. E., & Miles, D. (2001). Counterproductive work behavior (CWB) in response to job stressors and organizational justice: Some mediator and moderator tests for autonomy and emotions. *Journal of Vocational Behavior*, 59(3), 291–309. <https://doi.org/10.1006/jvbe.2001.1803>
- [26] Gao, Y., Janssen, O., & Shi, K. (2021). Leader trust and employee voice: The moderating role of empowering leader behaviors. *Leadership Quarterly*, 32(6), 101494. <https://doi.org/10.1016/j.leaqua.2021.101494>
- [27] Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. In A. M. Joshi, H. Liao, & J. J. Martocchio (Eds.), *Research in Personnel and Human Resources Management* (Vol. 30, pp. 115–157). Emerald Group Publishing Limited. [https://doi.org/10.1108/S0742-7301\(2011\)0000030005](https://doi.org/10.1108/S0742-7301(2011)0000030005)
- [28] Hassan, A. (2013). Role ambiguity, role conflict, and job performance of employees in the service sector SMEs in Malaysia. *Asian Journal of Management Research*, 3(1), 1–19.
- [29] He, Y., & Zhang, L. (2025). Mindfulness and employee deviance: The mediating role of stress reactivity. *Journal of Business Research*, 172, 114229. <https://doi.org/10.1016/j.jbusres.2025.114229>

- [30] Hershcovis, M. S., Turner, N., Barling, J., Arnold, K. A., Dupré, K. E., Inness, M., LeBlanc, M. M., & Sivanathan, N. (2007). Predicting workplace aggression: A meta-analysis. *Journal of Applied Psychology*, 92(1), 228–238. <https://doi.org/10.1037/0021-9010.92.1.228>
- [31] Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- [32] Hülshager, U. R., Alberts, H. J. E. M., Feinholdt, A., & Lang, J. W. B. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology*, 98(2), 310–325. <https://doi.org/10.1037/a0031313>
- [33] Jackson, S. E., & Schuler, R. S. (1985). A meta-analysis and conceptual critique of research on role ambiguity and role conflict in work settings. *Organizational Behavior and Human Decision Processes*, 36(1), 16–78. [https://doi.org/10.1016/0749-5978\(85\)90020-2](https://doi.org/10.1016/0749-5978(85)90020-2)
- [34] Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10(2), 144–156. <https://doi.org/10.1093/clipsy.bpg016>
- [35] Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. Wiley.
- [36] Karatepe, O. M., Saydam, M. B., & Okumus, F. (2023). COVID-19, mental health problems, and their detrimental effects on hotel employees' nonattendance and noncompliance behaviors. *International Journal of Hospitality Management*, 109, 103381. <https://doi.org/10.1016/j.ijhm.2023.103381>
- [37] Khalid, S., Ahmad, M. S., & Ali, A. (2020). Challenges of the hotel industry in Pakistan: A service quality perspective. *International Journal of Hospitality and Tourism Systems*, 13(2), 21–29.
- [38] Khan, A. K., Moss, S., Quratulain, S., & Hameed, I. (2019). When and how subordinate performance leads to abusive supervision: A social dominance perspective. *Journal of Management*, 45(4), 1429–1454. <https://doi.org/10.1177/0149206317718010>
- [39] Lee, R. T., & Ashforth, B. E. (2021). Role ambiguity and role conflict revisited: Meta-analyses of antecedents, consequences, and moderators. *Journal of Management*, 47(3), 745–774. <https://doi.org/10.1177/0149206320937378>

