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DETERMINING CUSTOMER EXPERIENCE INNOVATION: EXPLORING A DYNAMIC MODEL OF CUSTOMER RESPONSES IN NEGATIVE SERVICE ENCOUNTERS

Abstract

Given a volatile business environment, enhancing customer experience has become a key resource that has transformed service innovation for business growth. While recent studies have investigated customer value co-creation, there is less knowledge about potential value co-destruction which is that customers respond to negative service encounters in vindictive and aggressive ways. This study aims to examine key triggers of customer negative emotions and propose human needs threat (HNT) as antecedents. This study has two stages. Firstly, the critical incident technique was used as the preliminary study. Secondly, empirical research involved the survey using online panels. Data from 318 respondents of various service contexts were analyzed through structural equation modeling. Finally, this study finds that HNT is a trigger for customer rage in service recovery failure. The findings highlight the challenges for service organizations in managing standards of customer service and ensuring that their employees, especially frontline employees, can monitor customers' responses based on HNT. This study focuses on social psychology studies and examines that customer rage arises when individuals feel alienated and excluded in service recovery context as do in groups or in their personal relationships.

Keywords: customer value co-destruction, customer rage, service recovery failure, customer experience innovation, human needs threat (HNT)

1. INTRODUCTION

Grove *et al.* (2004) argue that people are now living in an age of rage. When customers experience unexpected unsatisfactory situations when consuming services or products, they consequently experience negative emotions (Laros and Steenkamp, 2005; Nyer, 2000; Richins, 1997). However, customers often go beyond simply being upset to quickly feeling extremely negative emotions (Bonifield and Cole, 2007; Kalamas *et al.*, 2008; McColl-Kennedy *et al.*, 2009; Patterson *et al.*, 2009; Surachartkumtonkun *et al.*, 2015). Such cases create economic and psychological losses to customers, employees in charge of the relevant services, and the relevant firms (McColl-Kennedy *et al.*, 2009; Patterson *et al.*, 2009; Surachartkumtonkun *et al.*, 2013). Furthermore, one customer's negative experience can easily become public through various media channels and his or her social networking service activities (Ward and Ostrom, 2006).

Previous studies have defined customer rage as a strong negative and anti-social emotion and as intense anger manifested in ways such as verbal, physical, and displaced anger (Deffenbacher *et al.*, 2002; McColl-Kennedy *et al.*, 2009). Other researchers have argued that rage is a strong and definite emotion and thus is a different form of anger (Kalamas *et al.*, 2008). We conceive of rage as a form of an affective state more definite and powerful than anger that involves aggressive and hostile behavioral responses to the party believed to be the cause of the problem. Furthermore, customer rage is a strong affective state that generates destructive and aggressive behavioral responses. Customers follow their negative emotions and either vent these emotions or take aggressive and confrontational actions (McColl-Kennedy *et al.*, 2009; Patterson *et al.*, 2009). Because rage exhibits different aspects from low or moderate levels of anger in terms of emotion, expression, and behavior, studies on what causes customer rage are necessary. Patterson *et al.* (2009) explore how customers reach highly negative emotions qualitatively, finding that customers experience extreme emotion when they have repeatedly asked firms for improvement but have received unsatisfactory results. Customers tend to regard such cases as threats to their basic human needs (e.g., self-esteem and fairness) and consequently experience high levels of negative emotions. Research has linked subsequent needs-based cognitive appraisals to the type of service failure (Surachartkumtonkun *et al.*, 2013). For example, customers reach the level of rage because of threats to their fundamental needs, such as self-esteem, need for control, and justice. Research has also investigated the constructs of self-esteem, sense of control, and justice in repetitive service failures as a loss of personal resources (Surachartkumtonkun *et al.*, 2015). These studies are meaningful because they help shed light on customers' appraisal processes behind rage episodes by demonstrating the association between the types of service failure and recovery failure and by appraising the threat to fundamental human needs or resources.

However, few investigations have examined the role of human needs threat (HNT) in the relationship between the antecedents and consequences of

customer rage for customers' psychological processes. More specifically, scant research has compared the relative impact of various HNTs in this process. Therefore, the objectives of this study are to (1) identify the threats to human needs that customers experience during a service recovery failure, (2) verify and propose instruments to measure the threats in service contexts on the basis of an interdisciplinary literature review, and (3) empirically validate the role of HNT under the psychological process.

