Positive psychological capacities: the mystery ingredient in successful service recoveries?

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Abstract

Purpose – This paper aims to explore the influence of frontline employees' (FLEs') positive psychological capacities (PPCs) (optimism, hope, resilience and self-efficacy) on service recovery.

Design/methodology/approach – A model of FLE PPCs is tested using two studies: a field study ($N_{retail} = 205$; $N_{restaurant} = 160$) and between-subject experimental design ($N_{education} = 206$) in three service settings.

Findings – Results show that positive emotions mediate the relationship between PPCs and problem-solving adaptability, and that authenticity of positive emotions moderates the relationship between positive emotions and interactional justice. Surprisingly, problem-solving adaptability positively influences perceptions of distributive justice and interactional justice. A small interaction effect between positive emotions and problem-solving adaptability also was found.

Research limitations/implications – The dependent variable (problem-solving adaptability) was measured using an open-ended question evaluated by objective, independent raters rather than a self-reported structured metric, to minimize social desirability bias.

Practical implications – Given that the customer complaints to the Better Business Bureau in 2016 were close to one million, most of them occurring in the service sector, service firms need continuous research into improving service recovery. This study argues that firms can improve FLEs' problem-solving adaptability behavior by training existing FLEs to strengthen PPCs, hiring FLEs that have strong PPCs and fostering positive emotions.

Originality/value – This is the first study that examines the effect of PPCs on service recovery outcomes. By incorporating PPCs as antecedents of positive emotions, this paper explains how FLEs can offer a better recovery rather than dictating what they ought to display and say. An explanation of how FLE PPCs influence customer outcomes via the broaden-and-build theory of positive emotions and emotion contagion theory is offered, highlighting a novel path/relationship between FLE positive emotions and problem-solving abilities, and extending emotion contagion to service recovery.

Keywords Positive emotions, Frontline service employees, Emotion contagion theory, Positive psychological capacities, Problem-solving adaptability, The broaden-and-build theory of positive emotions

Paper type Research paper

Introduction

Consider the following scenario:

> Airline representative Sally was finishing her shift. As she checked passengers in for the last flight, it was announced the flight had been canceled. Sally wouldn't be leaving anytime soon! Tired and irritable, she determined to resolve her customers' problems. Conjuring up a smile, she turned to face them. *They* were angry. One was verbally abusive. The cancellation meant he would miss an important meeting. Neither hotel nor a flight voucher could fix his problem. Their anger brought Sally to the verge of tears. However, she remained calm and considered possible options. Eventually, she found a flight on a competing carrier that made the passenger's connection. The passenger thanked her warmly before hurrying off to his new flight. Exhausted, Sally told herself, "You can do this." Summoning another smile, she turned to face the next customer. Upon seeing Sally's first success, this customer smiled hopefully. Sally finally cleared her last passenger, who told her, "Thank you!" Tired but satisfied, Sally said to herself, "I love my job."

This scenario illustrates the critical role played by frontline employees (FLEs) in service failures and recoveries (Hart *et al.*, 1990). If a recovery fails, firms may lose customers, revenues and experience negative word-of-mouth (Weun *et al.*, 2004). Clearly, FLEs such as Sally are key in turning unhappy customers around. As the "face" of the firm, their attitudes and behaviors influence customer reactions in both service failure and recovery (Bitner *et al.*, 1990). Not only are they at the epicenter of service failure, they are critically positioned to improvise solutions, and to display pleasant and affirming emotions in the process (Liao, 2007).

Service delivery research reports beneficial effects when firms require FLEs to smile, be enthusiastic or to show regret when things go wrong (Pugh, 2001). Enforcement of such behaviors can be challenging (Medler-Liraz, 2016). Forcing FLEs to act out emotions they do not feel produces emotional labor and burnout (Hochschild, 2012; Lings *et al.*, 2014). Clearly, genuine positive emotions are superior to acted-out emotions. Yet most FLE service recovery role research focuses on *what* to do, rather than *how* to do it. This gap suggests a number of interesting questions:

Q1. How can firms ensure FLEs express genuine positive emotions in service encounters?

Q2. Are some people better at showing genuine positive emotions than others?

Q3. If so, do they have special capacities?

Q4. Do these capacities improve service failure and recovery?

Recent research shows that those high in positive psychological capacities (PPCs[1]) – hope, optimism, self-efficacy, and resilience – enjoy favorable outcomes, such as greater job satisfaction, performance, and sense of well-being (Luthans *et al.*, 2007). Yet, the influence of PPCs on customer outcomes has received little attention (Chang and Banks, 2007; Dixon and Schertzer, 2005; Estrada *et al.*, 1994; Fu *et al.*, 2010), and almost none in service recovery research. The purpose of this research is to address this gap.

To help shed light on FLE PPCs in service recoveries, this paper reports on two studies in three service settings. The first study shows that PPCs are positively correlated with FLE positive emotions and ability to generate adaptable service failure solutions. The second demonstrates the influence of FLE-displayed emotions and problem-solving adaptability on customer perceptions of justice in service recovery solutions, leading to positive customer outcomes for the firm.

Together, these studies are among the first to apply positive psychology to service recovery. By highlighting the importance of genuine versus mechanically displayed emotions, the study opens a fresh approach to understanding and managing service recoveries—one that focuses on the psychological resources of FLEs engaged in service failure reversal. Using emotion contagion theory, the study also shows the significant impact of FLE positive emotions on customer perceptions. Finally, by applying the broaden-and-build theory of positive emotions, the study shows how FLEs provide more adaptable solutions. In sum, the study provides a better approach to understanding recovery performance.

Conceptual framework and hypothesis

Service recovery
Service failure occurs when service delivery falls below customer expectations (Weun *et al.*, 2004). Service recovery occurs when the service provider successfully re-establishes customer satisfaction and loyalty. Customers evaluate service recoveries based on outcomes received (distributive justice), fairness of steps taken (procedural justice), and how the recovery is implemented (interactional justice) (Smith *et al.*, 1999). Because service failure/recovery research has focused

more often on the nature of the service failure (Hess *et al.*, 2003), on *customer* reactions to the failure, or on FLEs' behavioral strategies (Van der Heijden *et al.*, 2013), less attention has been given to possible FLE attributes that are helpful in service recovery. Thus, the question of which strategies best facilitate recovery remains only partially answered.

This research addresses this gap by exploring PPCs as antecedents of desired FLE problem-solving adaptability behaviors and as drivers of customer perceptions of service recovery outcomes. Problem-solving adaptability is the ability to modify behavior to meet customer needs in the service failure (Hartline and Ferrell, 1996). In the opening scenario, Sally could have: (1) Booked a hotel and reserved a ticket on the next available airline; (2) Reimbursed the passenger and given him an extra voucher; or (3) Explored a route on a competing airline, etc. Although these all represent possible solutions, adaptable problem-solving considers what best meets customer needs. FLE problem-solving has received little attention in the literature (Liao, 2007). Moreover, studies incorporating problem-solving focused more on self-reported assessments of problem-solving (Van der Heijden *et al.*, 2013), than objectively measuring the actual adaptability of the solutions. By considering how FLEs can offer adaptable solutions, firms are able to offer more effective service recoveries.

Positive psychological capacities
Mainstream psychology focused for many years on the negative aspects of human psychology (Freud, 1914), ignoring the positive side. *Positive psychology* emerged as an effort to explore affirmative and constructive human experiences, such well-being, happiness, and optimism (Seligman and Csikszentmihalyi, 2000). Subsequent research found that positive psychology affects a wide range of human activities, including sports performance and health (Curry *et al.*, 1997), public speaking (Kashdan, 2002), and problem-solving (Isen, 2001).

