

# Exploring the Impact of Customer Mistreatment on Employees: The Mediating and Moderating Roles of Emotional Exhaustion, Cognitive Rumination, and Role Overload

## ABSTRACT

Customer mistreatment is an accelerated stressor in the hospitality industry, and it not only results in the risk of psychological issues but also employees' personal lives. Moreover, drawing on the conservation of resources theory, customer mistreatment depletes employees' emotional and cognitive resources, leading to heightened stress, anxiety, and family conflict. Furthermore, role overload is identified as a factor that intensifies these effects, exacerbating emotional exhaustion and cognitive rumination. The results investigate the positive relationships between customer mistreatment and employees' mental disorders as well as work-family conflict. Emotional exhaustion and cognitive rumination are proposed as mediators in these relationships, respectively, revealing the mechanisms through which mistreatment impacts psychological and familial outcomes. Additionally, role overload is examined as a moderator, amplifying the effects of customer mistreatment on mental disorders via emotional exhaustion and on work-family conflict via cognitive rumination.

**Keywords:** customer mistreatment, emotional exhaustion, cognitive rumination, mental disorder, work-family conflict, role overload

# Introduction

## Background and Motivation

Customer mistreatment is an escalating concern in the hospitality industry, where frontline employees frequently encounter challenging interactions with clients (Srivastava et al., 2024). These interactions often involve rude, aggressive, or disrespectful behaviors, posing significant challenges to maintaining employee well-being (Baker & Kim, 2024), service quality and organizational stability (Qiaoling et al., 2024). The consequences of such behaviors are far-reaching, affecting not only the individuals directly involved but also the overall operational performance of hospitality organizations (Wu et al., 2023). Moreover, researches highlight that daily customer mistreatment has been shown to spill over into employees' personal lives, reducing their energy and increasing fatigue (Yang, et al., 2020). Such negative effects extend to service performance, as mistreated employees often experience diminished self-esteem and role alignment, resulting in reduced service quality and, in extreme cases, deliberate service sabotage (Lu et al., 2022). This highlights the urgent need for organizations to address the issue and develop strategies to mitigate its effects.

Customer mistreatment has emerged as a critical issue in the workplace, studies indicate that exposure to customer mistreatment increases the risk of psychological issues such as emotional exhaustion, anxiety, and depression, as employees struggle to cope with these stressful encounters (Wu et al., 2022). This spillover effect can create tensions in familial relationships, exacerbate mental health challenges (Shao et al., 2021) and leading to psychological disorders (Shin et al., 2021). Prolonged emotional exhaustion can result in more severe mental health issues, including anxiety and depression. However, the exact mechanisms linking customer mistreatment, emotional exhaustion, and mental health remain underexplored.

Recent studies indicate that such mistreatment not only diminishes workplace satisfaction but also exacerbates stress that spills over into employees' personal lives, potentially leading to work-family conflict (Zhang et al., 2019). Additionally, cognitive rumination amplifies the stress from customer mistreatment, as employees replay negative interactions in their minds (Zhang et al., 2024). Cognitive rumination has been identified as a mechanism that intensifies the mental burden of workplace stressors, hindering employees' ability to disengage from work-related thoughts and recover during non-working hours (Zhang et al., 2023). In addition, prior work suggests that negative customer interactions can increase work-family conflict through heightened emotional and cognitive stress (Chi et al., 2018). Furthermore, the repercussions of customer mistreatment often extend beyond the workplace, leading to work-family conflict

(Zhao et al., 2024). This rumination not only prolongs stress but also spills over into family life, creating work-family conflicts (Shin et al., 2021). Customer mistreatment impacts employees by inducing cognitive rumination, which contribute to work-family conflict, respectively. However, the mechanisms underlying this relationship remain underexplored. Cognitive rumination is a potential mediating factor that warrant further investigation.

Role overload refers to the excessive demands placed on employees due to multiple or conflicting responsibilities (Zhang et al., 2022). This can exacerbate the effects of customer mistreatment, intensifying emotional exhaustion, which in turn, is a critical mediator in the development of psychological disorders. For example: Emotional exhaustion serves as a key mediator between customer mistreatment and psychological outcomes. Research shows that excessive role demands exacerbate this exhaustion by depleting employees' emotional resources, leading to burnout and mental health challenges (Kim & Tak, 2023). Similarly, studies indicate that when employees face role overload, they experience heightened stress, making it harder to recover from the negative impacts of mistreatment, ultimately resulting in depression and anxiety (Zhao & Liu, 2024).

Additionally, COR theory explains that role overload depletes employees' emotional and cognitive resources, making them more susceptible to emotional exhaustion caused by customer mistreatment. This strain impairs coping mechanisms, increasing the risk of psychological disorders (Rafique, 2022). Overloaded roles exacerbate the cumulative effect of daily stressors such as customer incivility. This chronic strain leads to severe mental health outcomes, including anxiety and depression (Yang et al., 2020). Role overload magnifies the emotional exhaustion that mediates the relationship between customer mistreatment and psychological disorders.

Moreover, role overload refers to employees facing excessive or conflicting demands, which can exacerbate the effects of cognitive rumination—when individuals continuously think about stressful events like customer mistreatment. Employees who engage in frequent rumination due to customer mistreatment experience heightened work-family conflict, as unresolved stress diminishes their ability to balance work and family roles (Zhao et al., 2024). Role overload amplifies cognitive rumination because it creates additional stressors, leaving employees with fewer psychological resources to process and recover from mistreatment. This exacerbates the negative effects of mistreatment on work-family conflict (Dodanwala et al., 2022). The combined burden of customer mistreatment and role overload leads to prolonged cognitive engagement, further straining work-family relationships (Vatharkar & Aggarwal-Gupta, 2020). When employees face high role overload, their ability to detach mentally from

work decreases, intensifying the adverse effects of rumination on family dynamics (Feng et al., 2023).

This study seeks to explore the intricate relationship between customer mistreatment and psychological disorders, with a particular focus on the mediating role of emotional exhaustion. Understanding this mediating mechanism can provide insights into how adverse customer behaviors directly impact employees' psychological health. Moreover, the study investigates the relationship between customer mistreatment and work-family conflict, emphasizing the mediating role of cognitive rumination. This perspective sheds light on the cognitive processes through which customer mistreatment transcends the boundaries of the workplace, affecting employees' home environments. Lastly, this research incorporates the moderating role of role overload in these relationships. Employees experiencing high levels of role overload may lack the resources to effectively manage the stress caused by mistreatment, thereby intensifying its impact on emotional exhaustion, cognitive rumination, and related outcomes.