2.   EMOTIONS AND COPING IN SERVICE FAILURE

The mechanisms of stress and coping theory well explain how individuals cope with the stress of negative situations (Lazarus and Folkman, 1984). These mechanisms are referred to as coping (Lazarus and Folkman, 1984), and to cope with the stress of failure, consumers employ diverse coping strategies (Duhachek and Kelting, 2009) largely divided into two types (Folkman and Lazarus, 1980). On the one hand, emotion-focused coping refers to coping that focuses more on the feelings each individual experiences in the relevant situation. On the other hand, problem-focused coping refers to coping that addresses and tries to solve the problem. Duhachek (2005) proposes a consumer-oriented framework comprised of three coping strategies: expressive, active, and avoidance/denial. The expressive strategy refers to consumers' acts of support-seeking behaviors to overcome negative emotions. The active strategy is similar to problem-focused coping and captures customers' efforts to solve problems. The denial coping strategy is the most passive of the three and involves avoiding the relevant situations or problems. In stressful situations such as service failures, customers use many strategies simultaneously to achieve the most effective outcome (Duhachek, 2005). In particular, studies have found that during service failures, anger causes high levels of expressive behaviors (Bonifield and Cole, 2007; Kalamas *et al.*, 2008). In addition, customers use both expressive and active coping strategies to solve problems (Herrald and Tomaka, 2002). Thus, in this study, we investigate customer rage and the behaviors following service recovery failures using stress and coping theory (Duhachek, 2005; Lazarus and Folkman, 1984).

3.   LITERATURE REVIEW AND HYPOTHESES

Customer rage and aggression

Customer rage is powerful anger accompanied by aggressive behaviors or behavioral intentions (McColl-Kennedy *et al.*, 2009). After experiencing service failure and service recovery failure, customers go beyond the level of simply being upset and reach aggressive affective states and resultant behavioral intentions. Therefore, to understand the triggers for such customer rage and the psychological mechanisms needed to reach coping responses, relevant customer behaviors should be examined in the context of aggression.

Research in social psychology has extensively investigated diverse forms of aggression and related behaviors. In particular, results in recent social exclusion or ostracism studies indicate that humans become frustrated and aggressive when they feel left out in relationships with others or in groups to which they belong (Baumeister and Leary, 1995; Leary *et al.*, 1995; Leary *et al.*, 1998, Williams, 2007, 2009; Zadro *et al.*, 2004). In other words, humans experience extreme negative emotions when they feel rejected, ignored, or excluded and act aggressively as a coping response. Researchers argue that the reason for such responses is that humans feel that their fundamental needs, such as the need to belong (Baumeister and Leary, 1995), self-esteem (Leary et al., 1995; Leary et al., 1998), and sense of control, are being threatened (Williams, 2007, 2009; Zadro *et al.*, 2004).

In particular, in explaining human reactions to ostracism, Williams (2007, 2009) argues that threatened fundamental needs play crucial roles. When customers feel that their fundamental human needs have been threatened, they react with related coping behaviors to protect those needs. Williams (2009) presents a "model of ostracism" to argue that ostracized individuals who immediately experience threats to their basic human needs (i.e., belonging, self-esteem, sense of control, and meaningful existence) are consequently motivated to restore such needs (see Figure 1).
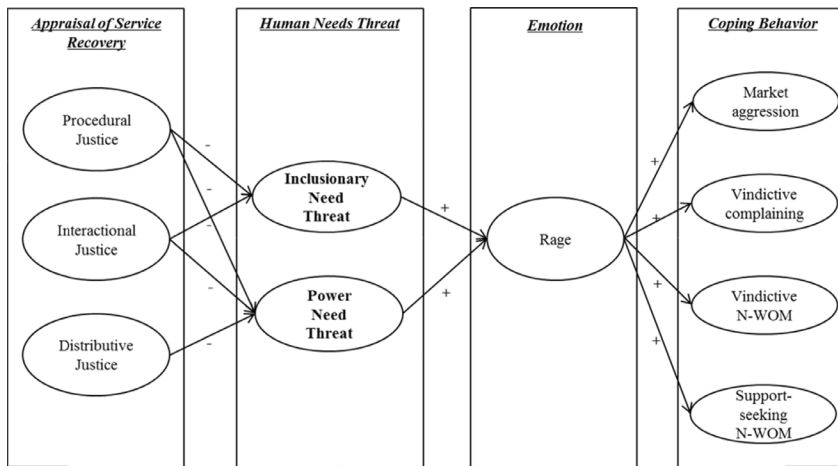

Figure I Conceptual model

Perceived justice and HNT

Justice theory is the most widely used theory to cognitively assess service recovery (McColl-Kennedy and Sparks, 2003; del Rio-Lanza *et al.*, 2009; Tyler, 1994). Justice is a cognitive standard employed when people have received something less than what they believe they should have (Lerner, 2003). This standard is based on an instinctive psychological agreement that everybody should be treated fairly (Seiders and Berry, 1998). In the context

of service failure, to appropriately maintain or increase customers' sense of justice, firms should provide justice in three dimensions: distributive justice, procedural justice, and interactional justice (Smith *et al.*, 1990; Sparks and McColl-Kennedy, 2001; Tax *et al.*, 1998).

As noted previously with regard to social exclusion and ostracism, when people are ignored or rejected in social exchange situations, such an unpleasant experience will eventually make them dislike those who caused the problem (Craighead *et al.*, 1979; Fenigstein, 1979; Geller *et al.*, 1974; Williams, 2009). Such social exclusion or ostracism may threaten four fundamental human needs: the need to belong, the need to maintain a high level of self-esteem, the need to control one's social environment, and the need to have one's existence recognized. These four needs can be divided further into two need clusters: the inclusionary need cluster (belongingness and self-esteem) and the power need cluster (sense of control and meaningful existence) (Williams, 2009).