Under the umbrella of positive organizational behavior, the related term "psychological capital" emerged to represent "individual's positive psychological state of development," in terms of four component characteristics: optimism, hope, self-efficacy and resilience, which contribute to job-related outcomes (Luthans, 2002; Larson and Luthans, 2006; and Luthans *et al.*, 2007). Because they share a positive (rather than negative) evaluation of circumstances and the likelihood of success (rather than failure), these are collectively referred to as PPCs (Luthans *et al.*, 2007). PPCs have been found to contribute to improvements in employee attitudes, job satisfaction, commitment, and productivity, and to reduce stress and turnover (Avey *et al.*, 2008). Luthans *et al.* (2007) explain that PPCs, unlike inborn personality traits, are a developmental psychological skillset that can be improved upon with training (Peterson and Byron, 2008; Luthans *et al.*, 2008), suggesting an intriguing approach to the recruitment and development of FLEs.

In this literature, *optimism* is understood to be a general assessment that a *current negative situation* will turn out well (Seligman, 1991). The more optimistically individuals think, the more likely they will interpret failures as temporary and controllable (Dixon and Schertzer, 2005). Optimists and

pessimists have different coping strategies. Whereas optimists seek information to resolve problems, pessimists focus on how to minimize negative emotions (Strutton and Lumpkin, 1993). In service recovery, FLEs high in optimism will expect a good outcome is possible and will be more likely to develop recovery solutions. Pessimistic FLEs will not expect positive outcomes from recovery and will be less likely to search for solutions.

While optimism is present-oriented, hope is future-oriented (Bryant and Cvengros, 2004). Hope is defined as "a cognitive set that is based on a reciprocally derived sense of successful: (a) Agency (goal-directed determination); and (b) Pathways (planning of ways to meet goals)" (Snyder *et al.*, 1991, p. 571). In this literature, hope combines motivation with a means to achieve a goal. Hope takes optimism's positive assessment of the present and projects it into the future. Although "hope" and "optimism" are frequently used interchangeably in common speech, the literature defines them as distinct conceptual entities (*n.b.* Bryant and Cvengros, 2004), having statistical discriminant validity, and four noteworthy differences:

1 Optimism is primarily present-oriented, whereas hope is future-oriented.
2 Optimism is a passive present *expectation* of favorable future outcomes, while hope is the action-oriented *intent to pursue* specific favorable outcomes (Henry, 2004).
3 Optimism focuses on *life events*, while hope focuses on *goals*.
4 Optimism involves a general expectation of outcomes, whereas hope necessitates a personal responsibility in achieving these goals.

Hopeful people imagine solutions for unexpected problems, interpret negative events diagnostically, and explore alternatives, and so increase the likelihood of reaching goals (Peterson and Byron, 2008). Because of this, FLEs high in hope develop solutions that are more adaptable. During service failure, hopeful FLEs will imagine and identify alternative ways to achieve recoveries (Rego *et al.*, 2012). Hope *intends* a future outcome to occur (Peterson and Byron, 2008), but lacks the activating force to achieve it. Self-efficacy is the activating force that convinces individuals they can achieve the goal hope imagines.

S*elf-efficacy* is the confidence to take on and perform a task successfully (Bandura, 2000), reflecting the internal conviction, "I can do this." Faced with a service failure, FLEs high in self-efficacy act *merely* because they believe they can find solutions. Those low in self-efficacy will not act because they believe they will fail.

In engineering, *resilience* is the property of materials deformed under pressure to regain shape when the pressure is released. Psychology uses the term analogously to refer to an individual's ability to bounce back from adversity (Masten, 2001). Although physical resilience is fixed by nature, psychological resilience increases each time equilibrium is successfully regained (Luthans *et al.*, 2007). Resilient employees have a "zestful" outlook on life (Rego *et al.*, 2012), and avoid getting "hung up" on customer anger and abuse in service failures. Highly resilient FLEs can solve

service failure problems more successfully than those low in resilience.

Taken together, optimism, hope, self-efficacy, and resilience form an interrelated set of psychological tools useful in understanding and managing FLE-customer service failure/recovery interactions (Barnes *et al.*, 2014). The literature bundles these concepts together, treating them as a second order reflective construct Psycap. Because they are conceptually distinct, and yet share a positive orientation, we call them *PPCs*. The logic runs as follows: Optimistic people expect the future to turn out well, will set goals to reach that future (hope), believe they can accomplish those goals (self-efficacy), and will bounce back when setbacks are encountered (resilience). Contextualizing this to service failure/recovery, we propose that FLEs high in PPCs will:

· expect favorable recoveries;
· be motivated to attempt them;
· believe they can resolve failure favorably; and
· bounce back when customer negativity is encountered.

Thus, we hypothesize:

H1. There is a positive relationship between FLEs' PPCs of (a) optimism; (b) hope; (c) self-efficacy; and (d) resilience and employee problem-solving adaptability.

Although there may be a direct relationship between PPCs and problem-solving adaptability, the literature also suggests an indirect relationship, mediated by positive emotions (Avey *et al.*, 2008). This cognitive→emotional path reflects the approach of cognitive psychology, which advocates changing emotions and behavior by changing cognitions. In services, relatively stable PPCs increase temporary positive emotions (Giardini and Frese, 2008). For example, salespeople high in self-efficacy have fewer negative emotions affecting their confidence to overcome challenges (Mulki *et al.*, 2008). Also, because they attribute service failure to temporary causes, highly optimistic FLEs experience positive emotions in the interaction (Crosno *et al.*, 2009). Similarly, because of the positive emotions they experience, highly resilient FLEs bounce back from adversity more easily (Tugade and Fredrickson, 2004). Finally, because employees high in hope can better imagine service recovery, they experience positive emotions in setting favorable goals. Accordingly, in contrast to *H1*, we propose that PPCs influence FLEs' problem-solving adaptability by creating positive emotions, which in turn affect these behaviors. Thus, we hypothesize that:

H2. Employee positive emotions mediate the relationship between the FLEs' PPCs of: (a) optimism; (b) hope; (c) self-efficacy; and (d) resilience and employee problem-solving adaptability.

Two service recovery paths

We argue here that PPCs affect service recovery through behavioral *and* emotional paths. Through the behavioral path, FLEs high in PPCs experience more positive emotions and so are better able to act to solve service failures. Customers perceive this as better, more flexible service, and are more likely

to conclude that the FLE has done things right. Through the emotional path, FLEs display positive real emotions that are transferred to customers via emotion contagion, so that customers feel the FLE's positive emotions. Because they feel these emotions, customers are more likely to believe FLEs have treated them fairly.

Behavioral path

The broaden-and-build theory of positive emotions emerged as the assumption that negative and positive emotions are isomorphic was relaxed (Fredrickson, 1998). Positive emotions help the body switch from a narrow thought-action tendency to a wider repertoire, accentuating capacities to restore balance after negative encounters (Tugade and Fredrickson, 2004). Fredrickson (2001) shows that each positive emotion stimulates a cognitive response, *broadening* the repertoire of possible problem-solving courses of action (Isen *et al.*, 1987), improved memory, and increased giving behavior (Isen, 2001).

Clearly, the increased problem-solving emerging from emotion-generated cognitive responses is of interest in service recovery (Isen *et al.*, 1987). FLEs high in PPCs experience temporary positive emotions, which increase their capacity to solve problems. The greater the positive emotions, the more likely FLEs will discover adaptive solutions to service failures, making successful recoveries more likely (Hartline and Ferrell, 1996). Thus, we hypothesize:

H3. There is a positive relationship between FLEs' positive emotions and FLEs' problem-solving adaptability.

