
RESEARCH ARTICLE

The Impact of Affective Repair Strategies on Brand Trust: The Mediating Role of Positive Emotions

Xiangmei Li¹ and Yuhui Yang² ✉

^{1,2}School of English for International Business, Guangdong University of Foreign Studies, Guangzhou, China

Corresponding Author: Yuhui Yang, **E-mail:** 20210301269@gdufs.edu.cn

ABSTRACT

As online brand transactions surge, trust crises are increasingly common, posing significant challenges to brand-consumer relationships. This study investigates the impact of affective repair strategies on brand trust mediated by positive emotions. Specifically, the research focuses on four common affective repair strategies: apology, denial, promise, and their combinations. Through empirical analysis, it was found that apology and promise combinations exhibit the strongest positive effect on brand trust, surpassing the impact of singular strategies. Conversely, reliance on denial alone weakens consumer trust in the brand over time. In addition, positive emotions emerge as a critical mediator in trust restoration, particularly evident in denial combined with promise strategies. Based on these findings, managerial recommendations advocate for prioritizing apology and promise combinations, caution against the exclusive use of denial, and highlight the importance of fostering positive emotions to rebuild brand trust. This study provides actionable insights for brands seeking to effectively navigate trust crises and restore consumer confidence in the digital marketplace.

KEYWORDS

Affective repair strategies, brand trust, positive emotions.

ARTICLE INFORMATION

ACCEPTED: 09 July 2024

PUBLISHED: 21 July 2024

DOI: 10.32996/ijllt.2024.7.7.4

1. Introduction

With the rapid increase in online brand transactions, online trust crises are becoming more frequent. Due to the lack of face-to-face communication between buyers and sellers and the inability of customers to physically experience products, customers are more prone to feelings of dissatisfaction (Yang & Fang, 2004; Li, 2015). Consequently, service failures are difficult to completely avoid, severely damaging customer trust in the brand, and may even lead to trust crises between the brand and customers, resulting in customer loss (Bolat et al., 2020; Ahmad & Guzmán, 2021). This places brands in challenging operational situations amidst fierce market competition.

Effective trust repair strategies play an important role in the competition. The importance of trust repair strategies lies in their ability to mitigate the destructive consequences of brand trust violations (Nelson et al., 2021; Tong et al., 2022). Common online repair strategies include apology, denial, and commitment as affective repair strategies (Wang et al., 2021). However, the impact of these strategies on restoring brand trust varies (Omar et al., 2017). Some strategies may be able to quell consumer dissatisfaction in the short term, but the long-term effect is not obvious. Others may address the root causes of trust issues and have a lasting positive impact. Therefore, understanding the effects of different affective repair strategies and how they interact is crucial for brands to succeed in the challenging digital marketplace.

Positive emotions play an important mediating role in the process of restoring brand trust. Trust repair strategies can be effective in instilling positive emotions in consumers (Chen et al., 2013), helping them rebuild confidence in the brand. Positive emotions

not only affect consumers' cognitive assessments but also have a profound impact on their emotional responses and changes in attitudes (Chen & Ayoko, 2012; Chen et al., 2013). This can be seen as acting as a bridge in the trust repair process. Therefore, understanding the mediating role of positive emotions in the trust repair process is helpful in deeply studying the mechanisms behind consumer psychology and providing brands with more targeted trust repair solutions.

While research on trust repair exists in domains such as public relations (Lewicka, 2022), social relations (Siebert & Martin, 2014), and interpersonal relationships (Kähkönen et al., 2023), studies at the brand-consumer level are relatively scarce. Previous research often isolated and broadly explored several trust repair strategies (Cao et al., 2014), with limited investigation into their combined effects. However, in the process of restoring brand trust in reality, the efficiency of a combined repair strategy may be higher and more practical than that of a single one. Hence, this study, based on objective data analysis, aims to investigate the influence of different affective repair strategies and their combinations on consumer brand trust, with positive emotions as a mediator. Through this research it will be conducive to providing brands with more specific and practical trust repair guidelines while theoretically providing beneficial guidance for brand trust management reinforcement.