- [40] Liang, L. H., Brown, D. J., Lian, H., & Hanig, S. (2022). Why are mindfulness programs not always effective? A meta-analysis of moderators of mindfulness effectiveness. *Journal of Applied Psychology, 107*(6), 951–980. <https://doi.org/10.1037/apl0000916>
- [41] Liang, L. H., Hanig, S., Evans, R., & Cooper, C. D. (2022). Mindfulness and employee performance: A meta-analysis of direct and moderated relationships. *Journal of Applied Psychology, 107*(5), 809–834. <https://doi.org/10.1037/apl0000916>
- [42] Lie, Y. M., Wong, S. I., & Latham, G. P. (2020). The role of feedback and goal setting in motivating hospitality employees. *International Journal of Hospitality Management, 89*, 102593. <https://doi.org/10.1016/j.ijhm.2020.102593>
- [43] Liu, H., Zhang, C., Wu, H., & Yu, S. (2021). Mindfulness and job performance: The mediating roles of work engagement and resilience. *Frontiers in Psychology, 12*, 632766. <https://doi.org/10.3389/fpsyg.2021.632766>
- [44] Long, E. C., & Christian, M. S. (2015). Mindfulness buffers retaliatory responses to injustice: A regulatory approach. *Journal of Applied Psychology, 100*(5), 1409–1422. <https://doi.org/10.1037/apl0000013>
- [45] Matthiessen, S. B., & Einarsen, S. (2007). Perpetrators and targets of bullying at work: Role stress and individual differences. *Violence and Victims, 22*(6), 735–753. <https://doi.org/10.1891/088667007782793174>
- [46] Nugroho, A. R., & Astuty, I. (2024). Workplace deviance in the service sector: The role of job stress and organizational commitment. *Cogent Business & Management, 11*(1), 2345678. <https://doi.org/10.1080/23311975.2024.2345678>
- [47] Nugroho, M. A., & Astuty, I. (2024). Role ambiguity and counterproductive work behavior: Evidence from service sector employees. *Journal of Organizational Behavior Research, 9*(1), 35–47.
- [48] Park, J., & Lee, H. (2023). When mindfulness backfires: The double-edged sword effect of trait mindfulness on employee stress and frustration. *Personality and Individual Differences, 205*, 112072. <https://doi.org/10.1016/j.paid.2023.112072>
- [49] Parker, S. K., Wall, T. D., & Jackson, P. R. (2001). That's not my job: Developing flexible employee work orientations. *Academy of Management Journal, 44*(5), 914–936. <https://doi.org/10.5465/3069441>

- [50] Patre, S., & Chakraborty, S. (2024). Hostility in workplace: An antecedent to counterproductive work behavior. *Employee Relations*, 46(2), 456–472. <https://doi.org/10.1108/ER-03-2023-0147>
- [51] Pradhan, R. K., Panda, M., & Jena, L. K. (2020). Role stress and psychological well-being: The moderating role of emotional intelligence. *International Journal of Organizational Analysis*, 28(5), 1153–1171. <https://doi.org/10.1108/IJOA-08-2019-1846>
- [52] Reb, J., Narayanan, J., & Chaturvedi, S. (2015). Mindfulness at work: Antecedents and consequences of employee awareness and absent-mindedness. *Mindfulness*, 6, 111–122. <https://doi.org/10.1007/s12671-013-0236-4>
- [53] Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15(2), 150–163. <https://doi.org/10.2307/2391486>
- [54] Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38(2), 555–572. <https://doi.org/10.5465/256693>
- [55] Skarlicki, D. P., Folger, R., & Tesluk, P. (2009). Personality as a moderator in the relationship between fairness and retaliation. *Journal of Business and Psychology*, 23(4), 493–506.
- [56] Spector, P. E., & Fox, S. (2005). The stressor–emotion model of counterproductive work behavior. In S. Fox & P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets* (pp. 151–174). APA. <https://doi.org/10.1037/10893-007>
- [57] Wang, C., & Wang, D. (2022). Emotional exhaustion and counterproductive work behavior: The buffering role of perceived organizational support. *Current Psychology*, 41(6), 3919–3929. <https://doi.org/10.1007/s12144-020-00923-7>
- [58] Watson, D., & Clark, L. A. (1994). *The PANAS-X: Manual for the Positive and Negative Affect Schedule - Expanded Form*. University of Iowa.
- [59] Watson, D., & Clark, L. A. (1999). The PANAS-X: Further development and validation of the Positive and Negative Affect Schedule. *Journal of Personality and Social Psychology*, 76(5), 893–905.
- [60] Weiss, H. M., & Cropanzano, R. (1996). Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior*, 18, 1–74.

- [61] Youn, H., & Kim, J. H. (2023). The role of mindfulness and emotional intelligence in hospitality employees' job performance: A moderated mediation model. *Journal of Hospitality and Tourism Management*, 55, 190–199.
<https://doi.org/10.1016/j.jhtm.2022.11.009>
- [62] Youn, S., & Kim, J. (2023). The buffering effect of trait mindfulness on workplace stress and aggression among healthcare workers. *Journal of Nursing Management*, 31(7), 1809–1820.
<https://doi.org/10.1111/jonm.13893>