By addressing these interconnected dynamics, this study aims to provide a comprehensive understanding of how customer mistreatment influences employees' psychological and work-family outcomes, while also identifying critical moderating and mediating mechanisms. These findings have practical implications for organizational strategies aimed at mitigating the negative consequences of customer mistreatment.

## **Literature Review**

### **Customer Mistreatment and Mental Disorder**

During service delivery, customer mistreatment in general involves the behavior of treating the service employee disrespectfully or demeaning, including impolite behaviors, verbal abuse, or unreasonable demands while interacting with service employees (Spencer & Rupp, 2009; Chi et al., 2013; Baranik et al., 2017). And it is reported that unfriendly manners, verbal abuse, and dysfunctional customer behaviors are the most observed issues of customer mistreatment (Harris & Reynolds, 2004; Yi & Gong, 2006). Customer mistreatment is recognized as a significant stressor in many service-oriented work environments (e.g., Dormann & Zapf, 2004; Grandey et al., 2012). According to the control theory of job stress (Spector, 1998), stressors in the workplace may trigger negative emotions as an initial response to stress. These stressors at work are perceived as a threat to the employees' well-being, since the mistreatment behavior is often perceived as both unfair (Rupp & Spencer, 2006) and stressful (Grandey et al., 2004).

Based on the conservation of resources theory (Hobfoll, 1989), customer mistreatment serves as a workplace stressor that drains the psychological resources of service employees. As a result, employees might lack the necessary resources to effectively address job-related challenges (Wang et al., 2023), this depletion weakens their resilience, increasing susceptibility to anxiety, depression, and other mental health challenges (Hobfoll, 1989). Prior studies indicated mental disorders are increasingly common in developed countries, with their prevalence peaking during working age, making them a leading cause of sickness absence (Roelen et al., 2012). Customer mistreatment has also been linked to a negative influence on service employees' cognition, such as impairing their working memory (e.g., Rafaeli et al., 2012) and threatening their self-efficacy (e.g., Dormann & Zapf, 2004). Given that customer mistreatment acts as a significant stressor and resource drain in service environments, it is likely to contribute to the onset or exacerbation of mental disorders among employees. Based on this reasoning, we propose the following hypothesis:

*H1: Customer mistreatment is positively related to mental disorder.*

### **Customer Mistreatment and Work-Family Conflict**

Customer mistreatment is referred to the event that frontline employees are mistreated by customers with unreasonable rudeness, disrespect, or verbal abuse attitude (Grandey et al., 2004; Groth & Grandey, 2012). Empirical noticed that customer mistreatment has become a main stress in work and undoubtedly as one of the main job stressors as for many service workers (Chi et al., 2018; Zhang et al., 2019). Frontline workers need to exert additional personal efforts to cope with these negative work-related emotions caused by inappropriate treatment from customers during their shifts in the hospitality industry. To be more precise, over 90% of restaurant workers have encountered customer mistreatment (Harris & Reynolds, 2004). Customer mistreatment can lead to serious work stress to frontline employees (Dormann & Zapf, 2004).

According to the conservation of resources theory made by Hobfoll (1989), the more effort employees put into their work, the less time they are able to spend at home. If employees feel stress during their work domains, they probably lose their control with their family domain at the same time for everyone has limited time and energy and it is impossible to focus on both work and family roles at the same time (Dodanwala et al., 2022; Duxbury et al., 2008), which accelerate work-family conflict. Based on the stressor-emotion model, work pressures can positively influence employees' personal lives (Chi et al., 2018; Fox & Spector, 2006). Generally speaking, customer mistreatment is a significant job stressor for many service jobs

(Chi et al., 2018). Empirical also studied about how negative spillover effects evoked employees' work-family conflict (Chi et al., 2018; Zhang et al., 2019)

Hence, the hypotheses in the current study we propose:

*H2: Customer mistreatment positively affects employees' work-family conflict.*

### **The Mediating Role of Emotional Exhaustion**

Emotional exhaustion, a core dimension of burnout, is defined as the state of being emotionally drained due to prolonged exposure to stressors, emotional exhaustion captures the immediate psychological toll of dealing with mistreatment (Grandey et al., 2004). The affective events theory (Weiss & Cropanzano, 1996) posits that affective events that happen to people at work settings can trigger emotional reactions that influence behaviors and attitudes, and can impact job performance and satisfaction. From the perspective of the COR theory (Halbesleben et al., 2014; Hobfoll et al., 2018), customer mistreatment functions as a workplace stressor that depletes the psychological resources of service employees. Also, the negative emotions can be contagious to service employees, depleting their personal resources and ultimately impairing their well-being (Grandey et al., 2012). Emotional exhaustion disrupts employees' ability to recover from stress, leading to psychological disorders like anxiety and depression (Yagil, 2021). Therefore, the hypotheses in the current study we propose:

*H3: Emotional exhaustion mediates the positive relationship between customer mistreatment and mental disorder.*

### **The Mediating Effect of Cognitive Rumination**

Customer mistreatment can be regarded as the main stress for service employees, for example, customers made unreasonable demands or behaved in a rude or aggressive manner toward service workers (Kim, 2023; Park & Kim, 2020) and these work-related stress have influenced employees physically and psychologically; as a result, employees would experience serious negative emotions (Yagil, 2021). According to the conservation of resources theory, every individual naturally knows how to preserve, protect, or even build valuable resources for themselves. Nevertheless, resources are limited (i.e., time, energy, or capability). If work-related stress is occupied most of one's resources, work-family conflict is encountered (Pak et al., 2022; Wood et al., 2020).

Based on the stressor-emotion model, negative work events (i.e., customer mistreatment) may first result in negative emotions and finally triggers negative reactions (Eissa et al., 2020). When service workers face inappropriate treatment from customers, the uncomfortable

emotions cause involuntarily dwell on negative thoughts (Lin & Bai, 2022). Empirical studies found out that people experienced cognitive rumination after customer mistreatment (Baranik et al., 2017; Chuang et al., 2021). Meanwhile, cognitive rumination can further burn out service workers' resources and interfere with their family roles (Chi et al, 2018). When service workers repeatedly ruminate on negative work scenarios and are overwhelmed with negative emotions, which leads to difficulty fulfilling their family roles and causes work-family conflict (Wang et al., 2013). Rumination drains out resources from employees, causing them to act with a more antisocial and impulsive attitude in response to customer mistreatment events (Ni et al., 2024).

Thus, the hypotheses in the current study we propose:

*H4: Cognitive rumination mediates the positive relationship between customer mistreatment of work-family conflict.*

### **The Moderating Effect of Role Overload**

Role overload is a serious and increasing issue these years (Brown et al., 2005), which refers to those who have multiple roles with multiple expectations from both work and family; however, both roles are all overwhelmed (Eatough et al., 2011). Long working hours trigger higher role conflicts (Pak et al., 2022), especially when the roles overlap both work and family domains, role overload becomes a severe stress stressor (Zhang et al., 2022).