The structure of this paper is as follows. The second part consists of a literature review and research hypotheses, and the third part is methodology, followed by data analysis and description. The final part includes further discussion, including conclusions, managerial implications, and research limitations.

2. Literature Review

2.1 Affective Repair and Brand Trust

Among affective repair strategies, apology, denial, and promise are the most effective and common strategies in an attempt to repair trust. Affective repair refers to the mechanisms that organizations employ to express responsibility and regret and address negative emotions arising from trust violations (Xie & Peng, 2009). Various trust repair tactics, including apologies (Tomlinson et al., 2004; Kim et al., 2006), promises (Schweitzer et al., 2004), and denials (Kim et al., 2006), have been found to be effective and impact trust repair outcomes differently. An apology given by mistake-makers shows consideration, decency, effort, and regret toward sufferers (Smith et al., 1999). If the trustee is willing to take responsibility for their actions and accept responsibility for their mistakes, mutual trust is more likely to be restored (Lewick & Bunker, 1996). A denial, in the situation of morality- or integrity-based trust violations, more effectively improves trust repair willingness than an apology (Van Laer & De Ruyter, 2010). Prior work also found that promises facilitate cooperation (Orbell et al., 1988) and the trust restoration process (Schweitzer et al., 2004). Thus, each affective repair strategy must be carefully selected and tailored to the context of the trust violation to maximize its effectiveness.

Affective repair strategy influences brand trust positively. Previous studies (e.g., Mattila, 2009; Zhang, 2012; Chen et al., 2013; Bansal & Zahedi, 2015) have examined the effectiveness of various affective repair strategies in different contexts. These strategies serve as critical roles for brand trust by addressing the emotional dimensions of the breach (Chen et al., 2013) and restoring a sense of security and trustworthiness in the relationship (Nakayachi & Watabe, 2005). For example, an apology significantly enhances trust willingness after competency trust violations (Bansal & Zahedi, 2015). Mattila (2009), who studied consumer trust repair after price gouging by hotels, found that an apology coupled with the organization's causal explanation effectively repaired consumer trust. From a single apology and acknowledgment to a combined tactic, affective repair strategies play a crucial role in shaping the trajectory of relationship reconciliation and restoration. Overall, the sincerity and effectiveness of affective repair efforts significantly and positively impact brand trust. Consequently, organizations must prioritize authentic and empathetic communication in their repair strategies to effectively rebuild and maintain consumer trust.

Early research has predominantly examined the effectiveness of using various affective trust repair methods individually after different trust violations in e-commerce. While these studies have provided valuable insights into the efficacy of specific strategies, there remains a significant gap in understanding the potential benefits of combining different trust-repair strategies. Specifically, there is limited empirical evidence on whether integrating multiple strategies—such as combining denials with promises—might yield more effective outcomes in restoring brand trust. Furthermore, the role of promises in trust repair has not been thoroughly explored. Although Zhang (2012) suggested that promises could facilitate trust willingness, this proposition has not been empirically validated. This lack of empirical investigation leaves a critical gap in the literature regarding the standalone and combined effects of promises as part of trust repair strategies. Addressing these gaps, this study hypothesizes that a combined approach of different trust repair strategies will be more effective in enhancing brand trust compared to individual strategies. Therefore, it is hypothesized that:

H1: Affective repair strategies have a positive impact on brand trust.

Specifically, H1 is further subdivided into four presumptions:

- H1a: Apology has a positive impact on brand trust.
- H1b: Apology + Promise has a positive impact on brand trust.
- H1c: Denial has a positive impact on brand trust.
- H1d: Denial + Promise has a positive impact on brand trust.

2.2 Positive Emotions and Brand Trust

Different types of emotions might not have the same effect on brand trust. Individuals may experience a diverse range of negative emotions when trust is violated, such as anger (Gregoire et al., 2010; Antonetti, 2016; Hsu et al., 2019), disappointment, betrayal, and regret (Harrison-Walker, 2012). Anger, in particular, is recognized as a significant factor in consumers' revenge intentions following a service failure (Porath et al., 2011; Obeidat et al., 2020). Conversely, positive emotions may optimistically motivate repair willingness and brand trust. So, it is important to examine the ways in which trustees can trigger positive emotions to encourage brand trust.