The inclusionary need cluster refers to an individual's perception of his or her self-worth. Feeling good about him- or herself potentially improves a person's mental well-being (Caplan, 1974). The quality of interpersonal interactions provided by service employees involves listening to customers' opinions, displaying sympathy, apologizing, and being responsive. In particular, displaying respect plays a crucial role in increasing customers' feelings of self-worth. Furthermore, damaging customers' self-esteem and their sense of belongingness eventually creates negative emotions or vengeful behaviors (Patterson *et al.*, 2009).

The power need cluster refers to individuals' beliefs that they can well achieve their goals, solve problems, and control situations (White, 1959). Both the need for control and a meaningful existence are basic human desires (Skinner, 1996). As such, if people believe that they have limited or insufficient control, they will feel helpless and engage in maladaptive behaviors (Bowen and Johnston, 1999). The need to have a certain level of control is a prerequisite for satisfactory relationships in social exchange situations (Hui and Bateson, 1991), and this need influences customer satisfaction and positive emotional reactions (Rodin and Langer, 1976). When customers have experienced an initial failure, they expect to exert a certain level of control to solve the problem. However, when the subsequent service recovery fails—that is, when customers expected that they could control the situation and anticipated a solution but the effort failed—they perceive this failure as a lack of control (Surachartkumtonkun *et al.*, 2013). With regard to the HNT scale, because Williams (2009) already specified that the concepts explained by individual needs can overlap in a relevant cluster, analysis based on these clusters should not be theoretically problematic. Thus, we posit the following:

H1. (a) Perceived procedural justice, (b) perceived interactional justice, and (c) perceived distributive justice are negatively related to the inclusionary need cluster.

H2. (a) Perceived procedural justice, (b) perceived interactional justice, and (c) perceived distributive justice are negatively related to the power need cluster.

HNT and rage

Williams (2009) maintains that humans experience perceived threats to their needs when they feel rejected or excluded from interpersonal relationships and that, in such situations, they seek others' support or engage in more aggressive behaviors to recover (fortify) the interpersonal relationships. Research has argued that in the process of buying and using a brand or service, customers form interpersonal relationships with the brand or service provider (Johnson *et al.*, 2011). Therefore, customers experience more negative emotions in service failure when their self-relevance is high or they have maintained their relationship for a long time and, as such, their trust is high (Johnson *et al.*, 2011; Thomson, 2006).

Essentially, humans expend effort to satisfy their fundamental needs. Doing so brings about cognitive appraisal processes, and the results affect emotional reactions (Baumeister and Leary, 1995; Twenge *et al.*, 2001; Twenge *et al.*, 2003). When the ability to satisfy such needs is blocked, individuals try to find diverse measures around the blockade because satisfying fundamental needs is an inherent motivation in person–environment behaviors (Markus and Wurf, 1987) and thus has critical effects on humans' psychological well-being and their perceptions of themselves (Markus and Kitayama, 1991). A mismatch between the situation (e.g., a perceived violation of one's self-esteem due to poor service) and the internal meaning of self (e.g., the need for self-esteem) can result in considerable distress (Burke, 1991). If needs are continuously damaged, seriously negative reactions will arise (Surachartkumtonkun *et al.*, 2013; Williams, 2007, 2009). Therefore, if customers' fundamental human needs are damaged in service situations, an extreme and negative emotional response may result. Thus, we posit the following:

H3. The perceived threat to the inclusionary need cluster (belongingness and self-esteem) increases rage.

H4. The perceived threat to the power need cluster (sense of control and meaningful existence) increases rage.

Rage and coping behaviors

Rage fosters confrontative coping behaviors, such as marketplace aggression and vindictive complaining. Confrontative coping involves aggressively attacking another party (Folkman *et al.*, 1986) as a way to vent negative emotions and persuade the party to change its mind (Yi and Baumgartner, 2004). Psychological research has shown that anger induces confrontative coping (Frijda, 1987), and research in the context of service failures often refers to confrontative coping as retaliatory behavior (Grégoire and Fisher, 2008). Angry customers tend to engage in two types of retaliation: marketplace aggression and vindictive complaining (Bonifield and, Cole 2007; Bougie *et al.*,

2003; Folkes, 1984). Market aggression means that customers try to damage a firm's property without breaking its policies (Grégoire and Fisher, 2008). Vindictive complaining means that customers turn on the company and abuse its employees (Grégoire and Fisher, 2008). A subset of vindictive complaining is vindictive negative word of mouth (N-WOM), which involves communicating with other customers in any unfavorable way to denigrate the company (Richins, 1983) and/or advising others not to use the company's services (Bougie *et al.*, 2003); therefore, vindictive complaining can be understood as an aggressive type of "private response" in Singh's (1988) taxonomy of consumer complaint behavior. Thus, we posit the following:

H5. Rage increases the intention to engage in confrontative coping behaviors, such as (a) market aggression, (b) vindictive complaining, and (c) vindictive N-WOM.

