



Contents lists available at ScienceDirect

## International Journal of Hospitality Management

journal homepage: [www.elsevier.com/locate/ijhm](http://www.elsevier.com/locate/ijhm)

# Severe service failures and online vindictive word of mouth: The effect of coping strategies

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## ARTICLE INFO

## Keywords:

Vindictive word of mouth  
Coping strategies  
Severe service failure  
EWOM

## ABSTRACT

This study proposes an integrative model that investigates the role of coping strategies in the relationship between severe service failures and online vindictive word of mouth (OVWOM) behavior. While the mechanism of online negative word of mouth (ONWOM) have been widely studied, the underlying processes by which OVWOM develops remain unclear, specifically when it comes to the use of OVWOM as a coping mechanism. Achieving a better understanding of the mechanism by which OVWOM develops is important given its potential to significantly harm a firm's image, loyalty and market share. The results of a survey of restaurant customers confirm the role of the psychological and situational factors that result in OVWOM behavior as a strategy to cope with severe service failures. Accordingly, this study provides an initial response to calls for research on the role of situational and personal factors that explain retaliation behavior in response to severe service failures.

## 1. Introduction

In 2008, Dave Carroll, a Canadian musician, was flying with United Airlines from Halifax, Nova Scotia to Omaha, Nebraska. Upon landing, he realized that his \$3500 Taylor guitar's neck was broken due to the airline's careless handling of his luggage (Rauschnabel et al., 2016). United refused to take responsibility, prompting Mr. Carroll to create a now infamous music video called "United Breaks Guitars" to explain his negative experience with the airline. To date, the song has received over 20 million YouTube views, gone viral on various social media platforms, and motivated other consumers to share their negative experiences with United on the Internet. Within four days of his song going online to seek revenge, the gathering thunderclouds of negative PR caused United Airlines' stock price to suffer a mid-flight stall in the form of a 10% devaluation, costing shareholders \$180 million (Sawhney, 2009).

In academic terms, Mr. Carroll's experience with United Airlines would typically be characterized as a severe service failure, a common occurrence in the service industries. What is less common is Mr. Carroll's response to this severe service failure. After all, most consumers that experience severe service failures do not spend the time and energy that Mr. Carroll spent to take revenge on the company or organization that failed them. So why did Mr. Carroll choose to retaliate? Or more

broadly, why do some customers seek revenge in the event of a severe service failure while others choose to do nothing at all? In order to answer this question, this research uses stress-coping theory to explore why, upon experiencing a severe service failure, some individuals choose to engage in a specific form of revenge-seeking behavior called online vindictive word of mouth (Gelbrich, 2010).

Online vindictive word of mouth (OVWOM) is different than what is typically referred to as online negative word of mouth (or ONWOM). Under normal conditions of dissatisfaction, consumers may turn to the Internet (or social media) to report minor annoyances or unmet expectations in the hope of venting their negative emotions (Taheri et al., 2020), attaining social support and/or informing other customers. Such behavior is commonly referred to as ONWOM or negative EWOM. However, unlike ONWOM, the primary purpose of OVWOM is not to inform future customers, but rather to punish or take revenge on the offending firm and to explicitly advise others not to use its services. For example, in 2017, vindictive Uber customers, enraged over surge pricing, launched the #DeleteUber campaign, successfully prompting roughly 500,000 users to delete their Uber accounts (Kim and Park, 2020). Further, according to the Customer Rage Survey (2020), the extent of telling other customers about a service failure, as well as the resulting change in brand loyalty, depends on whether the complaint

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<https://doi.org/10.1016/j.ijhm.2021.102911>

Received 21 June 2020; Received in revised form 28 February 2021; Accepted 28 February 2021

Available online 15 March 2021

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was addressed satisfactorily by the company. Specifically, complainants that do not receive a satisfactory response to a failure tell an average of seven people about their experience versus satisfied complainants that tell an average of only 3.7 people. Similarly, dissatisfied complainants' brand loyalty decreases by 22%, whereas satisfied complainants brand loyalty actually increases by 12%.

Existing research has demonstrated a number of external factors that facilitate this type of OVWOM behavior. For example, customers are more likely to engage in OVWOM when (1) the service failure is perceived as severe; (2) the firm is responsible for the failure; and (3) the failure could have been prevented by the firm (Bavik and Bavik, 2015; Kaltcheva et al., 2013). Although previous research has been successful in identifying the external/contextual factors that precede OVWOM behavior, there remains a poor understanding of the psychological mechanisms behind such behavior.