Customer perceptions of the fairness of service recovery *outcomes* are described in terms of distributive justice (Maxham and Netemeyer, 2003). When service failures occur, customers believe they have not received outcomes commensurable to their input. However, when FLEs offer adaptable service recovery solutions, customers interpret it as justice restored. Conversely, if outcomes offered by FLEs are viewed as inappropriate by customers, a double deviation is likely: Customers may experience outrage *and* engage in negative word-of-mouth (Liao, 2007). Therefore, the kind of outcome the FLE offers is crucial to customers' assessment of the encounter. FLE problem-solving skills enhance the likelihood of such favorable outcomes. As FLEs bring appropriate discounts, exchanges, repairs, etc., to recovery efforts, customers are more likely to evaluate the recovery as successful (Mattila and Cranage, 2005). Thus:

H4. There is a positive relationship between FLEs' problem-solving adaptability and customers' perceived distributive justice.

Emotional path

Positive emotions affect those experiencing them. However, emotions may also transfer from person to person in a process called *emotion contagion* (Groth *et al.*, 2009). Emotion contagion occurs when displayed emotions (e.g. facial expressions) are consciously or subconsciously picked up by another (Hatfield *et al.*, 1993). Emotion contagion has been used in service delivery research to explore how emotions displayed by FLEs affect customer perceptions of service

quality (Groth *et al.*, 2009) and their behavioral intentions (Tsai and Huang, 2002).

Emotion contagion has received little attention in service recovery research. Yet the idea of emotion contagion suggests numerous interesting questions. For example, how does emotion contagion work when customers are experiencing negative emotions and frustrations because of service failures? Might positive emotions have an offsetting effect if the compensation offered a customer is unsatisfactory? Could FLEs' positive emotions affect customer assessments of the interaction? FLEs' positive emotions affect customer satisfaction and loyalty (Groth *et al.*, 2009), customer evaluations (Grandey, 2003), moods (Luong, 2005), positive affect (Pugh, 2001), and perceptions of employee friendliness (Tsai and Huang, 2002). Just as service failure leads to disequilibrium between customer perceptions of inputs and outcomes, so an injustice on the emotional side is also experienced. Using emotion contagion theory, we propose that FLE displays of positive emotions are channeled to customers, tending to transform their perceptions of injustice from a negative emotional experience to a positive characterization of the encounter in the form of higher interactional justice. Thus, we posit:

H5. There is a positive relationship between FLEs' positive emotions and customers' perceived interactional justice.

Because of the potential effects of emotion contagion, firms often develop rules mandating how, and in what circumstances, employees *must* display emotions. Such rules often and unintentionally result in emotional labor for employees. Emotional labor is the stress experienced when FLEs are required to display certain emotions, regardless of their actual feelings (Hochschild, 2012). Thus, FLEs might end up faking, or as the literature puts it, surface-acting their emotions. However, most customers recognize when displayed emotions are genuine (deep acting) or are simply mechanically displayed (Grandey, 2003; Medler-Liraz, 2016). Furthermore, research also demonstrates that deep acting has stronger positive effects on customer perceptions than surface acting (Groth *et al.*, 2009). Thus, as the degree to which customers perceive employees' displayed emotions to be authentic increases, the more likely they will feel their interests are attended to and the greater their trust in the firm. For example, authentic smiles have been shown to have a stronger influence on employee-perceived friendliness and satisfaction (Hennig-Thurau *et al.*, 2006), and stronger employee-customer rapport than fake smiles (Azab and Clark, 2017). Thus, hiring service employees and simply training them to smile mechanically is not a good approach to effective service delivery. Hochschild (2012) characterizes this process as "…the commercialization of the human heart." Accordingly, efforts to understand how to help FLEs display authentic positive emotions have increased. Thus, we expect that when FLE-displayed emotions are perceived as authentic, customers will have an increased sense of interactional justice:

H6. Perceptions of authentic emotions moderate the relationship between employees' positive emotions and customers' perceived interactional justice, such that as the customers perceive the FLE to be more authentic,

the stronger the relationship between frontline positive emotions and interactional justice.

Figure 1 summarizes the hypothesized relationships. In Study 1, PPCs are posited to have a positive relationship with problem-solving adaptability (*H1*) and positive emotions (*H2*). In Study 2, we propose that positive emotions influence customer perceptions of justice through an emotional path, specifically that positive employee emotions influence customer perceptions of interactional justice (*H5-H6*) via emotion contagion. Positive emotions also are believed to influence customer perceptions of justice through a behavioral path, per broaden-and-build theory (*H3*), and by the adaptability of problem-solving behaviors' link to customer perceptions of distributive justice (*H4*). Despite differing findings, the literature is unanimous in that perceptions of justice *in all forms* are significant in customers' overall satisfaction with the company (Homburg *et al.*, 2010; McCollough *et al.*, 2000; Smith *et al.*, 1999). Because the relationships between justice dimensions and service recovery outcomes (customer satisfaction, word-of-mouth and repurchase intentions) have been examined previously, they are included here only as post-hoc tests of the known nomological network, thus connecting our study to managerially relevant outcomes (Lastner *et al.*, 2016).

Methodology and results

The hypotheses were evaluated in two studies in three service delivery contexts. The first surveyed FLEs from restaurant and retail contexts to explore how employee PPCs and emotions influence their problem-solving adaptability (*H1-H3*). The second study employs an experimental design in a higher education service context to examine how employees' problem-

solving adaptability and positive emotions affect customer justice perceptions, recovery satisfaction, behavioral outcomes and repurchase intentions (*H4-H6*). Use of these varied contexts increases the likelihood findings will be generalizable across a wide range of service recovery settings.

Study 1 – survey
Mechanical Turk (*Mturk*) was used to construct a convenience sample of FLEs in restaurant and retail settings. *Mturk* has been used extensively in scholarly marketing research (Giebelhausen *et al.*, 2014) and compares favorably with other high-quality approaches (Berinsky *et al.*, 2012). To examine the relationships between PPCs, positive emotions, and problem-solving, the surveys used service recovery scenarios, and respondents were asked to provide recovery solutions. Scenarios are used in services research (Hess *et al.*, 2003) because they make it possible to simulate service failures/recoveries more efficiently, predictably, and fully than would be possible in the field (Smith *et al.*, 1999).

A short job-screening survey was used to recruit participants who reported having experience as FLEs in the industries of interest. A total of 750 surveys were completed. Of these, 205 currently worked as FLEs in retail, and 161 in a restaurant setting. The samples provided a balanced range of ages and gender distribution (retail: 54.6 per cent women/45.4 per cent men; restaurant: 56.9 per cent women/43.1 per cent men).

Common method bias was controlled for by separating independent (PPCs) and dependent variables (positive emotions, problem-solving adaptability) with an independent distractor task (Podsakoff *et al.*, 2003).