When talking about the affective events theory, Weigelt et al. (2021) concluded that the negative effects from continuing negative work events would have bad influence at work. Customer mistreatment not only exhausted other tasks' cognitive resources (Goldberg & Grandey, 2007), but also generated employees' work stress (Bi et al., 2021). For frontline service workers, cognitive rumination after work affects their negative emotions at home and persists for a long time (Shi et al., 2024). In other words, work pressure can last longer and even mess up employees' personal lives (Chi et al., 2018). Resources are depleted after customer mistreatment and employees may become antisocially and impulsively (Ni et al., 2024)

Employees experiencing role overload are tasked with juggling numerous and often conflicting responsibilities, which magnify stress when coupled with customer mistreatment. Under high role overload conditions, the emotional and cognitive toll of customer mistreatment becomes even more prominent, resulting in heightened exhaustion and psychological strain.

Employees experiencing role overload are tasked with juggling numerous and often conflicting responsibilities, which magnify stress when coupled with customer mistreatment. Under high role overload conditions, the emotional and cognitive toll of customer mistreatment becomes even more prominent, resulting in heightened exhaustion and psychological strain.

Therefore, we propose the following:

*H5: Role overload moderates the positive relationship between customer mistreatment and mental disorder, mediated via emotional exhaustion: for employees with high role overload, the relationship is stronger.*

Role overload is a kind of role conflict based on a time-based form when multiple tasks happen in a simultaneous period of time (Duxbury et al., 2008). Empirical research mentioned that increased role overload results in higher emotional burnout, work-related stress, work-family conflict, and psychological strain (Dodanwala et al., 2022; Tang & Vandenberghe, 2021; Vullings et al., 2020). Therefore, the hypotheses in the current study we propose:

*H6: Role overload moderates the positive relationship of customer mistreatment and work-family conflict, mediated via cognitive rumination: for employees with high role overload, the relationship is stronger.*

## Methodology

### Research Model

As figure 1 shows, the present study aims at exploring the relationship between customer mistreatment, emotional exhaustion, cognitive rumination, mental disorder, and work-family conflict.

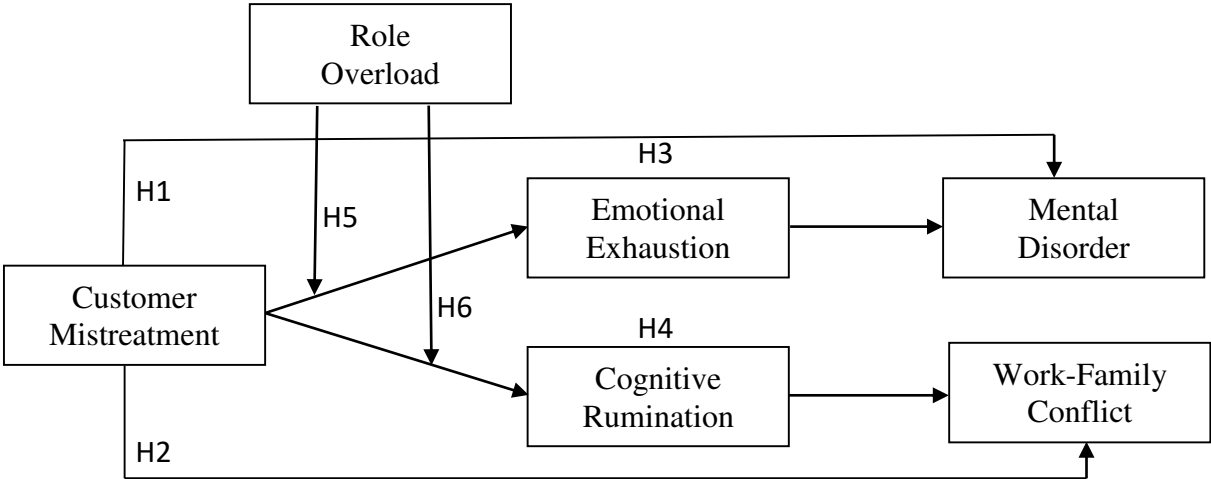


Figure1 Research model

### Participants and Procedure

The present study’s participants are front-line service workers (n = 380) because of their high-pressure working phenomena, long-working hours, and shifting demands in the hospitality

industry in Taiwan. An anonymous online questionnaire was designed from Google Forms, and spread through the internet via a snowballing strategy. The main targets are front-line employees from international hotels, hotels, chain restaurants, restaurants, homestays, travel agencies, flight attendants, and others. It was scored on a five-point Likert scale ranging from 1 to 5 (1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree).

## **Measures**

### ***Customer Mistreatment***

To measure customer mistreatment, a 3-item customer mistreatment scale ( $\alpha = .804$ ) from Chi et al. (2013) is used to examine how testers' customer mistreatment affect their working experience. A sample item was "Customers complain about your service performance for no reason." The results of factor loading are between .679 ~ .824, and the composite reliability (CR) was .807 and the results of average variance extracted (AVE) were .584.

### ***Emotional Exhaustion***

To measure emotional exhaustion, a 4-item scale ( $\alpha = .882$ ) developed by Shu et al. (2019) is used to examine the testers' emotional exhaustion. A sample item was "My work always brings me down, and I am even unable to laugh." The results of factor loading are between .775 ~ .853, and the composite reliability (CR) was .884 and the results of average variance extracted (AVE) were .656.

### ***Cognitive Rumination***

To measure cognitive rumination, an 8-item cognitive rumination scale ( $\alpha = .953$ ) developed by McCullough et al. (2007) is used to examine how the testers' cognitive rumination affects them. A sample item was "I can't stop thinking about what (customers) have done to me." The results of factor loading are between .690 ~ .916, and the composite reliability (CR) was .953 and the results of average variance extracted (AVE) were .718.

### ***Mental Disorder***

To measure mental disorder, a 5-item Brief Symptom Rating Scale (BSRS-5) ( $\alpha = .889$ ) selected from BSRS-50 scale (Lee et al., 2003) is used to examine how strong the testers' mentally illness is. A sample item was "I have trouble sleeping, such as falling asleep, waking up easily or waking early." The results of factor loading are between .657 ~ .884, and the composite reliability (CR) was .892 and the results of average variance extracted (AVE) were .624.

### ***Work-Family Conflict***

To measure work-family conflict, a 9-item work-family conflict scale ( $\alpha = .904$ ) developed

by Carlson et al. (2000) is used to examine how testers' work interfere with their family. A sample item was "I am unable to participate in the family activities due to my work." The results of factor loading are between .533 ~ .843, and the composite reliability (CR) was .904 and the results of average variance extracted (AVE) were .516.