Given this gap in the literature, the present research seeks to better understand the internal mechanisms that drive consumers to seek revenge online (or OVWOM) against a service organization in response to a perceived severe injustice. From a theoretical standpoint, this research looks at the issue of OVWOM from the perspective of stress-coping theory (Lazarus and Folkman, 1984), that helps explain why and how people react to stressful situations. Broadly speaking, this theory suggests that OVWOM is the outcome of coping mechanisms that are activated to alleviate to the stress of a severe service failure. For example, in the case of Dave Carroll, his initial reaction to his broken Taylor guitar was not to record a viral music video about his negative experience. In fact, Mr. Carroll spent nearly a year in dialogue with United Airlines, only to be told in the end that they would assume no liability for his damaged property. Only then did he take his revenge. According to stress-coping theory, it was the final refusal by United to accept responsibility for the broken guitar and not the initial failure that necessitated the activation of a coping behavior to alleviate the associated stress; hence, the production of the retaliation video recounting his negative experience.

As illustrated through the case of David Carroll and United Airlines, OVWOM is not only the result of contextual factors such as a severe service failure and the firm's response to it, but also of the customer's ability to cope with the stress of the situation (Tsarenko and Strizhakova, 2013). However, while calls have been put forth for research to examine the relationship between severe service failures and behavioral intentions such as use, recommendations and complaining (Sengupta et al., 2015; Tsarenko and Strizhakova, 2013), very little is known about the internal psychological mechanisms that drive OVWOM. Accordingly, the purpose of the present research is to more deeply consider the role of coping, in its various forms, in the relationship between severe service failures and OVWOM behavior, thus answering the questions: why and how do people seek revenge against service organizations that fail them?

To answer this question, this study develops and tests a conceptual model that investigates consumer responses to severe service failures with an emphasis on how specific types of coping strategies may facilitate or hinder an individual's intentions to engage in OVWOM. In doing so, this study makes a theoretical contribution to the existing literature on severe service failures by advancing the understanding of why and how OVWOM develops. Additionally, this theoretical advancement is considered in terms of its ability to inform practical managerial decision making, particularly with regard to (1) managing severe service failures and (2) training employees to react appropriately if/when they occur.

## 2. Literature review

### 2.1. Online vindictive word of mouth (OVWOM)

Word of mouth (WOM), whether it is positive or negative, is considered one of the most important sources of information in the consumer decision-making process due to its perceived credibility (Day,

1971). When it comes to negative WOM, customers can engage in direct and indirect forms of complaint behavior. Direct complaint behavior involves complaining directly to the service firm to resolve a problem (Gelbrich, 2010). This type of complaint behavior contributes highly valuable market data because firms can use it to measure service quality, improve service design and delivery, and increase customer loyalty (Marquis and Filiatrault, 2002).

On the other hand, indirect complaint behavior involves complaining in forums outside of direct company channels, such as the Internet. Indirect complaint behavior comes in two forms: online/electronic negative word of mouth (ONWOM, also called EWOM) and online vindictive word of mouth (OVWOM). Whereas customers engage in ONWOM to vent their negative emotions (Hennig-Thurau et al., 2004), to reduce cognitive dissonance (Oliver, 1987), and to attain social support (Schoefer and Diamantopoulos, 2008), OVWOM represents as a retaliatory gesture to discourage other potential customers from patronizing the firm (Grégoire and Fisher, 2008) or to alert the public about the firm's misbehavior (Ward and Ostrom, 2006). Thus, ONWOM and OVWOM can be differentiated according to the way in which the customers intend to harm the firm. Unlike ONWOM, OVWOM is "an aggressive type of voice response" (Gelbrich, 2010; p. 570), with a clear intent to "get the firm in trouble" (Grégoire et al., 2010, p. 744).

OVWOM is perceived as the most harmful type of indirect complaint behavior because of the possibility for a chain reaction effect (Kaltcheva et al., 2013) and the damaging impact on the firms' reputation and market share (Grégoire and Fisher, 2008; Moe and Schweidel, 2012; Weun et al., 2004). Customers engaging in OVWOM may think that they can change an adverse situation whereas customers engaging in ONWOM may not (Gelbrich, 2010). Another distinction is that while ONWOM can be triggered by minor service failures, OVWOM tends to be triggered primarily by severe service failures, resulting in relatively stronger negative emotions (Wetzer et al., 2007). As it relates to the present research, Yi and Baumgartner (2004) argue that consumers' responses such as OVWOM to a severe service failure tend to be a function of their choice of a particular coping strategy.