Positive emotions play a crucial role in the brand trust-building process, influencing individuals' willingness to engage in efforts to restore trust after a breach has occurred. Research shows that positive feelings tend to initiate more positive assessments of the environment, whereas negative feelings cause less favorable assessments of it (Andrade, 2005). Positive emotions, such as gratitude, forgiveness, and empathy, are associated with increased trust and willingness among individuals and within organizations (Chen et al., 2013). For example, forgiveness, defined as "consumers' willingness to give up retaliation, alienation, and other destructive behaviors and to respond in constructive ways after an organizational violation of trust and the related recovery efforts" (Xie & Peng, 2009), is widely agreed that involves a process of overcoming negative emotions (Worthington and Scherer, 2004; Shin et al., 2018; Tsarenko et al., 2019). Studies have shown that individuals who experience forgiveness are more likely to exhibit trust willingness and build brand trust by giving the trustee a second chance and being open to future interactions (Exline et al., 2004; Finsterwalder et al., 2017). By eliciting positive emotions, the brand trust-building process can be facilitated, leading to an increased willingness to engage in efforts to restore trust relationships. Building on the above views and findings, this study expects that positive emotions could play a mediating role in affecting brand trust in an optimistic direction:

- H2: Positive emotions have a positive impact on brand trust.

2.3 Affective Repair Strategies and Positive Emotions

Affective repair strategies not only aim to address the negative emotions resulting from trust violations but also serve to elicit positive emotions in the trust repair process. Apology, as a prominent affective repair strategy, has been extensively studied for its ability to generate positive emotions such as forgiveness, gratitude, and reconciliation (Bansal & Zahedi, 2015). A sincere apology acknowledges responsibility, expresses remorse, and demonstrates a commitment to change, which can evoke feelings of empathy and understanding in the injured party. Similarly, promise, when accompanied by genuine intent and follow-through, can instill hope and confidence in the relationship, leading to positive emotions such as trust and optimism (Zhang, 2012). Even denial, when used appropriately to clarify misunderstandings or assert innocence, can alleviate negative emotions and pave the way for positive resolution (Bansal & Zahedi, 2015). Effective affective repair strategies mitigate negative emotions and foster positive affective states such as forgiveness, empathy, and understanding. Thus, these strategies play a crucial role not only in addressing immediate emotional turmoil but also in facilitating long-term emotional healing and trust rebuilding.

While the effect of apology as a repair strategy is generally well-researched in the literature (Friend et al., 2010; Dietz & Gillespie, 2012; Chen et al., 2013), the mechanism through which the emotional expression of an apology stimulates positive emotions has seldom been investigated. Most studies focus on the immediate outcomes of apology, denial, or promise as isolated strategies, neglecting the intricate emotional processes involved. This represents a significant gap in understanding how these strategies, especially when combined, foster positive emotional states such as forgiveness, empathy, and understanding. Furthermore, the role of promises in trust repair, though recognized for their potential to rebuild trust (Orbell et al., 1988; Schweitzer et al., 2004), has not been thoroughly explored in terms of their specific emotional impacts. Zhang (2012) suggested that promises could facilitate trust willingness, yet this proposition lacks empirical validation, leaving an unexplored area in the literature regarding how promises interact with other strategies to elicit positive emotions.

Addressing these gaps, this study hypothesizes that different affective repair strategies, individually and in combination, influence positive emotions. By empirically testing these hypotheses, the research aims to provide a comprehensive understanding of the emotional mechanisms underlying trust repair strategies. Thus, it is hypothesized that:

- H3: Affective trust repair strategies influence positive emotions.

Specifically, H3 is further subdivided into four hypotheses:

- H3a: Apology influences positive emotions.
 H3b: Apology + Promise influences positive emotions.
 H3c: Denial influences positive emotions.
 H3d: Denial + Promise influences positive emotions.