### ***Role Overload***

To measure role overload, an 8-item scale ( $\alpha = .864$ ) made by Rizzo et al. (1970) is used to examine how multiple roles affect testers. A sample item was "My work requires me to have communication and coordination skills with many supervisors or colleagues, which is not easy to handle." The results of factor loading are between .763 ~ .987, and the composite reliability (CR) was .948 and the results of average variance extracted (AVE) were .724.

### **Data Analysis**

SPSS and JASP were used in the current study for data analysis. First of all, SPSS is used to conduct descriptive statistics analysis of participants' demographic variables, including gender, age, marital status, type of company and seniority. Secondly, JASP is used to perform confirmatory factor analyses (CFAs) on all measures in order to examine whether the hypothesized construct model fits the data well. Further, structural equation modeling (SEM) is utilized to further testify the interactions of each variable in relation to mediating effects. In addition, CFA was employed to assess the validity of the constructs, ensuring that the dimensions exhibited loadings surpassing the established standard as per Lee et al. (2022). Moreover, to examine the moderating effect, a process (hierarchical regression analysis) is used to analyze data, and the interaction plots were made to further inspect the moderating effect that with higher the moderating effect, stronger the relationship.

## **Results**

The present study's participants are front-line service workers ( $n = 380$ ) in the hospitality industry in Taiwan. Among the 380 participants, 40.789% ( $n = 155$ ) were men and 59.211% ( $n = 225$ ) were women. The majority were 21-30-year-old ( $n = 169, 44.474\%$ ), followed by those aged 31-40 ( $n = 68, 17.895\%$ ), 41-50 ( $n = 62, 16.316\%$ ), 51 and above ( $n = 45, 11.842\%$ ) and 20 and below ( $n = 36, 9.474\%$ ). For marital status, over 60% of participants were single ( $n = 234, 61.579\%$ ), while married with children were 25.789% ( $n = 98$ ), followed by 7.105% ( $n = 27$ ) were married, 4.211% ( $n = 16$ ) were divorced, and only 1.316% ( $n = 5$ ) were in other status. In terms of diverse types of employment, 75.263% of the participants were in the hospitality industry, including 28.421% ( $n = 108$ ) in restaurants, 20.526% ( $n = 78$ ) in chain restaurants, 12.368% ( $n = 47$ ) in international

hotels, 9.474% (n = 36) in hotels, 1.842% (n = 7) in homestays, 1.579% (n = 6) in flight attendants, and 1.053% (n = 4) in travel agencies, whereas 24.737% (n = 94) were in other industries. Most participants have been working under 1 year (n = 131, 34.474%) and over 6 years (n = 118, 31.053%), others were between 1-3 years (n = 91, 23.947%) and 3-6 years (n = 40, 10.526%).

### Confirmatory Factor Analysis

We performed a confirmatory factor analysis to test whether our proposed Six-factor model (i.e., customer mistreatment, role overload, cognitive rumination, emotional exhaustion, work-family conflict and mental disorder) fit the data better than the 1-factor model (all items loaded on the same factor) and Four-factor model (customer mistreatment, role overload, cognitive rumination and work-family conflict items loaded on the same factor, emotional exhaustion mental disorder items loaded on the same factor). The results show that the proposed Six-factor measurement model provided a better fit ( $\chi^2/df = 3.116$  (1305.548/419), NFI = .860, RFI = .845, IFI = .901, TLI = .889, CFI = .900, GFI = .909, RMSEA = .075) than the 1-factor model ( $\chi^2/df = 8.352$  (5253.920/628), NFI = .525, RFI = .497, IFI = .557, TLI = .529, CFI = .555, GFI = .694, RMSEA = .139) and 4-factor model ( $\chi^2/df = 5.111$  (3199.905/626), NFI = .711, RFI = .692, IFI = .753, TLI = .737, CFI = .833, RMSEA = .104). Thus, the data supported the model in the present study.

Model	$\chi^2$	$\chi^2/df$	NFI	RFI	IFI	TLI	CFI	GFI	RMSEA
Six-factor model	1305.54 8	3.116	.860	.845	.901	.889	.900	.909	.075
Four-factor model	3199.90 5	5.111	.711	.692	.753	.737	.753	.833	.104
One-factor model	5253.92 0	8.352	.525	.497	.557	.529	.555	.694	.139

### Descriptive Statistics and Correlation Analysis

The means, standard deviations, correlations and validity (on the diagonal) of all the variables in the present study can be seen in table 1. For employees, work-family conflict was correlated with emotional exhaustion ( $r = .567, p < .001$ ), mental disorder ( $r = .479, p < .001$ ) work engagement ( $r = .136, p < .01$ ), and role overload ( $r = .622, p < .001$ ). Emotional exhaustion was correlated with mental disorder ( $r = .705, p < .001$ ) and role overload ( $r = .595, p < .001$ ). Mental

disorder was correlated with role overload ( $r = .480, p < .001$ ). Role overload was correlated with work engagement ( $r = .226, p < .001$ ).

Table 1 Means, Standard Deviations, Correlations and Discriminant validity.

Variable	Means	SD	1	2	3	4	5	6
1. Customer Mistreatment	2.775	1.015	(.804)					
2. Role Overload	3.200	.865	.427***	(.864)				
3. Emotional Exhaustion	3.107	1.081	.468***	.596***	(.882)			
4. Cognitive Rumination	2.789	1.071	.422***	.500***	.539***	(.953)		
5. Mental Disorder	2.916	1.055	.442***	.475***	.702***	.617***	(.889)	
6. Work-Family Conflict	3.042	.945	.421***	.622***	.568***	.446***	.477***	(.904)

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  SD=Standard Deviations.

Numbers in parentheses = Cronbach's  $\alpha$  value.

## Hypothesis Testing

### Direct Effects

According to table 2, both customer mistreatment are positively related to mental disorder (Estimate = .144, 95% CI [.065 .222]) and work-family conflict (Estimate = .279, 95% CI [.185 .373]). Thus, the results of H1 and H2 are all supported.

### Mediating Effects

According to table 2, results suggest that emotional exhaustion significantly mediates the relationship between customer mistreatment with mental disorder (Estimate = .292, 95% CI [.225 .358]) and cognitive rumination significantly mediates the relationship between customer mistreatment with work-family conflict (Estimate = .135, 95% CI [.086 .185]). Therefore, both H3 and H4 are supported.