Extant seven-point Likert scales were used for PPC component variables: *self-efficacy* (Luthans *et al.*, 2007); *hope* (Snyder, 2002); *optimism* (Scheier and Carver, 1985); and

Figure 1 The influence of PPCs on service recovery
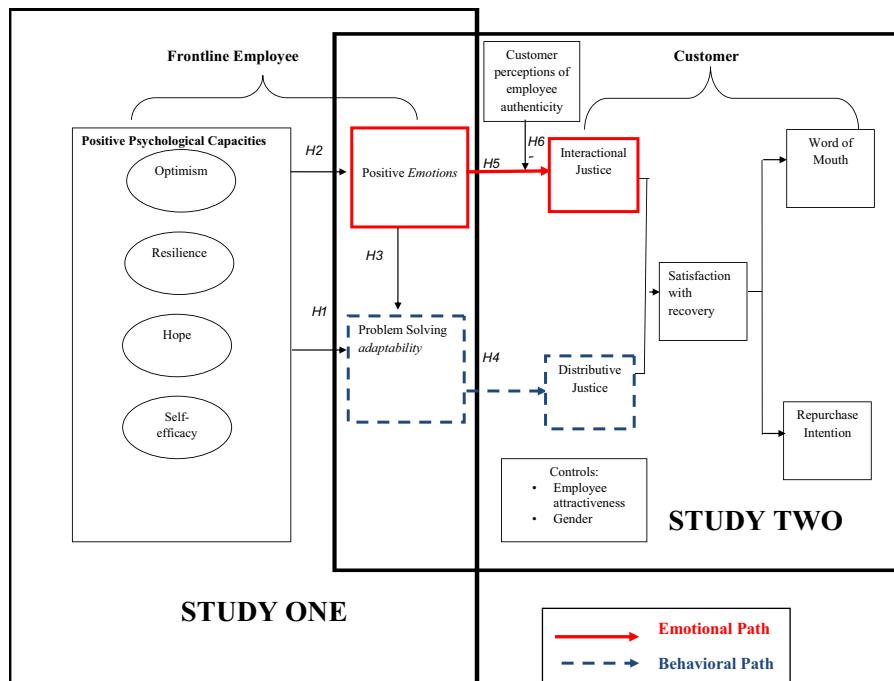
resilience (Luthans *et al.*, 2007). Although the literature models PPCs as a second-order reflective construct, we determined after consideration of the criteria provided, that the four capacities are not unidimensional reflective indicators of PPCs. Thus, we examined them as separate independent variables (Jarvis *et al.*, 2003), which is mathematically identical to modeling a second-order construct in which the second-order factor represents only a conceptual composite of its first-order formative indicators (MacKenzie *et al.*, 2005).

The study used 12 positive emotion items from the PANAS (Watson *et al.*, 1988) and Positive Affect (Oliver *et al.*, 1997) scales to measure the number of discrete positive emotions experienced (Avey *et al.*, 2008) and their intensity (Appendix 1).

To avoid social desirability and same-source biases, self-reported statements on *problem-solving adaptability* were not used. Instead, respondents were given a problem scenario and asked to provide written solutions. Independent raters assessed the adaptability level for each response using a rubric describing levels of problem-solving adaptability (Appendix 3). Interrater reliability was assessed using:

- Percentage of agreement (93 per cent retail/91.9 per cent restaurant);
- Cohen's Kappa [0.85 ($p < 0.01$) retail/0.84 ($p < 0.01$) restaurant] (Perreault and Leigh, 1989); and
- Krippendorff's alpha of 0.81 (95 per cent CI of 0.72 and 0.92) (Hayes and Krippendorff, 2007).

These measures indicate high interrater reliability.

Scale reliabilities and validities were assessed using confirmatory factor analysis (CFA) using AMOS 20 (N_{retail} = 205; $N_{restaurant}$ = 160). Statistics for both samples indicate an appropriate fit (Appendix 1). Standardized item loadings (ranging from 0.67-0.90/retail; 0.62-0.88/restaurant) are all positive and statistically significant, indicating convergent validity for all constructs. The constructs also have high reliability (Cronbach's alphas > 0.85), and average variance extracted (AVE) > 0.50. As an indicator of discriminant validity, AVE exceeds the squared inter-construct correlations in all cases (Fornell and Larcker, 1981) (Table I).

Analysis and results
H1 and *H3* were evaluated using ordinal regression (Table II). The 2LL log likelihood values and the hit ratio indicate good model fit, suggesting the model predicts better than chance. Pearson and deviance chi-squares both suggest the model is not significantly different from the saturated model, also indicative of good fit. Table II shows the odds ratios for hope, optimism, self-efficacy, and resilience are not significant ($p > 0.05$ retail/ $p > 0.05$ restaurant), failing to support *H1a-H1d*. The odds ratio for positive emotions is significant and positive, supporting *H3*, suggesting the odds of being a highly adaptable problem solver versus low adaptability problem solver increased by 2.03 for retail and 1.75 for restaurant with each unit increase in positive emotions. Nagelkerke's R-squared is 14.2 per cent (retail)/12.8 per cent (restaurant), indicating a moderate effect size, yet sufficiently strong for testing the influence of a single factor. This should be considered in the context of a model that does not purport to explore the determinants of positive emotions or problem-solving adaptability.

H2 was examined using linear regression. Results show significant positive relationships between optimism, self-efficacy, resilience, and positive emotions, with the three PPCs accounting for an R^2 = 0.36 (retail)/0.342 (restaurant). The

Table I Research descriptive statistics and correlations

Variable	Mean	SD	CR/ CA	1	2	3	4	5
Study 1 – retail								
Resilience	5.420	0.993	0.886/0.884	0.659				
Hope	5.297	1.192	0.913/0.907	0.644**	0.629			
Optimism	4.803	1.312	0.931/0.933	0.632**	0.603**	0.686		
Self-efficacy	5.277	1.189	0.885/0.881	0.737**	0.675**	0.589**	0.659	
Positive emotions	2.850	0.980	0.954/0.955	0.446**	0.532**	0.517**	0.542**	0.654
Study 1 – restaurant								
Resilience	5.450	0.980	0.893/0.890	0.677				
Hope	5.400	1.110	0.883/0.873	0.595**	0.560			
Optimism	4.913	1.228	0.919/0.925	0.678**	0.552**	0.654		
Self-efficacy	5.358	1.141	0.884/0.881	0.647**	0.650**	0.491**	0.656	
Positive emotions	2.942	0.956	0.954/0.955	0.439**	0.487**	0.515**	0.462**	0.634

	Mean	SD	CR/ CA	1	2	3	4	5	6
Study 2									
Repurchase Intention	4.243	1.858	0.946/ 0.930	0.855					
Distributive Justice	4.601	1.945	0.969/0.968	0.745**	0.861				
Interactional Justice	4.055	1.910	0.955/0.955	0.852**	0.618**	0.811			
Satisfaction with Recovery	4.158	2.000	0.961/0.960	0.852**	0.873**	0.766**	0.861		
Word-of-Mouth	4.223	1.920	0.977/0.976	0.925**	0.736**	0.871**	0.845**	0.934	
Authenticity	4.529	1.637	0.912/ 0.910	0.517**	0.518**	0.540**	0.428**	0.553**	0.776

Notes: AVE = average variance extracted is reported on the diagonal, CR = construct reliability, CA = Cronbach alpha; **$p < 0.05$

Table II Summary of findings

Path	Hypothesis	Study 1 Restaurant Statistics	Significance	Effect size	Store Statistics	Significance	Effect size
PPCs → Problem-Solving Adaptability							
ordinal regression		2LL	χ^2		2LL	χ^2	
	Model fit	181.838	14.376	$p < 0.05$	238.04	26.74	$p < 0.05$
		Hit Ratio			Hit Ratio		
		65.73%			67.51%		
	H1a	exp (0.178)	$p > 0.05$	Nagelkerke's R^2 = 12.8%	exp (0.032)	$p > 0.05$	Nagelkerke's R^2 = 14.2%
	H1b	exp (0.255)	$p > 0.05$		exp (0.062)	$p > 0.05$	
	H1c	exp (0.175)	$p > 0.05$		exp (0.123)	$p > 0.05$	
	H1d	exp (0.103)	$p > 0.05$		exp (0.091)	$p > 0.05$	
Positive emotions → Problem-Solving Adaptability							
	H3	exp (0.560)	$p < 0.05$	odds ratio = 1.75	exp (0.710)	$p < 0.05$	odds ratio = 2.03
PPCs → Positive emotions							
linear regression		$F(4,155) = 20.149^{***}$			$f(4,200) = 28.072^{**}$		
	H2a	b = 0.251	$t = 3.592^{**}$	R^2 = 34.2%	b = 0.130	$t = 2.462^{**}$	R^2 = 36*%
	H2b	b = 0.167	$t = 2.097^{**}$		b = 0.173	$t = 2.763^{**}$	
	H2c	b = 0.151	$t = 1.900^{**}$		b = 0.212	$t = 3.014^{**}$	
	H2d	b = −0.004	$t = −0.038$		b = 0.01	$t = −0118$	