### 2.2. Coping strategies

Service researchers have long been interested in understanding how consumers cope in the marketplace (Dubachek and Oakley, 2007), particularly after experiencing a stressful event such as a service failure. Stress and coping theory (Lazarus and Folkman, 1984) argues that negative encounters can trigger two types of coping mechanisms: cognitive and behavioral. Cognitive coping efforts reflect the degree to which individuals perceive a stressful situation as important or threatening to their wellbeing, whereas behavioral coping efforts reflect the actual strategies and techniques individuals use to either change the situation or the emotion caused by the situation (Hambrick and McCord, 2010).

Coping has been broadly defined in terms of both the covert and overt behaviors that help people reduce psychological distress (Fleishman, 1984) and achieve psychological adaptation during stressful situations (Holahan and Moos, 1987). However, Folkman and Lazarus (1980) argue that coping should not be viewed as a function of a specific personality trait in terms of how people *usually* cope, but as a function of the situation in terms of how people *actually* cope. In support of this perspective, the current study adopts Lazarus and Folkman's (1984, p. 141) definition of coping as the "constantly changing cognitive and behavioral efforts to manage specific internal and/or external demands that are appraised as taxing or exceeding the resources of the person."

In general terms, consumer coping strategies can be classified in many different ways. Coping can be classified in terms of focus (inward or outward coping), function (managing the problem or managing mental state/emotions), situation (controllable or uncontrollable), perceived power (feeling powerful or powerless) or approach (engagement or disengagement). For example, regarding focus, customers

engage in outward coping when they focus on the source of the stress and perceive themselves as able to change the source by solving the problem or voicing their dissatisfaction directly to the firm. In contrast, customers engage in inward coping when they focus on regulating their emotional response to the source of the stress or reconstructing the subjective meaning of the stressful situation.

According to goodness of fit theory, individuals who perceive a given stressor as uncontrollable and unchangeable are more likely to appraise events as more stressful and to engage in expressive or avoidance coping (Stephens and Gwinner, 1998). This is also true for those that feel less powerful than the organization. Engagement coping strategies aim at dealing with the source of stress or related emotions, while disengagement coping strategies aim at escaping from the source of stress or related emotions (Carver and Connor-Smith, 2010).

From an operational standpoint, prior research has proposed a number of different dimensional structures of the coping construct. Depending on the approach, the coping construct has been proposed as a function of: two dimensions such as problem and emotional coping (Folkman and Lazarus, 1980); three dimensions such as problem, emotion and meaning coping (Moos and Billings, 1982); four dimensions such as problem, direction, avoidance and support (Carver et al., 1989); or five dimensions such as problem, direction, avoidance, support and cognitive restructuring (Ayers et al., 1996). An examination by Duhachek (2005) of 10 seminal instruments used to measure coping from various theoretical perspectives resulted in the identification of 85 dimensions of coping across 250 items. A reduction to 53 items and eight dimensions revealed that previous models of coping structures are too abstract, oversimplified theoretically, and empirically inaccurate. Thus, this study adopts Duhachek's view of coping as having three hierarchical dimensions: active coping, expressive-support-seeking coping, and avoidance coping (see also Choi et al., 2019). Together, these three dimensions capture the complex psychological process of coping. Each is discussed as follows.

*Active coping* specifies a situation in which people direct their efforts and behaviors to changing and managing the stressful situation itself (Duhachek and Oakley, 2007). Active coping constitutes an instrumental type of coping that seeks to alter, remove, evade or diminish the impact of an adverse situation (Carver and Connor-Smith, 2010; Gelbrich, 2010). Consumers implementing such an adaptive coping mechanism tend to perceive situational control as high (Duhachek and Kelting, 2009) and assess the whole incident in a constructive and rational way (Folkman et al., 1986).

*Expressive-support-seeking coping* denotes a setting in which people direct their efforts and behaviors to regulating, reconstructing or letting out their negative emotions in response to a stressful situation (Duhachek and Oakley, 2007). Consumers implementing this coping mechanism tend to marshal their social resources to improve their emotional and/or mental state by venting negative emotions and seeking emotional and informational support from others (Duhachek, 2005).

*Avoidance coping* is a maladaptive or passive form of coping in which consumers attempt to create psychic or physical distance between themselves and a stressor (Duhachek, 2005). For example, consumers engage in avoidance coping when they try to take their minds off of a problem by distracting themselves through doing other things. Customers implementing an avoidance coping strategy are less likely to respond to a stressful situation, may completely ignore what has happened or may even dismiss negative emotions to restore their inner balance (Tsarenko and Strizhakova, 2013). However, using this coping strategy can be difficult in high stress situations as it can lead to unresolved emotional tensions, which can result in destructive behaviors (Strizhakova et al., 2012).