Table 2 Direct Effect and Indirect Effects

Hypothesis path	Standard error	Estimates	Percentile 95% CI	
			Lower	Upper
H1: Customer Mistreatment → Mental Disorder	.040	.144***	.065	.222
H2: Customer Mistreatment → Work-Family Conflict	.048	.279***	.185	.373
H3: Customer Mistreatment → Emotional Exhaustion → Mental Disorder	.034	.292***	.225	.358
H4: Customer Mistreatment → Cognitive Rumination → Work-Family Conflict	.025	.135***	.086	.185

Sample Size = 380. CI = bias corrected and accelerated 95% confidence interval; 5000 bootstrap samples. Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

### Moderated mediation effects

SPSS Process (version 4.2) Model 7 (bootstrap = 5000) is applied to examine the moderated mediation effects Hayes (2022). We also followed Hayes (2022) procedures to test the moderated mediation effects of role overload. The mediation effects of emotional exhaustion in the relationship between customer mistreatment and mental disorder are significant in a lower level of role overload (indirect effects = .157, 95% Boot CI = [.081, .230]), whereas the effects are also significant in a higher level of role overload (indirect effects = .181, 95% CI = [.121, .250]). The difference of indirect effects between high vs low levels of role overload (indirect effects = 0.170, 95% Boot CI = [.118, .231]) was significant. Hence, H5 is supported.

According to Aiken and West's (1991) approach to clarify the form of interaction (see Figure 3). Figure 3 shows that customer mistreatment strongly and positively predicted cognitive rumination when service workers' perceived role overload was high. However, this positive relationship was attenuated for employees who perceived high levels of role overload moderates the positive relationship of customer mistreatment and work-family conflict, mediated via cognitive rumination: for employees with high role overload, the relationship is stronger.

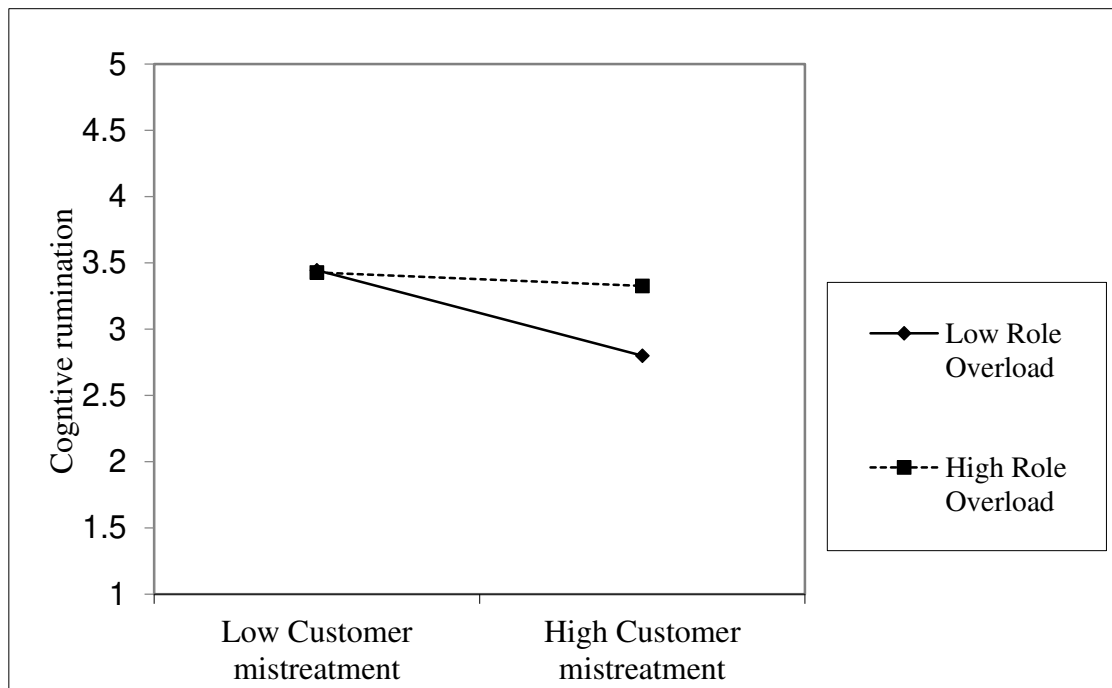
Similarly, the mediation effects of cognitive rumination on the relationship between customer mistreatment and work-family conflict are significant both in high (indirect effect

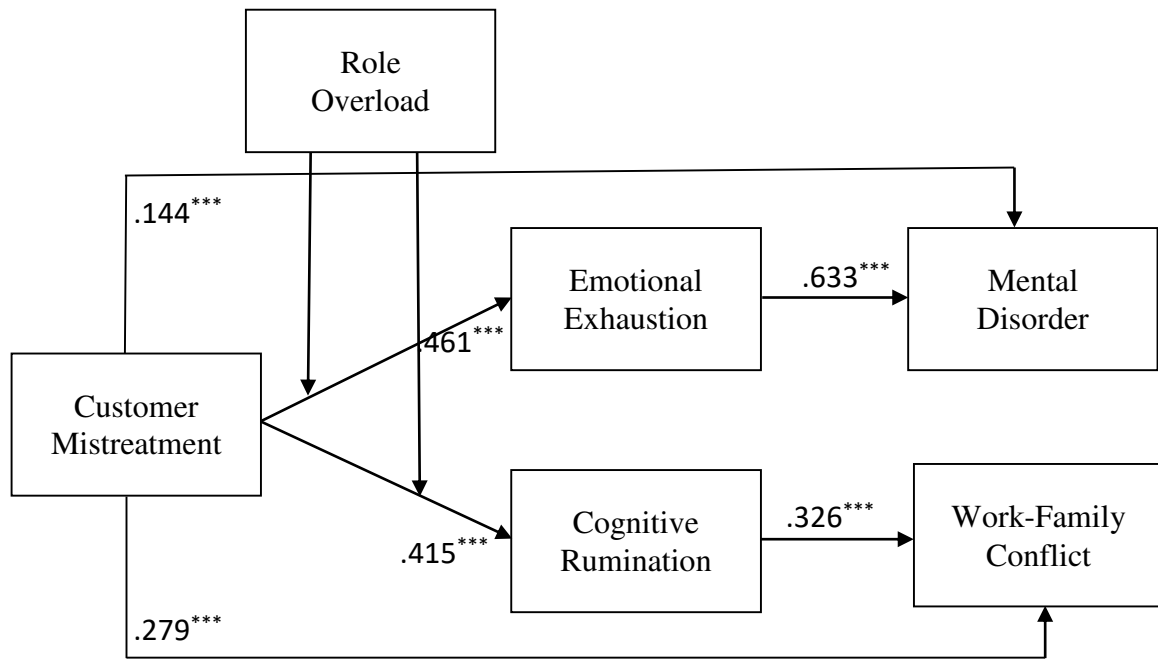
= .113, 95% Boot CI = [.064, .172]) and low (indirect effect = .012, 95% Boot CI = [-.030, .057]) levels of role overload, therefore H6 is supported.