Path	Hypothesis	Study 2 Statistics			Significance	Effect Size
PE → IJ						
MANOVA	*H4*	$(\lambda) = 0.534$, $F(2,195) = 85.09$			$p < 0.001$	$\eta2 = 0.466$
PE → IJ	*Univariate test*	$M_{low PE} = 3.05$, $M_{high PE} = 4.97$ $F_{1,196} = 135.75$			$p < 0.001$	$\eta2 = 0.409$
PSA → DJ						
	H6	$(\lambda) = 0.489$ $F(2,195) = 101.72$			$p < 0.001$	$\eta2 = 0.511$
PSA → DJ	*Univariate test*	$M_{low PSA} = 3.235$, $M_{high PSA} = 5.851$ $F_{1,196} = 204.08$			$p < 0.001$	$\eta2 = 0.510$
PSA → IJ	*Univariate test*	$M_{low PSA} = 3.37$, $M_{high PSA} = 4.65$ $F_{1,196} = 56.11$			$p < 0.001$	$\eta2 = 0.223$
Moderators						
PSA × PE		$(\lambda) = 0.926$, $F(2,195) = 7.755$			$p < 0.001$	$\eta2 = 0.074$
PSA × PE → DJ	*Univariate test*	$F_{1,196} = 4.536$			$p < 0.05$	$\eta2 = 0.023$
ATH	*H5*	$(\lambda) = 0.846$, $F(2, 195) = 17.797$			$p < 0.001$	$\eta2 = 0.154$
ATH → IJ	*Univariate test*	$F(1,196) = 28.313$			$p < 0.001$	$\eta2 = 0.126$
ATH → DJ	*Univariate test*	$F(1,196) = 24.715$			$p < 0.001$	$\eta2 = 0.112$
Control						
Gender		$(\lambda) = 0.986$, $F(2,195) = 1.376$			$p > 0.05$	$\eta2 = 0.014$
ATTRACT		$(\lambda) = 0.935$, $F(2,195) = 6.747$			$p < 0.002$	$\eta2 = 0.065$
	Univariate test	$F(1,196) = 11.583$			$p < 0.001$	$\eta2 = 0.056$

unstandardized regression coefficient was significant and positive for optimism, hope and self-efficacy, but not for resilience (Table II).

One possible explanation of the insignificant finding for resilience is that resilience is the least-researched and least-understood PPC. However, common sense suggests resilience should be significant in service failure and recovery. Our best interpretation for this non-finding is that further research, scale refinement, and the exploration of other intervening variables should be considered before eliminating it as a potential predictor.

As the direct relationship between PPCs and problem-solving is not significant, and the relationships between PPCs and positive emotions – and between positive emotions and problem-solving – are significant, we conclude that positive emotions fully mediate the relationship between PPCs and problem-solving adaptability (Baron and Kenny, 1986). Bootstrap testing (Preacher and Hayes, 2004) confirmed this mediation. Confidence intervals support the presence of indirect effects through positive emotions and indicate the absence of significant direct effects between PPCs and problem-solving adaptability, supporting the finding of full

mediation through positive emotions (Appendix 2). Hence, *H2a*, *H2b*, and *H2c* were supported.

Study 2 – experimental design

Study 2 is a 2 × 2 between-subject experimental design using scenario-based video manipulations with customers (students) and FLEs (instructors), from two medium-sized Midwestern universities. This methodology is not uncommon in service-recovery studies (Bateson and Hui, 1992; Sharma and Wu, 2015). Each video showed a professor (on camera) responding to a student (off camera) who came to the professor with a problem. Subjects were asked to imagine themselves in the role of the student. Four versions of the video were produced, reflecting the 2x2 experimental conditions of high/low displayed positive emotions and high/low adaptability of offered solutions (Appendix 4). Scenarios were written to reflect no fault on either the FLE or customer for the service failure. Subjects received extra course credit for participation. A total of 315 students were invited to participate. A control question ensured respondents viewed the video. A total of 203 usable responses were obtained.

Interactional justice, distributive justice, and satisfaction with complaint handling were measured using seven-point Likert scales, adapted for the educational service context (Maxham and Netemeyer, 2003). A CFA was conducted using AMOS 20.0, and indicated good fit (Appendix 1). One exception to this was an RMSEA = 0.099, higher than the 0.07 recommended level. All loadings were positive and significant, indicating convergent validity. Table I shows all constructs have AVEs > 0.5, indicating strong reliability. Also, all AVEs exceed the squared interconstruct correlations, indicating discriminant validity, with the exception of the comparison of repurchase intention and word-of-mouth, with a squared intercorrelation that equals the AVE of repurchase intentions at 0.855 (Fornell and Larcker, 1981).

Manipulation checks were conducted on a pretest of $N = 47$ as recommended by Perdue and Summers (1986), which indicated respondents identified differences between high displayed positive emotions (M = 5.71/SD = 1.62) and low displayed positive emotions [(M = 2.89/SD = 1.92); $F(1, 46) = 27.41$, $p < 0.01$]; and between high adaptable solutions (M = 4.89/SD = 2.18), and low adaptable solutions (M = 3.0/SD = 1.87), $F(1, 46) = 10.13$, $p < 0.01$]. Measures of the attractiveness of the professor and gender of the student were included as control variables.

Analysis and results

MANOVA was used to test *H4-H6*. Because authenticity of displayed emotions was measured as a continuous variable, it was included as a covariate. After controlling for professor attractiveness and gender, Wilk's lambdas for the four groups indicated overall significant large-group differences (Table II). The F-test indicated a significant difference in group means between the influences of low/high displays of positive emotions on perceptions of interactional justice, supporting *H5*; and low/high adaptability of problem-solving on perceptions of distributive justice, supporting *H4*. In addition, authenticity of displayed emotions is significantly related to both justice perceptions, suggesting that customer perceptions of authentic FLE emotions have a stronger and positive effect on interactional

justice rating than when the emotions are perceived as less authentic, supporting *H6*. Surprisingly, problem-solving adaptability also was found to be significantly related to interactional justice ($M_{low\ adaptability} = 3.37$, $M_{high\ adaptability} = 4.65$; $F_{1,\ 196} = 56.11$, $p < 0.01$, $\eta^2 = 0.223$). Finally, the effect of FLE attractiveness was significant, but only on interactional justice (Figure 2).

The univariate analysis of the interaction between positive emotions and adaptable problem-solving on distributive justice is significant with medium effect size ($\eta^2 = 0.074$), suggesting that when problem-solving adaptability is low, positive emotions have a positive effect on distributive justice perceptions. Therefore, positive emotions can have an offsetting effect on perceptions of fairness even when recovery solutions are not adaptable. However, as problem-solving becomes more adaptable, distributive justice ratings for those with lower positive displays of emotions surpass those with higher displayed positive emotions. This demonstrates the dynamic roles of positive emotions and problem-solving adaptability. Positive emotions mitigate against less-adaptable solutions, but they do not have the same effect on perceptions of distributive justice when solutions are adaptable.