Rage also fosters non-confrontative coping behaviors and even social-support-seeking behaviors. Social support theory suggests that when coping with stressful situations, people may rely not only on their own resources but also on the resources from their social environment (Albrecht and Adelman, 1984). This process is called support-seeking coping (Duhachek, 2005). Support-seeking N-WOM means that customers talk to others in their environment about service failures and ask for empathy and understanding (Stephens and Gwinner, 1998; Yi and Baumgartner, 2004). Several studies have shown that negative emotions also induce support-seeking coping (Frijda *et al.*, 1989; Menon and Dubé, 2007; Yi and Baumgartner, 2004). Thus, we posit the following:

H6. Rage increases the intention to engage in support-seeking coping behaviors, such as support-seeking N-WOM.

4. OVERVIEW OF STUDIES

Considering the research objectives, we conducted this study in two stages. First, we conducted qualitative research using the critical incident technique (CIT) to identify the threats to human needs that customers experienced during a service recovery failure based on the proposed conceptual model. Second, we conducted an empirical survey using an online panel. This empirical study had two objectives: (1) to clarify to measure HNT in service contexts on the basis of an interdisciplinary literature review and (2) to empirically validate the role of HNT under the psychological process through which customers experience rage after service failure.

4.1. Study 1

Method

To explore the proposed research framework qualitatively and substantiate application of Williams's (2009) framework, we first conducted a qualitative study with customers using the CIT and structured questions. The

CIT is a common method to gather deep insights from respondents' narratives of their own thoughts and emotions in a service context (Gremler, 2004). We systematically analyzed the data following the procedures of Surachartkumtonkun *et al.* (2013). One of the authors and one trained graduate research assistant conducted content analyses following appropriate standards (Kassarian, 1977; Weber, 1990). Respondents were customers who had experienced extremely negative emotions following a service recovery failure in the last six months.

Customer sample and questionnaire

The data for the customer CIT came from 152 adults. The average age of customers was 36.5 years, and 55 per cent were women. The most common types of industries involved in the customer rage episodes were Internet shopping malls, telecommunications service providers, communications service providers (e.g., telecommunications/Internet), and restaurants.

The open-ended questionnaire asked respondents to recall a situation in which they experienced rage following a service recovery failure in the last six months. Customers answered the questionnaire in terms of the details of the rage incidents, including (1) the service industry context (e.g., type of industry), (2) the explanation of the situation (the situation of the encounter), (3) the customers' appraisal of the service recovery failure (what triggered the incident and the aggravating factors), (4) their thoughts and feelings at certain times during and after the encounter, (4) how they expressed their emotions during the encounter, and (5) their behavioral responses to the firms or service providers.

Content analysis

We first defined the units of measurement, such as perceived justice, perceived HNT, customer rage, and coping behaviors, from the proposed conceptual model in Figure 2. We then referred to previous psychological literature for the coding scheme of customers' cognition (Ellsworth and Smith, 1988; Folkman *et al.*, 1986). Two trained judges coded the data independently. Inter-judge reliability was more than 84 per cent, exceeding the accepted benchmark of 80 per cent (Latham and Saari, 1984). Perreault and Leigh's index (Ir) which were more appropriate in marketing studies was also used to measure interjudge reliability. Ir was above recommended points, that is, .93 for types of justice and HNT, and .92 for customers' behaviors following HNT.

Results and discussion

We measured the frequency of perceived HNT in service failure and recovery failure, belongingness, self-esteem, sense of control, and meaningful existence. Some of customers' responses to HNTs were not included in single category. Threats to self-esteem and sense of control led to more extreme negative emotions and anti-brand actions. Thus, if customers perceive their self-esteem as being threatened, they feel betrayed and retaliate with vengeful behavior or switch to other brands. If they perceive their sense of control as being threatened, they feel frustrated, which also leads to anti-brand actions (see Tables I and II).

Table I

Types of Justice and HNT

	Dimensions	Distributive Injustice		Procedural Injustice		Interactional Injustice	
		Total incidents	% of incidents	Total incidents	% of incidents	Total incidents	% of incidents
Inclusionary Need Cluster	Need for belonging	22	18%	18	45%	30	36%
	Need for self-esteem	33	26%	8	20%	41	49%
Power Need Cluster	Need for control	68	54%	9	23%	10	12%
	Need for meaningful existence	2	2%	5	13%	3	4%

N = 152; multiple responses allowed.

Table II

Customer behaviors following HNT

	Dimensions	Complaining		N-WOM		Exit	
		Total incidents	% of incidents	Total incidents	% of incidents	Total incidents	% of incidents
Inclusionary Need Cluster	Need for belonging	23	19%	20	16%	15	12%
	Need for self-esteem	34	28%	45	37%	25	20%
Power Need Cluster	Need for control	60	49%	23	19%	10	8%
	Need for meaningful existence	5	4%	7	6%	4	3%

N = 152; multiple responses allowed.