Previous research from psychology, consumer behavior, and marketing suggests that, when dealing with a stressful situation, it makes little sense to contrast one coping strategy with another (Yi and Baumgartner, 2004). People tend to view coping strategies as complementary rather than independent (Carver and Connor-Smith, 2010) and

simultaneously applicable (Haj-Salem and Chebat, 2014). Additionally, different types of coping strategies should be considered simultaneously based on the nature of the situation (Folkman and Lazarus, 1980). For example, focusing on addressing a problem caused by a stressful event can reduce negative emotions caused by the problem. Similarly, a focus on reducing negative emotions caused by a problem can lead to a better focus on addressing that problem. Therefore, in this study, the three types of coping processes are tested simultaneously in order to capture the complementary nature of coping strategies.

### 2.3. Severe service failure and coping

Consumer behavior researchers (e.g., Duhachek and Iacobucci, 2005; Fu et al., 2015; Weber et al., 2016) have focused on understanding how customers cope with stressful and/or failed service encounters, because it is impossible to ensure 100% error-free service (Fisk et al., 1993) even for world-class organizations (Dong et al., 2008). The term "service failure" refers to conflict situations in which customers lose economic and/or social benefits as a result of an interaction with a firm (Smith et al., 1999). Taking this idea a step further, a *severe* service failure refers to a service failure in which the customer perceives an enhanced intensity of the problem, loss, or harm (Folkman et al., 1986; Hess et al., 2007; Weun et al., 2004). The concept captures the perceived importance of the failure, the ensuing inconvenience, and the ultimate aggravation caused by the failure (Maxham et al., 2002; Vogus et al., 2020). For example, flight delays or hotel cancellations could result in consumers missing important events or meetings (Keiningham et al., 2014). Severe service failures can lead to switching behavior (Keaveney, 1995), customer dissatisfaction (Hess et al., 2007; Keiningham et al., 2014; Smith et al., 1999), negative word of mouth (Weun et al., 2004), and reductions in repurchase intentions (Maxham et al., 2002; Schumann et al., 2014), profitability (Zeelenberg and Pieters, 2004), and organizational efficiency (Smith et al., 2010).

If customers perceive a service failure as severe, the exchange relationship becomes unbalanced (Smith et al., 1999). In response, the customer may try to regain balance by working to gain control, adjusting his position, or downgrading the negative harm or losses (McCull-Kennedy and Sparks, 2003). Customers in severe failure situations view themselves as victims who have been damaged by the service provider and often seek amends (Weun et al., 2004). Accordingly, severe service failures induce more variability in coping (Blodgett et al., 1997; Carver and Connor-Smith, 2010; Gabbott et al., 2011; Roggeveen et al., 2012; Tax et al., 1998). For example, individuals who engage in problem solving coping in situations with high perceived control over fixing the problem suffer lower levels of stress compared to those who engage in expressive-support seeking and avoidance/denial coping in situations with low perceived control over fixing the problem. This suggests that, although customers may engage in a variety of coping mechanisms to mitigate the stress associated with a negative experience, those who evaluate the service failure as severe but are able to fix it are more likely to engage in active coping. In contrast, those who experience severe failures such as flight cancellations or food poisoning but lack the cognitive and behavioral control or adequate resources to fix the problem are more likely to engage in expressive-support seeking coping (Gabbott et al., 2011), avoidance coping (Tsarenko and Strizhakova, 2013) or retaliatory OVVOM behaviors (Bonifield and Cole, 2007; Gelbrich, 2010). Accordingly, in line with Grégoire and Fisher's (2008) argument that actions directed to restore fairness are deliberate, we argue that:

**Hypothesis 1.** Severe service failures are positively associated with (a) active coping, (b) expressive-support-seeking coping, and (c) avoidance coping.

Although customers involved in denial or expressive-seeking coping may dismiss the problem at the cognitive level, they tend to relieve their negative emotions by sharing their distress (Singh, 1988) and asking



others for empathy and understanding (Yi and Baumgartner, 2004). Likewise, consumers may engage in OVVOM (e.g., Gelbrich, 2010) as a behavioral manifestation of coping to restore balance and facilitate healing and recovery (Tsarenko and Strizhakova, 2013). In contrast, customers involved in active coping are less likely to engage in OVVOM as they give priority to rationally assessing the stressful situation and openly discussing the problem with their service provider. Thus:

**Hypothesis 2.** (a) Active coping is negatively associated with OVVOM but (b) expressive-support-seeking coping and (c) avoidance coping are positively associated with OVVOM.