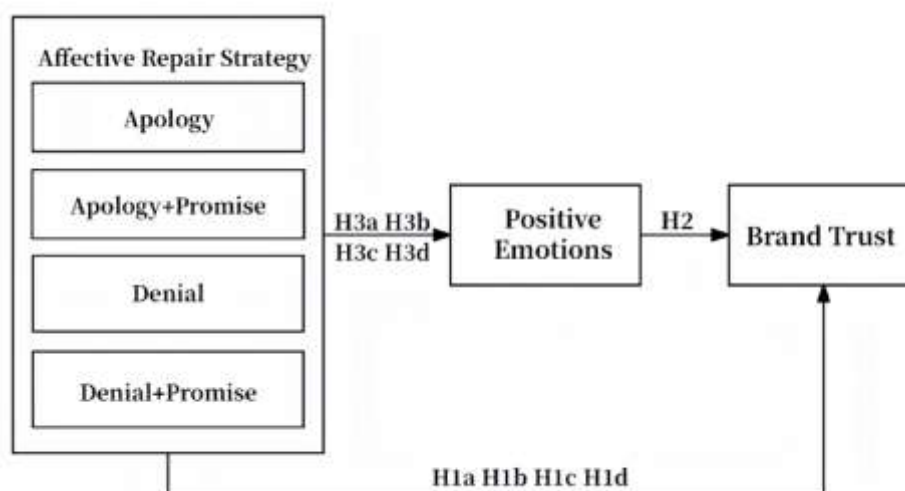


Figure 1. A research model on the mechanism of affective repair strategy on brand trust

The diagram illustrates a research model on the mechanism of affective repair strategies on brand trust, outlining hypotheses that different strategies (apology, apology + promise, denial, denial + promise) positively impact brand trust (H1a, H1b, H1c, H1d) both directly and indirectly through positive emotions (H2). Additionally, it hypothesizes that these strategies influence positive emotions (H3a, H3b, H3c, H3d), which in turn positively affect brand trust, highlighting the importance of emotional factors in trust repair.

3. Methodology

3.1 Questionnaire Designs

This study uses a questionnaire survey method to measure the impact of affective repair strategies on brand trust. The three prerequisites for using the questionnaire survey method are: the sample is not directly observable; the overall size is too large; the study is conducted on an individual basis; and the purpose is to measure the attitudes of large samples (Tao, 2011). This study meets these prerequisites.

The questionnaire is divided into an explanatory part and a main part. The explanatory section is intended to provide guidance to respondents, clarify the purpose of the survey, and request their assistance. In the explanatory part, we strive to provide a clear and concise presentation to ensure that the respondents can fully understand the objectives of the study. In addition, this section sets up a plausible backstory based on a real-world scenario: a well-known beverage manufacturer has triggered a crisis of consumer trust due to false advertising, and we assume that the company has adopted different strategies of public response online, including an apology, apology and promise, denial, and denial and promise.

The main section is divided into two parts. The first part aims to collect basic information about the respondents, including gender, age, online shopping experience, and other key information. The second part focuses on investigating relevant measurement items, including independent variables, mediating variables, and dependent variables. Specifically, we measured apology, apology + commitment, denial, denial + commitment, positive emotions, and brand trust. This part uses the *Likert 5-point scale* method, measuring each indicator on a 5-point scale. Respondents rate each question based on their feelings, with 1 to 5 representing degrees from lowest to highest, where 1 represents strongly disagree, and 5 represents strongly agree.

Overall, the questionnaire design is rigorous and reasonable, consisting of a clear explanatory section and two key investigation sections. This structure aims to ensure that the questionnaire content covers a wide range while efficiently collecting basic information about the respondents and relevant measurement items. The design emphasizes language conciseness and logical rigor, enhancing the overall academic quality and readability of the questionnaire.

3.2 Sample Overview

College students and young professionals were selected as respondents. This group has a high frequency of brand exposure and rich experience in online shopping, which constitutes the main body of online shopping of various brands, which is in line with the principle of universality of survey subjects. When faced with brand service failure, this group usually actively expresses dissatisfaction online and pays attention to the brand’s response to the trust crisis and its repair strategy. Therefore, the selection of this type of respondent is conducive to accurately reflecting the real situation of the questionnaire content.

3.3 Variable Definition and Measurement

The definitions of the variables in this study model refer to the achievements of previous scholars. Four combinations of affective repair strategies are used as independent variables: apology, apology + commitment, denial, and denial + commitment. Positive emotions serve as the mediating variable, and brand trust serves as the dependent variable. The definitions of each variable and their respective references are outlined in Table 1.