Consequently, as Williams (2009) proposes, customers actually feel threats to their needs after experiencing a service failure and a recovery failure in four dimensions: belonging, self-esteem, sense of control, and meaningful existence. In addition, these threats play major roles in the process through which customers reach the powerful negative emotion of rage. Among the four needs, customers experience threats to their self-esteem and sense of control the most frequently.

In summary, through the CIT, we qualitatively identified that Williams's (2009) framework was applicable. Therefore, Study 2 validates whether the HNT scale employed in social psychology to determine the causes of coping responses to the social exclusion or ostracism experienced in interpersonal relationships can explain customer rage in service failure situations.

4.2.   Study 2

Method

After identifying the effect of perceived HNT on customers' psychological processes regarding service recovery failure, we empirically tested the conceptual model. The objectives were to (1) validate the perceived HNT scale using Williams's (2009) framework in the recovery failure context and (2) test the proposed model empirically. The research context, or domain, was the service industry. Consistent with research on customers' negative emotions during service failure and service recovery (Grégoire and Fisher, 2008, Tax *et al.*, 1998), the study was based on retrospective experiences. After describing a recent service failure and recovery failure episode through open-ended questions, respondents were asked to recall their thoughts and emotions experienced at the time. We used an online panel to collect data on the service industry, respondents' age, and respondents' gender and to capture a wider range of service and recovery failures with varying degrees of severity. In total, we surveyed 318 respondents, all of whom were over 20 years of age. Respondents were customers who had experienced extremely negative emotions accompanied by rage following a repetitive service failure. We also measured the failure severity and blame attribution (Grégoire and Fisher, 2008; Grégoire *et al.*, 2010) as control variables.

Sample and procedures

The sample (n = 318) was recruited over one week by a marketing research firm from its online panel of Korean consumers. The respondents reflect the demographics of the adult Korean population (average age = 38.4 years, SD = 9.483, 53.9% male). At the initial stage, we screened out respondents who indicated a low level of rage because our intention was to examine those who experienced the intensity of rage. Respondents were asked to recall their rage experience following the service recovery failure, describe the details of the situation and the encounter, and answer questions about their perceived justice, HNT, level of rage, behaviors, and demographics. In terms of industries, respondents mostly experienced customer rage from online malls, telecommunications services, and communication services (e.g., telecommunications/Internet).

Measures

All measures employed seven-point scales. For perceived justice, we chose the well-established constructs and measurements of Grégoire and Fisher (2008) and Grégoire *et al.* (2010). We measured perceived HNT with the 17-item scale developed by Williams (2009). This scale measures threatened human needs in the social exclusion and ostracism contexts in social psychology research. Thus, we checked the validity of applying this scale to the service context before measuring the proposed conceptual model.

To measure customer rage, we referred to McColl-Kennedy *et al.*'s (2009) results. As discussed previously, they define emotions, expressions, and behaviors related to customer rage and provide a scale. We measured the expressions and behaviors of coping responses with a scale that has been widely employed in the area of service failure. Therefore, we examined rage by focusing on the emotions

mentioned in McColl-Kennedy *et al.*'s (2009) study. Although these researchers sub-divided rage into rancorous rage and retaliatory rage, the purpose of the current study is to examine results according to different types of threats. Therefore, we compared the indexes with existing measures for negative emotions to ensure that they were comprehensive and capable of encompassing a high intensity of negative emotions.

For coping responses, we divided coping strategies into two categories: confrontative and non-confrontative coping (Duhachek, 2005; Gelbrich, 2010; Grégoire and Fisher, 2008). Confrontative coping includes market aggression, vindictive complaining, and vindictive N-WOM. Non-confrontative coping includes support-seeking N-WOM. We controlled for the effects of age and gender on all endogenous variables (Aquino *et al.*, 2001), failure severity, and blame attribution (Grégoire *et al.*, 2010).

Results

Validation of the HNT scale. We conducted an exploratory factor analysis (EFA) and then a confirmatory factor analysis (CFA) to test the integrity of the perceived HNT scale. We also conducted structural equation modeling analyses to test the hypotheses and the mediating effects of perceived HNT. In applying the HNT scale, we followed the structural empirical scale development procedure (Churchill, 1979; Gerbing and Anderson, 1998). First, at the item judging stage, we assessed the face and content validities using marketing experts, two faculty members, and two doctoral students as judges (Table III). We used the standard for whether items are relevant in the service failure and recovery context. As a result, we included 13 of the original 17 items (Williams 2009).

Table III

Item judging results

Construct	Items	Removed
Belongingness threat	I felt disconnected.	
	I felt rejected.	
	I felt like an outsider.	v
	I felt like I belonged to the group.	
	I felt the other players interacted with me a lot.	v
Self-esteem threat	I felt good about myself.	
	My self-esteem was high.	
	I felt liked.	v
	I felt satisfied.	
Sense of control threat	I felt that I was in control.	
	I felt that I had the ability to significantly alter events.	
	I felt that I was unable to influence the others' actions.	
	I felt the other decided everything.	
Meaningful existence threat	I felt invisible to others.	
	I felt nonexistent.	
	I felt important.	
	I felt useful.	v

Next, we conducted an EFA to verify the dimensional structure of the HNT through factor analysis. We subjected the 13 items to a principal components analysis (Varimax rotation). The results retained all items in a three-factor solution, which accounted for 73 per cent of the variance. We used factor loading with an absolute value of more than .5 as the cutoff point for item retention and deleted items with cross-loadings of more than .4 points. The removal of items resulted in a nine-item scale. As a result, the factor of "meaningful existence" was not included (Table IV).