### 3. Method

Most research on service failure has used experiments based on hypothetical scenarios (e.g., Maxham et al., 2002). However, a study based on retrospective experience was deemed the most appropriate in the present endeavor for several reasons, including eliciting customer responses in real-life situations (Schoefer and Diamantopoulos, 2008); exploring the dynamics of relationships, rather than causation, in a nomological net (Sajtos et al., 2010); and allowing for external and ecological validation of the results (Gelbrich, 2010).

The restaurant service context was selected for two reasons. First, although service failures are common in the hospitality sector (Smith and Bolton, 2002), service failures are particularly relevant for restaurants as 65%–83% restaurant customers show a high propensity to complain in case of a service failure (Namkung and Jang, 2011). Second, restaurant experience is composed of several service encounter stages starting from greeting the customer to paying the bill and exiting. Service failure can occur at any stage of this extended service encounter. Thus, understanding why restaurant customers engage in OVVOM as a result of severe service failure in this extended service encounter is important given that repeat customers account for 60%–75% of restaurant business (McQuilken and Robertson, 2013).

#### 3.1. Measurement

Consumers' OVVOM behavior was measured using three items adapted from Gelbrich (2010). A shortened version (9 items) of Duhaček's (2005) coping scale was adapted to assess the three broad coping strategies using three items for each dimension. The three items measuring service failure severity were adopted from Grégoire and Fisher (2008).

All items were measured on a 5-point Likert scale. Blame attribution, age and gender were considered as control variables as research shows that they affect the coping strategy that the customer will adopt and to provide a more robust test of the hypotheses.

#### 3.2. Data collection

Using Qualtrics software, an online version of the survey was developed and pretested among a convenience sample of 20 postgraduate business students at a large British University. As a result, a few items were reworded to ensure clarity and avoid item content overlapping.

To ensure an adequate sample size for the main test, the common practice of using purposive sampling was followed (Ali et al., 2021; Schoefer and Diamantopoulos, 2008). Thus, only customers who recently experienced a severe dining failure and shared their negative experience with other customers online (four weeks before survey distribution) were surveyed. These criteria were crucial to enhancing the level of external validity (Grégoire et al., 2010), reducing memory lapses (Smith et al., 1999), and avoiding retrospective falsification of self-reported data (Folkman and Lazarus, 1980).

E-mails were sent to participants in online discussion groups on the topic of restaurant complaints, notifying them of an online survey on

severe service failure and requesting their participation. After describing their recent severe failure experience in an open-ended response format, respondents were asked to recall their thoughts and feelings at that time. Next, respondents were asked to answer questions related to their actual engagement in the three coping strategies, and OVVOM. They were also encouraged to ask questions if they considered any of the items to be unclear by e-mailing the researchers directly. Respondents scoring less than 4 on the 5-point Likert scale for measuring severity of failure and/or those that experienced different types of service failures other than in the context of dining experiences were excluded from the analysis.

The sampling procedure generated 257 usable questionnaires (49.4% women, 40.6% men), after incomplete and invalid questionnaires were excluded. This sample size exceeds the suggested sample size based on a rule of thumb for SEM to have a 10 to 1 ratio of the number of observations to items (Ali et al., 2018; Hair et al., 2010). Given that there were 5 constructs and 15 items measured in the model used in this study, a minimum sample size of 150 was required. The majority of respondents were between the ages of 18 and 30 years old (59.5%). To test for nonresponse bias, responses of early and late respondents on key variables including severity of failure, coping strategies, and OVVOM were compared. These comparisons revealed no significant differences between the two groups at the 5% level. Thus, nonresponse bias was unlikely to be a major problem in the study.

### 4. Results

To test the research model, Partial Least Squares (PLS-SEM) was used by employing SmartPLS 3.0. This technique does not require assumptions on the multivariate normality of the data and works efficiently with smaller sample sizes and complex models (Ali et al., 2018). As an initial step, a multivariate normality test was performed using Mardia's coefficients. Results indicated that the data did not follow a multivariate normal distribution, despite some of the individual variables following a univariate normal distribution. Thus, PLS-SEM was deemed the most appropriate method for testing the research model.

#### 4.1. Measurement model assessment

The internal consistency reliability and convergent validity were assessed following the procedure suggested by Fornell and Larcker (1981). Table 1 shows the results of this analysis. Internal consistency reliability was examined by Cronbach alpha (CA), Composite Reliability (CR) and rho.A. The results shown in Table 1 indicate values above 0.70, which is the recommended threshold for these measures (Ali et al., 2018). The AVE exceeds the cut-off point of 0.50 (Fornell and Larcker, 1981). Therefore, the model is satisfactory in terms of intrinsic reliability and convergent validity.