Table 1. Definitions of variables in this study

	Variables	Definitions	References
Independent Variables	apology	acknowledging an error and expressing regret and remorse for it	Wrightsmen (1992); Ha & Ning (2013)
	apology + promise	acknowledging an error, expressing regret and remorse for it, and then promising not to repeat similar mistakes in the future	
	denial	not admitting to having committed such an error	
	denial + promise	not admitting to having committed such an error and promising not to commit it in the future	
Mediator	positive emotions	the emotional state characterized by pleasurable feelings that individuals experience in response to stimuli from internal and external environments to meet their needs	Fredrickson (2013); Xie & Liu (2023)
Dependent Variable	brand trust	brand intent (the consumer’s belief that the brand will protect them) and brand reliability (the consumer’s belief that the brand will respond to their basic needs)	Delgado & Luis (2001); Li (2014)

Based on existing theories and literature reviews (e.g., Delgado-Ballester & Luis Munuera-Alemán, 2001; Fredrickson, 2013; Wrightsmen, 1992), this study designed measurement items for the independent variables of affective repair strategy combinations, the mediator variable of positive emotions, and the dependent variable of brand trust (see Appendix). All measurements were conducted using a 5-point Likert scale. The sources of the relevant scales are detailed in the Appendix: the sizes of the independent variables were inspired by studies from Wrightsmen (1992) and Han and Ning (2013), including four affective repair strategy combinations: apology, apology + promise, denial, denial + promise, comprising four scale items. The mediator variable, positive emotions, was referenced in studies by Fredrickson (2013) and Xie and Liu (2023), resulting in a three-item scale. The measurement of the dependent variable, consumer trust repair willingness, primarily relied on studies by Delgado-Ballester and Luis Munuera-Alemán (2001) and Li (2014), including six scale items.

4. Analysis and Results

4.1 Reliability Analysis of the Questionnaire

Reliability analysis determines the consistency and stability of the questionnaire measurement data, and reliability is a measure of the design of the questionnaire. Effective control and reduction of random mistakes in measurements are the goals of reliability testing. Additionally, reliability is used as a benchmark to assess the extent of measurement errors or the percentage of inaccuracies in the findings of the questionnaire measurement. A Cronbach’s Alpha value above 0.6 is typically regarded as acceptable, and a value over 0.7 indicates that the questionnaire has a high degree of reliability. Tables 2 and 3 display the reliability analysis results for the study’s questionnaire.

Table 2. Results of reliability analysis of positive emotions

Variables	Number of queries	Cronbach’s Alpha (α)
Positive emotions (apology)	3	0.824
Positive emotions (apology+ promise)	3	0.875
Positive emotions (denial)	3	0.899
Positive emotions (denial+ promise)	3	0.921

Table 3. Results of reliability analysis of brand trust

Variables	Number of queries	Cronbach's Alpha (α)
Brand trust (apology)	3	0.886
Brand trust (apology+ promise)	3	0.911
Brand trust (denial)	3	0.933
Brand trust (denial+ promise)	3	0.941

The analysis's findings demonstrate that *Cronbach's Alpha* values for the measurement scales of the five variables all surpass 0.7, a sign of excellent reliability. This suggests that there is good internal consistency overall and that the variables in the questionnaire show high consistency.

4.2 Validity Analysis of the Questionnaire

The degree to which a test can measure the trait it is designed to evaluate is referred to as its validity. A questionnaire survey's most important component is its validity, and its main objective is to achieve a high level of validity in its measurements and findings. Greater validity denotes the degree to which the questionnaire's measurement outcomes accurately capture the behavior being tested, making the test's objectives easier to meet and attesting to the validity and efficiency of the instrument. Tables 4 and 5 display the questionnaire's validity analysis results for this study.