The model for Study 2 (Figure 3) was tested using partial least squares to evaluate fit within the known nomological net, and to demonstrate its links to customer outcomes. All hypothesized paths were significant at $p < 0.01$, indicating that both behavioral and emotional paths are supported. However, the influence of the behavioral path on perceptions of quality of the service recovery is stronger than the emotional path ($b_{DJ} = 0.656$ versus $b_{IJ} = 0.355$). Finally, the relationships between satisfaction with service recovery and word-of-mouth (b = 0.855), and repurchase intentions (b = 0.848), are significant at $p < 0.01$.

Results were further evaluated using a bootstrapping test for mediation (Preacher and Hayes, 2004) (Appendix 2). The two sequential mediators in each path result in three indirect effects to be examined for each. All indirect effects were supported.

Figure 2 The interaction effect of problem-solving adaptability and positive emotions on distributive justice
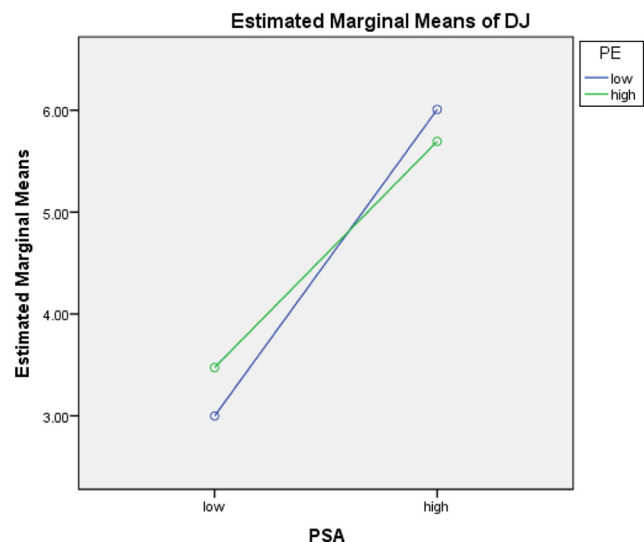
Figure 3 The influence of problem-solving adaptability and positive emotions on the justice perceptions of service recovery dimensions
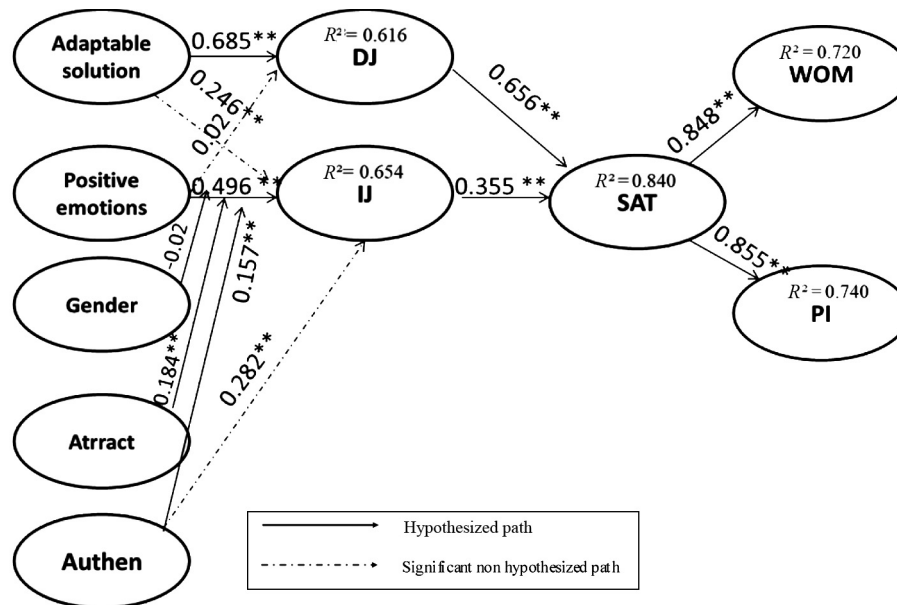
Notes: Attract = FLE's attractivness, Authen = FLE's authenticity, DJ = Distributive Justice, IJ = interactional justice, SAT = satifaction with recovery, PI = repurchase intention, WOM = word-of-mouth

Discussion and implications

Academic contributions

The first objective of this study was to explore the impact of FLEs on service recovery by addressing the question, "How can FLEs face the challenge of service recovery?" rather than, "What should FLEs do in a service recovery?" Our second objective was to describe the mechanisms by which FLE PPCs impact service recovery outcomes. Findings suggest that FLEs high in PPCs expect positive future outcomes (optimism), can set and reach goals (hope), believe in their abilities (self-efficacy), and can bounce back from adversity (resilience). Thus, they experience stronger positive emotions that are transmitted to customers, strengthening customer assessments of interactional justice (emotional path), and improving FLE problem-solving adaptability (behavioral path), resulting in more favorable customer perceptions of distributive justice. In short, FLEs' PPCs influence customer perceptions of the quality of a service recovery.

Although PPCs have been studied for some time, prior research focused more on *employee* outcomes, such as job satisfaction, engagement, and productivity. Yet, as this study shows, PPCs suggest ways for those who oversee FLEs to better manage service failure/recovery. By examining the impact of employee PPCs on service recovery, this study is among the first to empirically evaluate the relationship between PPCs and *customer outcomes*.

Because PPCs are shown to influence positive emotions, the emotional burnout FLEs encounter when using mechanical rules of emotional display is reduced (Medler-Liraz, 2016). Although external inducements such as management support, pay, rewards, and job redesign are recommended (Singh, 2000), this research suggests that PPCs facilitate the formation of more potent internal inducements to enhance service recoveries.

Surprisingly, although the transfer of positive emotions from FLEs to customers is well established (Giardini and Frese, 2008; Hennig-Thurau *et al.*, 2006), the role of FLE emotions in service recovery is not. Research has been limited to studies of customer rage, discontent, etc. Moving beyond these, this study extends emotion contagion theory from the context of service delivery to service recovery.

Moreover, this research employs an innovative methodology to bring greater realism and credibility to the findings. Further, this is among the first studies to apply the "broaden-and-build" theory of positive emotions to examine FLE capacities, extending the context of the study in a novel direction, beyond mere technical training—showing that positive emotions drive problem-solving adaptability. Although traditional practice advises firms to use cognitive exercises to improve employee problem-solving, this research suggests nurturing PPCs and positive emotions to improve FLEs' problem-solving abilities and service recovery.

Practitioner implications

Because PPCs influence emotional expression, problem-solving skills, and job performance, they are important to managers working to improve service recovery. Below are several practical recommendations for service managers:

Screen potential employees for PPCs

A major managerial implication of PPCs is the possibility of a new approach to identifying, vetting, and hiring FLEs. The idea is simple enough: An ounce of prevention at the front end saves wear and tear on employees and customers during inevitable service failure and recovery at the back end.

Traditionally, firms hire for what prospective employees know, and for the accumulation and variety of their employment experiences (Bettencourt and Brown, 1997). However, the present study suggests that potential employees might be usefully screened for *who they are and how they think and feel*. For example, although a seasoned potential hire might know an industry inside and out and also know the rules of service recovery by heart, a critical deficit in PPCs might be so offsetting that the firm might want to pass on hiring them. On the other hand, a novice with little industry-relevant knowledge or experience might be judged to be highly desirable *because of* their offsetting PPCs. Thus, screening potential applicants for these capacities, as well as for industry and work-related experiences, would seem to be a practical solution to long-term effective service delivery management.

Train existing employees to improve PPCs
Clearly, screening for potential employees high in PPCs is desirable. But what about current valuable, long-serving employees who are not high in PPCs? It is important to note that the literature suggests that PPCs are developmental (Luthans, 2002; Luthans *et al.*, 2007). This suggests that even those employees low in the desirable capacities may improve through training. Central to such training is the notion of "cognitive therapy" (Beck, 2010). Cognitive therapy has to do with the way people talk to themselves, their inner dialogues, self-evaluations, and the things they believe about their abilities, future, and goals. Appropriate in-house training based on cognitive therapy has great potential for organizations to help FLEs low in PPCs improve their service delivery and recovery skills. As such, training should move beyond mere technical skills and mechanical problem-solving, to focus on developing FLE PPCs, helping them approach their tasks more positively and creatively.