In addition, the discriminant validity of the constructs was evaluated using the Fornell-Larcker criterion. Table 2 indicates that all of the square roots of the AVE (values in bold, off-diagonal) are greater than the correlations in the respective columns and rows. Therefore, the measurement model demonstrated adequate discriminant validity. In addition, discriminant validity was also assessed by applying the HTMT method (Henseler et al., 2015). Table 2 shows that all values of HTMT are lower than the threshold of 0.90, fulfilling the condition of HTMT = .90 (Kline, 2015) and reinforcing the satisfactory discriminant validity for all constructs in this study.

Additionally, for the model fit assessment, SRMR value was used. A value less than 0.08 is considered a good fit (Hair et al., 2010). For this study, the SRMR value for both the saturated and estimated model was 0.074, indicating the proposed model has a good fit to the data.

#### 4.2. Structural model assessment

The structural model was tested after the overall measurement model was found to be acceptable. Initially, all variance inflation factor (VIF)

**Table 1**  
Validity and Reliability.

Construct	Factor loading	Cronbach's Alpha	rho_A	Composite Reliability	AVE
<b>Service failure severity</b>		0.801	0.870	0.878	0.706
The service failure caused me ....					
• minor problem (1) — major problem (5)	0.869				
• small inconvenience (1) — big inconvenience (5)	0.760				
• minor aggravation (1) — major aggravation (5)	0.886				
<b>Active coping</b>		0.833	1.214	0.877	0.707
I concentrate on resolving the problem.	0.949				
I develop a plan of action to change the situation.	0.722				
I think about potential solutions.	0.835				
<b>Expressive coping</b>		0.703	0.706	0.830	0.620
I rely on others to make me feel better.	0.778				
I let out my negative feelings.	0.818				
I express my negative emotions to others.	0.764				
<b>Avoidance coping</b>		0.822	0.901	0.868	0.698
I deny that the stressful event happened.	0.945				
I refuse to believe that the problem ever occurred.	0.954				
I pretend that this problem never happened.	0.599				
<b>OVWOM</b>		0.903	0.914	0.939	0.836
I retaliate online about the restaurant to other customers.	0.890				
I denigrate the restaurant to other customers.	0.930				
I warn other customers online to not to go to this restaurant.	0.923				

values were calculated and found to be under the threshold value of 5; hence, no multicollinearity issues in the structural model were identified. Further, R square, path estimates and their corresponding t-values were calculated by employing a bootstrapping procedure with 5000 subsamples. As shown in Fig. 1, severity of service failure has a significant and positive impact on expressive-support-seeking and avoidance coping and both of these have a significant and positive impact on OVWOM. In addition, the impact of severity of service failure on active coping and its impact on OVWOM were both negative but insignificant. Results of hypotheses testing are presented in Table 3.

### 5. Discussion

In this paper, we examine the relationships among severity of service

**Table 2**  
Discriminant Validity.

F and L Criterion					
Constructs	AC	DC	EC	SSF	VWOM
Active Coping	0.841				
Avoidance Coping	-0.094	0.836			
Expressive Coping	-0.153	0.233	0.787		
Severity of Service Failure	-0.062	0.105	0.401	0.840	
Online Vindictive WOM	-0.127	0.217	0.372	0.352	0.915
HTMT Criterion					
Constructs	AC	DC	EC	SSF	VWOM
Active Coping					
Avoidance Coping	0.109				
Expressive Coping	0.161	0.248			
Severity of Service Failure	0.096	0.128	0.504		
Online Vindictive WOM	0.113	0.207	0.465	0.399	

failure, three different types of consumer coping and online vindictive word of mouth. Findings from this study show that situational factors such as severity of service failure and individual factors such as customers' coping strategies are necessary conditions to explain why and how customers engage in OVWOM. Further, the results provide support for the hypothesis that OVWOM is a potential behavioral outcome of a coping process associated with the stress that results from the experience of a severe service failure.

Consistent with existing theoretical and empirical evidence, findings of this study show that severe service failures are likely to facilitate conditions where consumers pursue both expressive-support seeking (Gabbott et al., 2011) and avoidance coping mechanisms, (Sengupta et al., 2015). Customers tend to engage in expressive-support seeking and avoidance coping behaviors when they don't have the resources needed to fix the problem.