Table 3 Result of Moderated mediation effects

Moderator (Role overload)	Standard error	Indirect effect	Percentile 95% CI	
			Lower	Upper
Path: customer mistreatment → emotional exhaustion → mental disorder				
Low	.038	.157	.081	.234
M	.029	.171	.118	.231
High	.032	.181	.121	.250
Moderator (Role overload)	Standard error	Indirect effect	Percentile 95% CI	
			Lower	Upper
Path: Customer Mistreatment → Cognitive Rumination → Work-Family Conflict				
Low	.021	.012	-.030	.057
M	.021	.070	.337	.115
High	.027	.113	.064	.172

Sample Size = 380. CI = bias corrected and accelerated 95% confidence interval; 5000 bootstrap samples. Note: \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$





# Discussion

## Conclusions

This study explores the impact of customer mistreatment on the mental health of employees in the service industry, particularly focusing on the effects of customer mistreatment on emotional exhaustion, cognitive rumination, mental disorders, and work-family conflict. The results demonstrate a positive relationship between customer mistreatment and mental disorders, with emotional exhaustion and cognitive rumination mediating the relationship between customer mistreatment and both mental disorders and work-family conflict. Additionally, role overload moderates the relationship between customer mistreatment and mental health outcomes, particularly in high role overload situations, where the impact of customer mistreatment on employees is more pronounced.

Consistent with previous research (e.g., Grandey et al., 2004; Dormann & Zapf, 2004), customer mistreatment, as a workplace stressor, not only affects employees' emotions and behaviors but also exacerbates mental health issues, such as anxiety and depression. The study supports the view of customer mistreatment as a resource drain and further highlights the negative effects of emotional exhaustion and cognitive rumination on mental health.

## Theoretical Implications

The results of this study enrich the theoretical understanding of how customer mistreatment affects employees' mental health, particularly regarding the roles of emotional exhaustion and cognitive rumination in this process. According to the Conservation of Resources (COR) theory (Hobfoll, 1989), customer mistreatment, as a contextual stressor, depletes employees' psychological resources, increasing the risk of mental disorders. The mediating roles of emotional exhaustion and cognitive rumination between customer mistreatment and mental health issues further emphasize the importance of emotional and cognitive processes in explaining the effects of customer mistreatment on employees' mental well-being.

Moreover, the study highlights the moderating role of role overload, offering a new perspective on how multiple work-related pressures amplify the negative impact of customer mistreatment. This finding is consistent with Weigelt et al. (2021), who suggested that prolonged negative work events increase employees' psychological strain, which intensifies the effects of customer mistreatment in high-stress work environments.

## **Practical Implications**

The practical implications of this study are significant for managers in the service industry. Managers should be aware of the profound effects that customer mistreatment can have on employees' mental health. Providing emotional support, emotional regulation training, and mental health resources is essential to help employees cope with the stress caused by customer mistreatment. Specifically, in situations of high role overload, organizations should consider reducing employees' workload and providing more job flexibility to lower the risks of mental health issues.

Additionally, organizations should conduct regular mental health assessments for employees and establish effective feedback and support systems to reduce the occurrence of customer mistreatment, thereby mitigating emotional exhaustion and cognitive rumination. These measures can improve employee job satisfaction, reduce turnover rates, and enhance service quality.

## **Limitations and Future Research**

There are several limitations in this study. First, the research primarily focused on service employees in Taiwan, which may limit the generalizability of the findings. Future research could expand to other countries and cultural contexts to examine whether the impact of customer mistreatment on employees' mental health is universally applicable across different cultures. Cross-cultural studies could explore differences in how customer mistreatment affects mental health across various cultures and how cultural background moderates customer behaviors and employee responses.

Second, the study employed a cross-sectional design, which cannot establish causal relationships between customer mistreatment and mental health outcomes. Future research should use longitudinal studies to investigate the long-term impact of customer mistreatment on employees' mental health and explore the development process of these effects over time. Third, the study relied on self-reports from employees to measure customer mistreatment, emotional exhaustion, and other variables, which may be influenced by social desirability bias. To address this limitation, future studies should consider using multiple data sources, such as behavioral observations and supervisor reports, to enhance the validity of the findings. Furthermore, future research could explore the effectiveness of different interventions, such as emotional management training, employee support systems, and organizational culture changes, in mitigating the negative impact of customer mistreatment and promoting overall employee well-being.

## Reference

- Baker, M. A., & Kim, K. (2024). The impacts of organizational support and customer incivility on employee vulnerability and job performance: The moderating role of employee mental health. *International Journal of Hospitality Management*, *118*, 103686.
- Baranik, L. E., Wang, M., Gong, Y., & Shi, J. (2017). Customer mistreatment, employee health, and job performance: Cognitive Rumination and Social Sharing as Mediating Mechanisms. *Journal of Management*, *43*(4), 1261–1282.  
<https://doi.org/10.1177/0149206314550995>
- Bi, Y., Choi, S., Yin, J., & Kim, I. (2021). Stress on Frontline Employees From Customer Aggression in The Restaurant Industry: The Moderating Effect of Empowerment. *Sustainability*, *13*(3), 1433. <https://doi.org/10.3390/su13031433>
- Brown, S. P., Jones, E., & Leigh, T. W. (2005). The attenuating effect of role overload on relationships linking self-efficacy and goal level to work performance. *Journal of Applied Psychology*, *90*(5), 972-979. <https://doi.org/10.1037/0021-9010.90.5.972>
- Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work–family conflict. *Journal of Vocational Behavior*, *56*(2), 249-276. <https://doi.org/10.1006/jvbe.1999.1713>.
- Chi, N. W., Tsai, W. C., & Tseng, S. M. (2013). Customer Negative Events and Employee Service Sabotage: The Roles of Employee Hostility, Personality and Group Affective Tone. *Work & Stress*, *27*(3), 298-319. <https://doi.org/10.1080/02678373.2013.819046>
- Chi, N. W., Yang, J., & Lin, C. Y. 2018. Service workers’ chain reactions to daily customer mistreatment: Behavioral linkages, mechanisms, and boundary conditions. *Journal of Occupational Health Psychology*, *23*(1): 58-70.
- Chuang, S. P., Wu, J. Y., & Wang, C. S. (2021). Humor Styles Moderate The Relationship Between Rumination and Mental Health in Community Residents. *SAGE Open*, *11*(4), 215824402110544. <https://doi.org/10.1177/21582440211054477>
- Dodanwala, T. C., San Santoso, D., & Shrestha, P. (2022). The mediating role of work–family conflict on role overload and job stress linkage. *Built Environment Project and Asset Management*, *12*(6), 924-939. <https://doi.org/10.1108/BEPAM-12-2021-0153>
- Dormann, C., & Zapf, D. (2004). Customer-related social stressors and burnout. *Journal of Occupational Health Psychology*, *9*(1), 61–82. <https://doi.org/10.1037/1076-8998.9.1.61>