Table IV

EFA results

	Factor 1	Factor 2	Factor 3
I felt disconnected.	.208	.340	**.719**
I felt rejected.	.144	.163	**.853**
I felt I did not belong to the group.	.209	.235	**.804**
I did not feel good about myself.	**.813**	.128	.190
My self-esteem was not high.	**.760**	.104	.283
I felt unsatisfied.	**.810**	.273	.132
I felt invisible to others.	.657	.490	.116
I felt nonexistent.	.681	.545	.137
I felt I was not important.	.623	.574	.160
I felt that I was not in control.	.316	.590	.379
I felt I did not have the ability to significantly alter events.	.236	**.849**	.249
I felt I was unable to influence the action of others.	.263	**.837**	.187
I felt the others decided everything.	.165	**.772**	.327

We conducted CFA to confirm the properties of the HNT scale generated from the purification process. To test this structure, we assessed the dimensionality of the first-order dimensions and ensured that items did not cross-load on other factors. We used modification indexes to achieve a better-fitting model, following the recommendations of Schermellen-Engel *et al.* (2003) and Hair *et al.* (2006). The fit indexes for the final corrected model showed acceptable fit ($\chi^2 = 46.3992$, df = 23; GFI = .970; CFI = .986; RMSEA = .057). Nine items in total remained as the final measurement of HNT. All factor loadings are significant at the .001 level, and factor loadings as well as composite reliabilities are greater than .7, suggesting internal consistency (Bagozzi and Yi, 1988). The average variance extracted (AVE) for each measure is greater than .5, in support of convergent validity (Bagozzi and Yi, 1988). A comparison of the AVE of each construct and the correlations with all other constructs confirmed discriminant validity (Fornell and Larcker, 1981) (Tables V and VI).

Table V

CFA results

Items	Factor Loadings	Range	M	SD
Belongingness				
I felt disconnected.	0.758	6	3.97	1.537
I felt rejected.	0.754	6	4.77	1.577
I felt I did not belong to the group.	0.819	6	4.25	1.565
Self-esteem				
I did not feel good about myself.	0.796	6	4.02	1.625
My self-esteem was not high.	0.749	6	4.36	1.643
I felt unsatisfied.	0.897	6	3.90	1.619
Sense of control				
I felt I did not have the ability to significantly alter events.	0.910	6	3.95	1.616
I felt I was unable to influence the action of others.	0.921	6	3.93	1.660
I felt the others decided everything.	0.787	6	4.07	1.632

Table VI

Validity check results

	Cronbach's α	CR	AVE	Correlations		
				1	2	3
Belongingness	.82	.821	.605	(.605)	.494	.582
Self-esteem	.853	.856	.666	.494	(.666)	.598
Sense of control	.905	.907	.765	.582	.598	(.765)

Note: ( ) = AVE

Values below the diagonal = correlation estimates, values above the diagonal = squared correlations.

Measurement model. We tested the measurement properties and hypotheses using the structural equation modeling analysis with IBM SPSS Amos 21 software. We validated the measurement model for each latent construct before testing the structural model. For the component structure, the EFA results of perceived justice, perceived HNT, customer rage, and coping behaviors were more than 70 per cent of the variance for each. These results are in line with the literature we adopted. We then conducted a CFA for the measurement model (Fornell and Larcker, 1981). The fit of the finalized confirmatory factor model was acceptable (χ^2 = 869.201, df = 448; GFI = .862; CFI = .947; NFI = .892; RMSEA = .054). The measurement model consisted of eight correlated latent variables. Tables VII and VIII show the number of items, factor loadings, Cronbach's alphas, composite reliability values, and AVE estimates.