However, contrary to expectations and previous studies (e.g., Sengupta et al., 2015), it was found that severe service failures are not significantly associated with active coping. This interesting finding is interpreted based on Gelbrich's (2010) argument that consumers are less likely to engage in active coping when rational thinking suggests that they are unable to fix the problem and/or force the service provider to fix it. Further, a deeper consideration of the measurement of active coping construct sheds some light on this finding. For example, items such as "I concentrate on resolving the problem" and "I think about possible solutions." These may be rational coping strategies in the case of regular or less severe service failures. However, in case of severe service failures, customers may believe that there is no possible resolution to the problem, that they lack the power they need to resolve the problem or that they have no control over the stressful situation. Accordingly, it is possible that active coping mechanisms are more likely to be activated when there is a potential for conflict resolution and/or a win-win outcome, whereas such mechanisms are not activated in the case of severe service failures, in which the customer feels powerless in the exchange.

Additionally, results from this study indicate that active coping is not a significant predictor of online vindictive word of mouth. This finding is inconsistent with previous research (Gelbrich, 2010), suggesting that customers who feel helpless in the possibility of fixing the service failure may still need to take revenge on the service provider. A possible explanation is that customers may suppress their negative emotions while actively trying to resolve a problem (Tsarenko and Strizhakova, 2013). Thus, it is possible that OVWOM only takes place as a measure of last resort when active coping mechanisms have been determined to be ineffective in severe failure situations. Future research should continue to explore this possibility in other contexts with varying degrees of perceived control and helplessness to ensure continued advancement of theory regarding the mechanisms by which vindictive word of mouth behaviors develop.

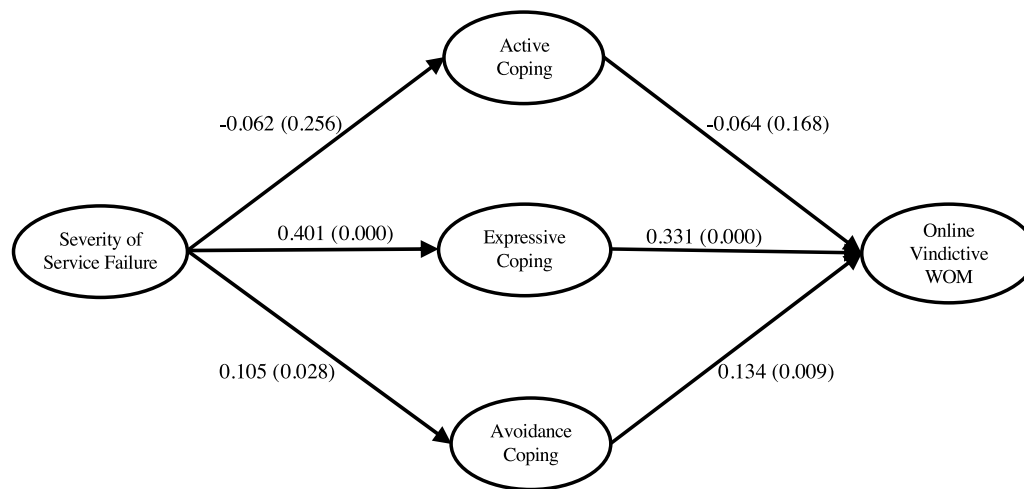


Fig. 1. The effect of the service failure on online vindictive world of mouth.

Table 3  
Hypotheses Testing.

Hypothesis	Beta	P Values	Decision
H1 (a): Severity of service failure -> Active coping	-0.062	0.256	Not Supported
H1 (b): Severity of service failure -> Expressive-support-seeking coping	0.401	0.000	Supported
H1 (c): Severity of service failure -> Avoidance coping	0.105	0.028	Supported
H2 (a): Active coping -> Online vindictive WOM	-0.064	0.168	Not Supported
H2 (b): Expressive-support-seeking coping -> Online vindictive WOM	0.331	0.000	Supported
H2 (c): Avoidance coping -> Online vindictive WOM	0.134	0.009	Supported

Results from this study further suggest that retaliation against the company in the form of vindictive word of mouth appears to be one of the ways that consumers alleviate the accumulated cognitive and emotional tensions perceived from severe service failures. This makes sense given that both expressive-support seeking and avoidance coping behaviors are likely to result from feelings of helplessness in the face of what is perceived to be a more powerful or uncontrollable threat. In support, Gelbrich (2010) found that individuals with high levels of perceived helplessness doubt their ability to address the problem or to force the provider to address it and in turn engage in vindictive complaining.

5.1. Theoretical implications

The present study makes several important contributions to prior research on customer revenge. First, despite the significant research interest that ONWOM has received in service research, the mechanism by which OVVOM develops has not received adequate attention (for exceptions, see Gelbrich, 2010; Grégoire et al., 2010). Our study responds to calls for future research on examining customers motives for OVVOM behavior and the relationship between severe service failures and coping strategies (Tsarenko and Strizhakova, 2013). Second, our research draws on stress and coping theory to better explain how failure severity and coping processes affect customers' willingness to engage in retaliatory behaviors such as OVVOM.