- Duxbury, L., Lyons, S., & Higgins, C. (2008). Too much to do, and not enough time: An examination of role overload. In *Handbook of Work-Family Integration* (pp. 125-140). Academic Press. <https://doi.org/10.1016/B978-012372574-5.50010-7>
- 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>
- Eissa, G., Lester, S. W., & Gupta, R. (2020). Interpersonal Deviance and Abusive Supervision: The Mediating Role of Supervisor Negative Emotions and the Moderating Role of Subordinate Organizational Citizenship Behavior. *Journal of Business Ethics, 166*, 577-594. <https://doi.org/10.1007/s10551-019-04130-x>
- Feng, X., Han, P., & Terpstra Tong, J. (2024). Joy at work turns to sorrow at home: The influence of flow experience on work–family conflict and a three-way interaction effect. *Applied Psychology, 73*(2), 801-829. <https://doi.org/10.1111/apps.12500>.
- Fox, S., & Spector, P. E. 2006. The many roles of control in a stressor-emotion theory of counterproductive work behavior. In P. L. Perrewé & D. C. Ganster (Eds.), *Employee health, coping and methodologies*: 171-201. Amsterdam, Netherlands: Elsevier Science/JAI Press.
- Goldberg, L. S., & Grandey, A. A. (2007). Display rules versus display autonomy: emotion regulation, emotional exhaustion, and task performance in a call center simulation. *Journal of occupational health psychology, 12*(3), 301.
- Grandey, A. A., Dickter, D. N., & Sin, H. P. (2004). The customer is not always right: Customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior, 25*(3), 397-418. <https://doi.org/10.1002/job.245>
- Grandey, A., Foo, S. C., Groth, M., & Goodwin, R. E. (2012). Free to be you and me: a climate of authenticity alleviates burnout from emotional labor. *Journal of occupational health psychology, 17*(1), 1.
- Groth, M., & Grandey, A. (2012). From bad to worse: Negative exchange spirals in employee-customer service interactions. *Organizational Psychology Review, 2*, 208-233. <https://doi.org/10.1177/2041386612441735>
- Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the “COR” understanding the role of resources in conservation of resources theory. *Journal of management, 40*(5), 1334-1364.
- Harris, L. C., & Reynolds, K. L. (2004). Jaycustomer behavior: An exploration of types and motives in the hospitality industry. *Journal of Services Marketing, 18*(5): 339–357.

- Hayes, A. F. (2022). Counterfactual/potential outcomes “causal mediation analysis” with treatment by mediator interaction using PROCESS. *Canadian Centre for Research Analysis and Methods Technical Report*.
- Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513-524. <https://doi.org/10.1037/000-066x.44.3.513>
- Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual review of organizational psychology and organizational behavior*, *5*(1), 103-128.
- Kim, S. (2023). An Examination of the Underlying Mechanisms of Customer Incivility: A Cognitive Approach. 1-63. <https://doi.org/10.7298/vqs1-2m06>
- Kim, S., & Tak, J. (2023). The Effect of Psychological Contract Breach by Subordinates on Job Burnout of Middle Managers Focusing on the Serial Multiple Mediation of Role Overload and Job Stress. *Korean Academy of Leadership*, *14*(1), 83-125. <https://doi.org/10.22243/tklq/2023.14.1.83>
- Lee, M. B., Liao, S. C., Lee, Y. J., Wu, C. H., Tseng, M. C., Gau, S. F., & Rau, C. L. (2003). Development and verification of validity and reliability of a short screening instrument to identify psychiatric morbidity. *Journal of the Formosan Medical Association*, *102*(10), 687-694.
- Lee, Y., Lee, J. Y., & Lee, J. (2022). The relationship between work engagement and workaholism: a systematic review and meta-analysis. *European Journal of Training and Development*, *46*(9), 996-1028. <https://doi.org/10.1108/EJTD-03-2021-0036>.
- Lin, H., & Bai, X. (2022). Differential Antecedents and Consequences of Affective and Cognitive Ruminations. *International Journal of Environmental Research and Public Health*, *19*(18), 11452. 1-16. <https://doi.org/10.3390/ijerph191811452>
- Lu, W., Wu, H., Liu, S., Guo, Z., & He, X. (2022). Why customer mistreatment undermines hospitality employees’ performance: The moderating role of job crafting. *International Journal of Contemporary Hospitality Management*. <https://doi.org/10.1108/ijchm-06-2021-0801>
- Mccullough, M. E., Bono, G., & Root, L. M. (2007). Rumination, Emotion, and Forgiveness: Three Longitudinal Studies. *Journal of Personality and Social Psychology*, *92*(3), 490-505. <https://doi.org/10.1037/0022-3514.92.3.490>.

- Ni, D., Yang, M., Chen, W., & Che, Y. (2024). Who is to blame for incivility? The influences of family undermining on employee incivility towards customers. *Journal of Business Research*, 177, 114621. <https://doi.org/10.1016/j.jbusres.2024.114621>
- Pak, S., Kramer, A., Lee, Y., & Kim, K. J. (2022). The impact of work hours on work-to-family enrichment and conflict through energy processes: A meta-analysis. *Journal of Organizational Behavior*, 43(4), 709-743. <https://doi.org/10.1002/job.2595>
- Park, J., & Kim, H. J. (2020). Customer Mistreatment and Service Performance: A Self-Consistency Perspective. *International Journal of Hospitality Management*, 86, 1-7. <https://doi.org/10.1016/j.ijhm.2019.102367>
- Qiaoling, L., Mohammadi, A., Sabermajidi, N., Tingfeng, Z., & Meihua, C. (2024). Effect of Customer Mistreatment on Employees' Turnover Intention in Star-Rated Hotels. *Journal of International Business and Management*, 7(11), 01-21.
- Rafaeli, A., Erez, A., Ravid, S., Derfler-Rozin, R., Treister, D. E., & Scheyer, R. (2012). When customers exhibit verbal aggression, employees pay cognitive costs. *Journal of applied psychology*, 97(5), 931.
- Rafique, M. (2023). Supervisor role overload and emotional exhaustion as antecedents of supervisor incivility: The role of time consciousness. *Journal of Management & Organization*, 29(3), 481-503. <https://doi.org/10.1017/jmo.2022.39>.
- Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 150-163. <https://doi.org/10.2307/2391486>.
- Roelen, C. A. M., Norder, G., Koopmans, P. C., Van Rhenen, W., Van Der Klink, J. J. L., & Bültmann, U. (2012). Employees sick-listed with mental disorders: who returns to work and when?. *Journal of occupational rehabilitation*, 22, 409-417. <https://doi.org/10.1007/s10926-012-9363-3>.
- Rupp, D. E., & Spencer, S. (2006). When customers lash out: the effects of customer interactional injustice on emotional labor and the mediating role of discrete emotions. *Journal of applied psychology*, 91(4), 971.
- Shao, L., Zhao, C., & Yu, G. (2024). The long-term effect of early-life uncertainty on mental health in adolescence and adulthood: a meta-analysis. *Trauma, Violence, & Abuse*, 15248380241241028.
- Shin, Y., Hur, W. M., & Kang, S. (2021). Mistreatment from multiple sources: interaction effects of abusive supervision, coworker incivility, and customer incivility on work outcomes. *International Journal of Environmental Research and Public Health*, 18(10),