Foster a nurturing organizational culture that empowers FLEs
As essential as the screening, selection, and hiring of FLEs high in PPCs are, the nature of the firm into which they are hired is equally important. The internal world of the service firm—its atmosphere, culture, and operating environment—should be supportive of the positive traits and behaviors for which employees were hired. This suggests that service firms pay attention to those internal factors that encourage, enhance, facilitate, and enable employees with significant psychological capital to engage in fruitful customer interactions, especially during service failure and recovery. For example, employee empowerment, tolerance for risk taking, and safe spaces for employee-customer engagement (Sok and O'Cass, 2015), would no doubt enhance and catalyze superior service delivery, reduce failure, and improve recovery.

Encourage a failure-tolerant organizational culture
Firms that regard service failures as inexcusable are probably setting mechanisms in motion to increase employee negativity, burnout, and inauthenticity. In contrast, firms that accept service failure as a normal part of business understand that customer complaints can become opportunities for improvement (Barlow and Møller, 1996). Moreover, for FLEs charged with handling service failure, empowerment to improvise recoveries is not only essential but also brings intrinsic job-related rewards. Such rewards, in turn, become

synergistic in the construction and maintenance of a positive organizational culture, tolerant of employee mistakes, understanding that resourceful personnel may not always get it right the first time. Unlike the culture in manufacturing organizations, where zero defects is the goal, the human factor in service encounters all but guarantees errors and failures. A culture that recognizes this by fostering an appropriate level of empowerment would help FLEs experience more positive emotions and, according to this study's findings, deliver a more favorable recovery.

Reduce dependence on orchestrated emotions
Even well-meaning service firms may expect displayed emotions at times and for durations such that "emotional stress" results, even among employees high in PPCs. Although research clearly supports a place for FLE displaying positive emotions (e.g. smiling, eye contact, talking with enthusiasm), it also makes it clear that employer demands for mechanical displays tax employees, leading to stress and burnout (Hochschild, 2012). It has been suggested that this may be mitigated by deployment of external rewards, such as management support, increased pay, bonuses, etc. (Grandey, 2003). In this context, the impact of the type of internal/intrinsic rewards associated with empowered employees high in PPCs to facilitate the generation of genuine displayed emotions remains underexplored. Because employee positive emotions (as described above) are experienced rather than acted, rewards are intrinsic and outcomes more favorable. Thus, by resisting the temptation to demand the production of mechanically-displayed emotions, firms may actually get something better: the real thing!.

Limitations and future research
Because the dependent variable (problem-solving adaptability) was measured using an open-ended question measured by objective external raters rather than a structured, self-reported metric, it minimizes social desirability bias but also is subject to rater interpretation. Interrater reliability measures were consistent and reliable, but better scales can be developed going forward. An important unanswered question is whether *felt* emotions (Study 1) are different from *expressed* emotions (Study 2). We use support of many studies that show experienced emotions result in a greater display of positive emotions (Giardini and Frese, 2008; Grandey, 2003; Pugh, 2001), and we included perceived authenticity of emotions as a covariate. Follow-up research should examine this relationship more closely. As explained in the implications above, it is important to empower FLEs. By nature, adaptable problem-solving requires service scenarios where FLEs choose to offer solutions that meet customer needs. As such, it was necessary to ask FLEs to assume full empowerment. The results of this should be interpreted with the importance of FLEs' empowerment at hand. Future research should control for restrictive company policies that might have a countereffect against PPCs on service recovery.

This study also suggests avenues for future research. First, is the possibility of employee negativity transferring to customers? Although beyond the scope of this study, the extent and impact of FLE negative emotion contagion to customers is intriguing and should be researched.

Second, do positive emotions and problem-solving adaptability vary with the type of service failure? For example, failure magnitude (mild versus severe); responsibility (firm, FLE, customer); and frequency (first versus repeat failures) are issues that warrant exploration. The scenarios used to stimulate participants' development of service recoveries used in Study 1 varied in industry context (retail and restaurant), in type of failure (process versus outcome and process combined), and in potential attribution of the source of the failure. Although these weren't designed as manipulations intended to test for their differential effects on outcomes, the fact that our results showed consistent significant positive effects of PPCs on problem-solving adaptability and positive emotions across these contexts and conditions suggests a robust and generalizable effect. However, differences in the type and nature of the failure could interact with PPCs to either attenuate or strengthen the observed effects. Thus, future research may want to consider the potential moderating effect of failure type on the relationship between PPCs and employee outcomes.

Third, does organizational culture help or hinder development of PPCs in FLEs? The organizational culture/ employee satisfaction performance literature is large but limited in service failure and recovery contexts. Yet organizational culture is formative in directing employee behaviors, so it is also undoubtedly critical for understanding service failure and recovery.

Fourth, how do PPCs interact with FLE intelligence, experience, industry knowledge, etc.? Are PPCs sufficient to outweigh a lack of industry knowledge or experience? Conversely, how much industry knowledge is sufficient to offset a lack of psychological capital? Moreover, what methods, metrics, scales and/or instruments would be appropriate for such pre-employment screenings? These are empirical questions and can only be answered by future contextualized investigations.

In addition, research might explore the different emotion contagion flows between FLEs and customers with respect to the direction, strength, and the positive or negative nature of the emotions. In other words, one could explore what happens when customers enter the encounter with positive emotions and employees have negative emotions, and vice versa.

Finally, do FLE PPCs have different effects in service delivery versus service recovery? A critical understanding of this difference would no doubt be of strategic importance.

Note

1 For clarity and consistency, each capacity considered individually is referred to as a PPC, and the four considered collectively as PPCs.

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Appendix 1. Scale items and CFA results

Table AI Construct definitions, scale items, and standardized loadings Study 1 CFA

Constructs/ Statements	Retail	Restaurant
CFA fit statistics	$\chi^2 (451) = 854.328$ ($p < 0.01$) CFI = 0.927 IFI = 0.927 TLI = 0.919 RMSEA = 0.06	$\chi^2 (446) = 792.8$ ($p < 0.01$) CFI = 0.91, IFI = 0.901 TLI = 0.911, RMSEA = 0.07
Hope		
I can think of many ways to reach my current goals	0.826	0.767
I am usually willing to set goals for myself	0.783	0.669
I am determined to meet the goals that I set for myself	0.810	0.833
Right now I see myself as pretty successful at work	0.791	0.774
Right now I am meeting the work goals that I set for myself	0.798	0.833
At the present time, I am energetically pursuing my work goals	0.779	0.802
Optimism		
When things are uncertain for me, I usually expect the best	0.823	0.741
I always look on the bright side of things	0.815	0.752
I am optimistic about what will happen to me in the future	0.879	0.878
I approach this job as if "every cloud has a silver lining"	0.87	0.854
I count on good things happening to me	0.834	0.842
I usually expect things to go my way	0.765	0.776
Self-efficacy		
I am confident helping to set targets at my work area	0.835	0.811
I am usually confident contributing to discussions at work	0.847	0.820
I am usually confident contacting people outside the company (e.g., suppliers, customers) to discuss problems	0.767	0.806
I am usually confident in representing my work area in meetings with management	0.795	0.803
Resilience		
When I have a setback, I can recover from it and move on	0.825	0.834
When faced with adversity, I can turn the situation to my advantage	0.834	0.804
I usually manage difficulties one way or another at work	0.802	0.808
I have the ability to come out of a difficult time stronger	0.787	0.844
Positive Emotions		
Interested	0.670	0.670
Excited	0.744	0.756
Inspired	0.76	0.788
Strong	0.766	0.801
Determined	0.701	0.740
Enthusiastic	0.813	0.825
Active	0.726	0.735
Proud	0.823	0.769
Happy	0.865	0.853
Enjoyment	0.895	0.879
Joy	0.897	0.878
Pleasure	0.882	0.836