Third, unlike prior research, we develop and test a framework that integrates situational factors such as the perceived severity of a service failure and psychological factors such as coping strategies into a single model to explain customers' OVVOM behavior. Accordingly, whereas

previous studies mainly focused on firm-related factors such as employee incivility, psychological contract breach or firm failure responsibility (Bavik and Bavik, 2015; Kaltcheva et al., 2013) or individual factors such as customers' emotional intelligence and self-efficacy (Tsarenko and Strizhakova, 2013), our research provides a better understanding of the mechanisms by which OVVOM develops.

Finally, our study contributes to the service literature as it focuses on severe service failures as opposed to experiences that simply fall short of expectations. Whereas prior research has often considered the antecedents of unmet expectations/less severe service failures, this research seeks to better understand situations in which the service failure is so egregious that consumers are driven to the Internet to engage in retaliatory behavior in order to cope with the associated negative emotion. Accordingly, to the extent that the overall quality of a service experience can be viewed as taking place on a continuum ranging from (1) exceeded expectations/delight on the high end to (2) mere satisfaction at the midpoint to (3) severe service failures at the low end, this research makes a theoretical contribution by exploring the behavioral outcomes of experiences that take place exclusively at the lowest end of this spectrum. As such, this research advances the theoretical understanding of consumer responses to service failures by providing a more fine-grained analysis of the phenomenon that focuses only on the severest forms of such failures and the resulting coping strategies that are activated under such conditions.

5.2. Managerial implications

The results of our research also provide useful implications for service managers, particularly in the restaurant industry. It is critically important for service managers to understand why customers are vindictive because OVVOM directly targets the firm and can seriously harm its image and profitability. Service managers need to understand the reasons for this vindictive behavior so that they can detect it, prevent it from reoccurring or counteract it at its early stages. To these ends, our research suggests that, at a minimum, service managers should understand the relationship between severe service failures and the obviously undesirable potential for retaliation in the form of OVVOM. Naturally, service marketers should seek to minimize severe service failures; however with the understanding that this is not always possible, it is important to (1) recognize these failures when they happen and (2) react in a way that prevents retaliatory OVVOM. Our results shed light on the prevention aspect of this process by demonstrating that OVVOM is the result of a coping mechanism triggered by their perception of failure severity.

OVVOM behavior, however, is not the only form of coping that

exists, and it is certainly not a foregone conclusion of any given severe service failure. Recognizing this, service managers should seek to minimize customers' perceptions of loss resulting from a service failure by providing controlled supportive channels for customers to vent their negative emotions. For example, forums such as help lines, chat rooms, etc. would act as a coping outlet for the customer's anger that does not damage the firm.

The results also emphasize the importance of training frontline employees to (1) identify severe service failures when they see them and (2) employ an informed approach to reducing the likelihood that the customer will engage in OVVOM as a result. As such, employees should be trained to understand the concept of coping, particularly the expressive-support seeking and avoidance styles, in order to enact a tailored approach to managing service failures. Frontline employees should also support customers by initiating dialogues that can cognitively restructure service failure-based problems and encourage them to express their emotions (Tsarenko and Strizhakova, 2013). In doing so, they may not be able to prevent the service failure, but they may be able to stop the customer from seeking revenge.

### 5.3. Limitations and future research

In conclusion of this research, several limitations are considered in terms of their ability to influence future research on severe service failures, coping and vindictive word of mouth behavior. The first limitation that should be acknowledged is that, in line with Schoefer and Diamantopoulos (2008), the use of online discussion groups such as restaurant complaint forums may have resulted in a somewhat biased sample, attracting more emotional or negatively biased consumers. Thus, a larger and broader sample would bring more diversity and richness to the study and extend the generalizability of the results.

Second, as suggested by Roesch et al. (2006) and Carver and Connor-Smith (2010), examining the role of culture, age or gender in influencing the relationships identified in this study's framework would enhance the predictive ability of the model. Third, implementing an experimental design to assess possible standard differences in failure type and severity reaction would increase the internal validity of the findings. Fourth, future research could extend the conceptual model by incorporating other types of online complaining behaviors such as complaining directly to a third party and service recovery activities such as explanations, compensation, and apologies to provide a more complete picture of the OVVOM nomological network.

### Data availability

The authors are unable or have chosen not to specify which data has been used.

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