5377. <https://doi.org/10.3390/ijerph18105377>.
- Shu, L., Wei, H., & Peng, L. (2019). Making the customer orientation of salespeople unsustainable—the moderating effect of emotional exhaustion. *Sustainability*, *11*(3), 1-15. <https://doi.org/10.3390/su11030735>.
- Spencer, S., & Rupp, D. E. (2009). Angry, guilty, and conflicted: injustice toward coworkers heightens emotional labor through cognitive and emotional mechanisms. *Journal of Applied Psychology*, *94*(2), 429-444. <https://psycnet.apa.org/doi/10.1037/a0013804>
- Srivastava, S., Madan, P., Alzeiby, E. A., & Bodhi, R. (2024). When patrons become perpetrators: Examining the negative effects of customer incivility for Hospitality employees. *International Journal of Hospitality Management*, *122*, 103867.
- Tang, W. G., & Vandenberghe, C. (2021). Role overload and work performance: the role of psychological strain and leader–member exchange. *Frontiers in Psychology*, *12*, 691207. <https://doi.org/10.3389/fpsyg.2021.691207>
- Vatharkar, P. S., & Aggarwal-Gupta, M. (2020). Relationship between role overload and the work–family interface. *South Asian Journal of Business Studies*, *9*(3), 305-321. <https://doi.org/10.1108/sajbs-09-2019-0167>.
- Vullingsh, J. T., De Hoogh, A. H., Den Hartog, D. N., & Boon, C. (2020). Ethical and passive leadership and their joint relationships with burnout via role clarity and role overload. *Journal of Business Ethics*, *165*, 719-733. <https://doi.org/10.1007/s10551-018-4084-y>
- Wang, I. A., Chen, P. C., & Chi, N. W. (2023). Mitigating immediate and lagged effects of customer mistreatment on service failure and sabotage: Critical roles of service recovery behaviors. *Journal of Business Research*, *154*: 113273. <https://doi.org/10.1016/j.jbusres.2022.08.037>
- Wang, M., Liu, S., Liao, H., Gong, Y., Kammeyer-Mueller, J., & Shi, J. (2013). Can't Get It Out of My Mind: Employee Rumination After Customer Mistreatment and Negative Mood in the Next Morning. *Journal of Applied Psychology*, *98*(6), 989–1004. <https://doi.org/10.1037/a0033656>
- Weigelt, O., Schmitt, A., Syrek, C. J., & Ohly, S. (2021). Exploring the engaged worker over time—a week-level study of how positive and negative work events affect work engagement. *International Journal of Environmental Research and Public Health*, *18*(13), 6699. <https://doi.org/10.3390/ijerph18136699>
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory. *Research in organizational*

*behavior*, 18(1), 1-74.

- Wood, J., Oh, J., Park, J., & Kim, W. (2020). The relationship between work engagement and work–life balance in organizations: a review of the empirical research. *Human Resource Development Review*, 19(3), 240-262. <https://doi.org/10.1177/1534484320917560>
- Wu, Y., Groth, M., Zhang, K., & Minbashian, A. (2023). A meta-analysis of the impact of customer mistreatment on service employees' affective, attitudinal and behavioral outcomes. *Journal of Service Management*, 34(5), 896-940.
- Yagil, D. (2021). Abuse from Organizational Outsiders: Customer Aggression and Incivility. *Special Topics and Particular Occupations, Professions and Sectors*, 109-134.
- Yang, F., Lu, M., & Huang, X. (2020). Customer mistreatment and employee well-being: A daily diary study of recovery mechanisms for frontline restaurant employees in a hotel. *International Journal of Hospitality Management*, 91, 102665. <https://doi.org/10.1016/j.ijhm.2020.102665>.
- Yi, Y., & Gong, T. (2006). The antecedents and consequences of service customer citizenship and badness behavior. *Seoul Journal of Business*, 12(2), 145-176.
- Zhang, H., Zhou, Z. E., Zhang, L., Liu, Y., & Shi, Y. (2024). How customer mistreatment hinders employee sleep quality and next-morning vigor: The effects of affective rumination and mindfulness. *Applied Psychology*, 73(3), 1188-1211. <https://doi.org/10.1111/apps.12507>.
- Zhang, H., Zhou, Z. E., Zhang, L., Liu, Y., & Shi, Y. (2024). How customer mistreatment hinders employee sleep quality and next-morning vigor: The effects of affective rumination and mindfulness. *Applied Psychology*, 73(3), 1188-1211.
- Zhang, N., Xu, D., Li, J., & Xu, Z. (2022). Effects of role overload, work engagement and perceived organisational support on nurses' job performance during the COVID-19 pandemic. *Journal of Nursing Management*, 30(4), 901-912. <https://doi.org/10.1111/jonm.13598>
- Zhang, R., Wu, Y., & Ferreira-Meyers, K. (2019). The work-family spillover effects of customer mistreatment for service employees: The moderating roles of psychological detachment and leader–member exchange. *Frontiers in psychology*, 10, 2107.
- Zhao, S., & Liu, B. (2024). The impact of customer misconduct on emotional exhaustion of fitness trainer: Role stress as mediating variable. *Environment and Social Psychology*, 9(8). <https://doi.org/10.59429/esp.v9i8.2908>
- Zhao, X., Wang, F., Mattila, A. S., Leong, A. M. W., Cui, Z., & Yang, H. (2024). The impact of customer misbehavior on frontline employees' work–family conflict and withdrawal

behaviors. *International Journal of Contemporary Hospitality Management*.