Notes: CFI = comparative fit index; IFI = incremental fit index; TLI = Tucker-Lewis index (TLI)

Table AII Scale items and standardized loadings for Study 2 CFA

Constructs/ Statements	Loading
CFA Fit statistics:	χ^2 (214) = 641.43 ($p <$ 0.01)
	CFI = 0.939, IFI = 0.939
	TLI = 0.929, RMSEA = 0.099
Interactional Justice (IJ)	
In dealing with my problem, the professor treated me in a courteous manner	0.828
The professor dealt with enthusiasm	0.917
The professor was eager to solve my problem	0.867
The professor was appropriately concerned about my problem	0.944
The professor's communications with me were appropriate	0.849
Distributive Justice (DJ)	
I received an adequate solution from the professor	0.898
I received about as much compensation from the professor as in the context of previous problems	0.934
The outcome I received was fair	0.908
In solving my problem, the professor gave me exactly what I needed	0.937
Given the inconvenience caused by the problem, the outcome I received from the professor was fair	0.961
Satisfaction with Recovery (SAT)	
In my opinion, the professor provided a satisfactory resolution to my problem on this particular occasion	0.923
I had a positive experience when addressing my problem to this professor	0.897
I was very satisfied with the way this professor handled my problem	0.970
I felt satisfied approaching the professor with this issue	0.920
Repurchase Intention (PI)	
In the future, I intend to take other classes with this professor	0.979
If the professor is teaching other classes, I would enroll for them	0.965
If I needed further future information regarding the course subject, I will address this professor	0.820
Word-of-Mouth (WOM)	
I would recommend this professor to my friends	0.975
If my friends were looking for a class to enroll in, I would tell them to try to this professor	0.984
I will speak positively about this professor to others	0.939
Authenticity (ATH)	
The professor was not faking how he feels in this interaction	0.902
The professor was not pretending, or putting on an act, in this interaction	0.867
The professor's emotions appeared real	0.875

Appendix 2

Table AIII Bootstrapping results

Study 1 – Path IV–>M–>DV	Store Sample		Restaurant Sample	
	Direct effect 95% CI	Indirect effect 95% CI	Direct effect 95% CI	Indirect effect 95% CI
Hope–>PE–>PSA	(−0.231 to 0.346)	(0.159 to 0.568)**	(−0.119 to 0.606)	(0.034 to 0.455)**
Optimism–>PE–>PSA	(−0.172 to 0.349)	(0.137 to 0.486)**	(−0.431 to 0.264)	(0.109 to 0.565)**
Self-efficacy–>PE–>PSA	(−0.142 to 0.457)	(0.135 to 0.510)**	(−0.142 to 0.548)	(0.055 to 0.458)**
Resilience–>PE–>PSA	(−0.180 to 0.523)	(0.169 to 0.595)**	(−0.366 to 0.433)	(0.084 to 0.577)**
Study 2 – Path		Direct effect 95% CI		Indirect effect 95% CI
PSA–> DJ–> SAT		(0.645 to 1.418)**		(1.638 to 2.440)**
PE–> IJ–> SAT		(−1.544 to −0.739)**		(1.570 to 2.589)**
DJ–>SAT–> WOM		(−0.1565 to 0.146)		(0.592 to 0.8641)**
IJ–> SAT–> WOM		(0.456 to 0.633)**		(0.219 to 0.4468)**
DJ–> SAT–> PI		(−0.140 to 0.146)		(0.571 to 0.850)**
IJ–> SAT–>PI		(0.3803 to 0.5581)**		(0.277 to 0.4572)**

Notes: PSA = problem-solving adaptability, PE = Positive Emotions, DJ = Distributive Justice, IJ = interactional justice, SAT = satifaction with recovery, PI = repurchase intention, WOM = word-of-mouth; **$p <$ 0.01

Appendix 3. Study 1 scenarios and coding instructions

Table AIV

Definition	Low (FLEs did not adjust behavior to the *specific need* of the customer)	High (FLEs made an effort to adjust behavior into trying to meet the customer needs)
Examples (store)	Refunding with no alternative	(Need: mother's day present that matches her shoes).
	Referring to supervisor without solving the problem	Offering future item free of charge in addition to the refund
	Keeping the man's shirt (female customer)	Offering a huge discount or a future gift certificate in addition to the refund
	Putting the burden on returning the shirt on the customer	Searching for the item at competing stores
	Tying the money made in purchase on store credit till the item is back in stock	Trying to find an alternative that would match the purse
		Getting the item from alternative store and overnight free of charge shipment
Examples (retail)	Making no adjustment made to the price	Making an adjustment made to the price or offering discount
	Claiming that the customer is to blame	Offering coupons or free dessert
		Explaining and having positive faith in the customer

Instructions for coders

Based on Hartline and Ferrell (1996) definition of employee adaptability, we define problem-solving adaptability as the ability to modify behavior to meet customer needs resulting from the service failure.

Retail scenario

"Imagine the following scenario: Cindy is very happy. She just found and ordered from an online store, the very designer shoes her mother had been looking for, for months. Such a find! Her mother has a purse she had never used because she needed the right shoes to go with it. With Cindy's gift, now she could wear both to a special Mothers' Day event! Cindy paid extra to ensure the package would arrive overnight, so she'd have time to wrap them up properly. You are the sales representative for the online store. The package arrived, as ordered, the next day. However, upon opening it, Cindy finds a man's shirt. She immediately calls the online customer service representative who readily admits a mistake has been made. The service rep transfers the call to you. Cindy gives you the item details. However, when you look at the screen, you realize the item is out of stock."

Restaurant scenario

"You are the manager of a high-end restaurant where a group of friends is eating. They order their meals, and you make sure everyone is happy with their meal and well taken care of. Mr Scott ordered a steak with sweet potatoes and vegetables on the side. After just a few bites, he pushes his plate aside, and the server offers to box it up for him. After the meal, the server takes the check to the table, and Mr Scott seems unhappy with the check. He claims his bill is incorrect and is more than the menu indicates. You show him from the menu that his bill is indeed the correct price. However, he turns the page, and points to the lunch menu, where the same item is served in lunch proportion without the two sides he'd ordered for dinner."

Appendix 4. Study 2 manipulation descriptions

(All videos have a small narration of the situation explained).

"Imagine you are about to graduate and are in the process of enrolling for your final semester of classes. You discover that your previous academic advisor, who no longer works for the university, had given you the wrong advice. That advisor told you that a course was an elective, when it fact it was a requirement. Luckily, this course is being offered this semester. The course meets three times/week. However, it conflicts with another course you are taking on one of these days. You email the professor, explaining the situation and asking if it is OK to miss one class a week rather than take the class the following semester and delay graduation for an entire year."

Positive emotions: Low (no smile, monotonous, no eye contact, and no enthusiasm), high (smiling, excited, eye contact, different vocal rhythm and tones) (Pugh, 2001; Tsai and Huang, 2002).

Problem-solving adaptability: Low (the professor replies with denial of request, gives the student a copy of syllabus emphasizing that if he misses 1/3 attendance, he loses the credit for it) and high (the professor agrees to make an exception for the student, gives a DVD of lectures for student to watch, and assigns an extra project for the student to follow up on hihe/sher attention to the missed lectures).

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