Table VII

Measurement model and CFA results

Construct	Items	Standard Factor Loading	Range	M	SD
Procedural justice	Despite the hassle caused by the problem, the firm responded fairly and quickly.	0.770	6	3.26	1.56
	I feel the firm responded in a timely fashion to the problem.	0.872	6	3.25	1.63
	With respect to its policies and procedures, the firm handled the problem in a fair manner.	0.780	6	3.24	1.61
Interactional justice	The employees treated me in a polite manner.	0.932	6	3.86	1.62
	The employees gave me detailed explanation and relevant advice.	0.947	6	3.30	1.62
	The employees treated me with respect.	0.889	6	3.40	1.63
Distributive justice	The employees treated me with empathy.	0.817	6	3.28	1.61
	Overall, the outcome I received from the service firm was fair.	0.920	6	2.81	1.63
	Given the time, money, and hassle, I received a fair outcome.	0.886	6	3.01	1.73
	I got what I deserved.	0.873	6	2.91	1.71
Inclusionary Threat Cluster					
Belongingness threat		0.801*			
	I felt disconnected.	0.748	6	3.97	1.54
	I felt rejected.	0.776	6	4.77	1.58
	I felt I did not belong to the group.	0.804	6	4.25	1.56
Self-esteem threat		0.720*			
	I did not feel good about myself.	0.797	6	4.02	1.62
	My self-esteem was not high.	0.887	6	4.36	1.64
	I felt unsatisfied.	0.791	6	3.90	1.62
Power Need Cluster		0.908	6	3.95	1.62
	I felt I did not have the ability to significantly alter events.				
	I felt I was unable to influence the action of others.	0.703	6	3.93	1.66
	I felt the others decided everything.	0.925	6	4.07	1.63
Rage	I felt overpowering destructive rage.	0.901	6	4.19	1.52
	I felt extreme anger and unrestrained violence.	0.785	6	3.63	1.66
Market aggression	I have damaged property belonging to the service firm.	0.820	6	1.53	1.13
	I have deliberately bent or broken the policies of the firm.	0.926	6	1.89	1.45

Vindictive complaining	I complained to the firm to…				
	... give a hard time to the representatives.	0.868	6	4.80	1.52
	… be unpleasant with the representatives of the company.	0.850	6	5.03	1.34
	… make someone from the organization suffer for their services.	0.856	6	4.93	1.43
Support-seeking N-WOM	I would talk to other people about my negative experience to…				
	… get some comfort.	0.885	6	3.61	2.05
	… feel better.	0.910	6	3.90	1.92
	… share my feelings with others.	0.879	6	3.99	1.93
Vindictive N-WOM	I would talk to other people about my negative experience to…				
	… spread negative word of mouth about the firm.	0.894	6	3.08	1.81
	… denigrate the firm to others.	0.959	6	3.03	1.75
	… warn others not to use the firm.	0.866	6	3.25	1.92

Table VIII

Constructs validity check

	Cronbach's α	CR	AVE	Correlations Matrix									
				1	2	3	4	5	6	7	8	9	10
1.Procedural justice	0.85	0.85	0.65	(0.65)	0.53	0.51	0.01	0.00	0.00	0.11	0.00	0.00	0.00
2.Interactional justice	0.94	0.94	0.81	0.73	(0.81)	0.40	0.03	0.01	0.02	0.06	0.01	0.01	0.01
3.Distributive justice	0.92	0.92	0.80	0.71	0.63	(0.80)	0.04	0.03	0.03	0.09	0.00	0.00	0.00
4.Inclusionary need cluster	0.83	0.73	0.58	-0.09	-0.17	-0.19	(0.58)	0.43	0.45	0.07	0.15	0.11	0.11
5.Power need cluster	0.90	0.90	0.70	-0.04	-0.09	-0.16	0.65	(0.70)	0.15	0.07	0.04	0.06	0.06
6.Rage	0.84	0.83	0.71	-0.02	-0.14	-0.17	0.67	0.39	(0.71)	0.10	0.19	0.07	0.13
7.Market aggression	0.84	0.87	0.77	0.33	0.24	0.30	0.26	0.26	0.31	(0.77)	0.00	0.03	0.10
8.Vindictive complaining	0.90	0.89	0.74	-0.04	-0.10	-0.06	0.38	0.21	0.44	-0.05	(0.74)	0.06	0.06
9.Support-seeking N-WOM	0.93	0.92	0.80	-0.04	-0.08	-0.03	0.34	0.25	0.27	0.17	0.24	(0.74)	0.43
10.Vindictive N-WOM	0.92	0.93	0.82	-0.03	-0.07	0.02	0.33	0.25	0.36	0.32	0.24	0.66	(0.82)

Note: ( ) = AVE

Values below the diagonal = correlation estimates, values above the diagonal = squared correlations.

Structural model and hypotheses tests. We used structural equation modeling analysis to estimate the theoretical model depicted in Figure 2. The fit for the corrected model was acceptable (χ^2 = 915.834, df = 473; GFI = .856; CFI = .944; NFI = .902; RMSEA = .054). We evaluated the proposed hypotheses using the estimated path coefficients shown in Table IX. We tested each dimension of HNT to understand its effect on rage. The effects of the inclusionary need cluster and the power need cluster were supported, though the impact of the inclusionary need cluster was stronger. In addition, interactional injustice affected the inclusionary need cluster, while distributive and procedural injustice affected the power need cluster. Accordingly, interactional injustice is the key trigger of customer rage, as Table IX shows.

Table IX

Hypotheses test results

	Standardized Estimate	S.E.	C.R.	Result
Procedural justice→Power need cluster	-0.230*	*0.144*	*-1.948*	Supported
International justice→Power need cluster	-0.080	0.096	-0.834	Rejected
Distributive justice→Power need cluster	-0.286**	0.092	-2.966	Supported
Procedural justice→Inclusionary need cluster	-0.070	0.115	-0.627	Rejected
Interactional justice→Inclusionary need cluster	-0.189*	0.077	-2.062	Supported
Distributive justice→Inclusionary need cluster	-0.140	0.074	-1.530	Rejected
Power need cluster→Rage	0.133*	0.050	2.343	Supported
Inclusionary need cluster→Rage	0.506***	0.120	4.433	Supported
Rage→Market aggression	0.250**	0.052	2.697	Supported
Rage→Vindictive complaining	0.454***	0.063	6.995	Supported
Rage→Vindictive N-WOM	0.378***	0.076	6.025	Supported
Rage→Support-seeking N-WOM	0.323***	0.086	5.067	Supported

*p < .05, **p < .01, ***p < .001.

5. CONCLUSION

First, we identified the perceived HNT measurement items in the service recovery failure context and confirmed the inclusionary need and power need clusters. Second, we confirmed the negative effects of perceived justice on perceived HNT, the positive effects of perceived HNT on customer rage, and the positive effects of customer rage on confrontative and non-confrontative coping behaviors. Third, we determined the mediating effects of perceived HNT on the relationship between perceived justice and customer rage.

This study highlights the challenges of managing customer service standards and providing services that enable employees to monitor their

responses based on HNT. Focusing on sociological psychology studies, this study examines that customer rage arises when individuals feel alienated and excluded in service recovery context as do in groups or in their personal relationships. Thus, frontline employees and service managers should realize that customers seek fulfillment of a set of psychological needs from service encounters.

6. DISCUSSION

Theoretical implications

The results broaden the understanding of the role of threats to human needs as major triggers for the rage customers experience in service recovery failure contexts. First, we proposed an extended psychological process by incorporating perceived HNT. Building on stress and coping theory, our research demonstrates that perceived HNT is largely responsible for activating customer rage following service recovery failures. We identified the role of perceived HNT on the relationship between cognitive appraisal (i.e., perceived justice) and emotion (i.e., rage) and proved the effect of perceived HNT. Thus, perceived HNT is a key trigger for customer rage.

Second, we verified the HNT scale to demonstrate comprehensive psychological processes. Research in social psychology has employed this scale to explain the causes of social exclusion or ostracism using systematized human needs structures; in turn, we demonstrate the applicability of this scale in the service context for the first time.

Third, the results substantiate moving from the existing managerial-centric perspective to a customer-centric perspective to understand service failure and negative emotions. Existing justice theories establish what service providers should do to improve services. That is, these theories helped define management improvement points, such as compensation, employee responses, and procedural impartiality, by examining customers' evaluations of service recovery for distributive, procedural, and interactional aspects. However, these theories are not sufficient for interpreting customers' emotions and mental states. The current study enables such interpretation by giving more weight to customers' emotions and mental states and by examining the role of threats to human needs during service failure.

Last, previous empirical studies were conducted in states in which the division and boundary between customer rage and other negative emotions are vague. However, in line with McColl-Kennedy *et al.*'s (2009) definition of customer rage, the current study argues that customer rage differs from other less or moderately negative forms of aggression. That is, this study uses the results of social psychology studies that indicated that aggression arises when humans feel alienated in their relationships or in the groups to which they belong. Thereafter, this study reveals that threats to human needs are triggers for customer rage in the service failure context. In addition, this study presents a comprehensive model to explain the causes of customer rage in this process.

Managerial implications

This research highlights the importance of prioritizing either problem-solving actions or customers' emotional states, depending on customers' psychological resources and coping strategies. Service providers must be empowered to govern the process of recovery from a service failure. Frequently, companies focus on finding a functional compromise and ignore the emotional aspects of the failure. In practical terms, however, effectively handling service failure recovery requires hiring and training personnel to incorporate customer–provider interventions and understand customers' emotional and cognitive responses to failures.

The psychological characteristics and abilities of service employees are becoming a competitive tool for service organizations. Service personnel should be able to identify customer coping styles and employ a targeted approach to recovery strategies. This also implies a challenge for service organizations in managing the standards of customer service and ensuring that their employees, especially frontline employees, can monitor customers' responses based on HNT.

The economic impact generated by complaints is superseded by overwhelming emotions (Chebat and Slusarczyk, 2005). Consequently, frontline employees should be aware of the emotional climate of customers' complaints and trained to monitor it. Frontline employees and their supervisors need to have the mind-set that customers come first and to realize that they seek fulfillment of a set of psychological needs from service encounters. This means that firms must understand and avert failed service encounters that may threaten fundamental human needs.

Limitations and further research

The limitations of this research are as twofold. First, retrospective-based field studies involve memory bias that may affect the accuracy of customers' recall (e.g., Smith *et al.*, 1999). Second, further research could refine our proposed scale by using extended service contexts. In this study, the factor of "meaningful existence" was not included. Thus, with varied service contexts and samples, the proposed HNT scale can be re-validated. Last, it would be worthwhile to enhance the external and internal validity by surveying respondents in different contexts. Furthermore, a scenario-based approach would extend the results for effective managerial intervention and differentiate the type of intervention appropriate for each threatened need.

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