Table 4. *KMO* value and *Bartlett's sphere* test results of positive emotions

	<i>KMO</i> value	Bartlett's sphere test		
		Approximate chi-square	Degrees of freedom	Significance (<i>P</i>)
Positive emotions (apology)	0.785	729.685	3	0.000
Positive emotions (apology+ promise)	0.732	558.291	3	0.000
Positive emotions (denial)	0.794	843.556	3	0.000
Positive emotions (denial+ promise)	0.725	497.348	3	0.000

Table 5. *KMO* value and *Bartlett's sphere* test results of brand trust

	<i>KMO</i> value	Bartlett's sphere test		
		Approximate chi-square	Degrees of freedom	Significance (<i>P</i>)
Brand trust (apology)	0.740	348.304	3	0.000
Brand trust (apology+ promise)	0.727	453.653	3	0.000
Brand trust (denial)	0.766	512.894	3	0.000
Brand trust (denial+ promise)	0.768	558.309	3	0.000

The positive emotions and brand trust in the four affective strategies responses were first tested using the *KMO* sample measure and Bartlett sphere test, and the results are shown in the table. The *KMO* values all exceed 0.7 and the probability of significance of the Bartlett sphere test was above 0.01, which was suitable for factor analysis.

4.3 Correlation Analysis

This study conducted separate analyses for the independent, mediating, and dependent variables. The correlation analysis results are presented in Table 6.

Table 6. *Correlation analysis*

Variable	Apology	Apology + Promise	Denial	Denial + Promise	Positive Emotions	Brand Trust
Apology	1.000					
Apology + Promise		1.000				
Denial			1.000			
Denial + Promise				1.000		
Positive Emotions	.781**	.822**	-.496**	.586**	1.000	
Brand Trust	.767**	.820**	-.497**	.595**	.895**	1.000

** . At level 0.01 (two-tailed), the correlation was significant.

By analyzing the data in Table 6, this study explored the relationship between four different emotion repair strategies (apology, apology + promise, denial, denial + promise), the mediating variable (positive emotion), and the dependent variable (brand trust).

First, observing the correlation coefficients between these four strategies and positive emotions, this study found that the strategies of “apology” and “apology + promise” had a significant positive correlation with positive emotions, with correlation coefficients of 0.781 and 0.822, respectively, while the “denial” strategy was negatively correlated with positive emotions with a correlation coefficient of -0.496. Although the strategy of “denial + promise” also has the element of denial, due to the subsequent promise, its relationship with positive emotions becomes positive, but the coefficient of 0.586 is lower than that of the first two strategies, indicating that its effect is not as good as that of direct apology or apology and promise.

Further analyzing the relationship between these four strategies and brand trust, this study finds that similar to positive emotions, the strategies of “apology” and “apology + promise” also show a significant positive correlation with brand trust, with correlation coefficients of 0.767 and 0.820, respectively, and both are lower than the significance level of 0.01, which fully proves the effectiveness of these two strategies in restoring consumer trust. The “denial” strategy is negatively correlated with brand trust, with a correlation coefficient of -0.497, which once again confirms that denial mistakes can damage corporate trust. While the strategy of “denial + promise” can salvage some trust to some extent, it is still less effective than a direct apology or an apology and promise.

4.4 Regression Analysis

Linear regression analysis was used to analyze the relationships between the four types of affective repair strategies and positive emotions. The four types of affective repair strategies and brand trust, as well as positive emotions and brand trust, were analyzed, as shown in Table 7.

Table 7. Regression analysis

Dependent variable	Independent variable	Beta (β)	P	TOLER	VIF	R2	R2 (after revision)	F
Brand Trust	Apology	0.708	0.000	17.146	1.000	0.588	0.586	293.969
	Apology + Promise	0.828	0.000	20.551	1.000	0.672	0.671	422.353
	Denial	-0.434	0.000	-8.221	1.000	0.247	0.243	67.582
	Denial + Promise	0.565	0.000	10.633	1.000	0.354	0.351	113.062
Brand Trust	Positive Emotions	0.845	0.000	57.914	1.000	0.802	0.801	3354.002
Positive Emotions	Apology	0.815	0.000	17.959	1.000	0.610	0.608	322.541
	Apology + Promise	0.833	0.000	20.731	1.000	0.676	0.674	429.757
	Denial	-0.408	0.000	-8.196	1.000	0.246	0.242	67.167
	Denial + Promise	0.587	0.000	10.392	1.000	0.344	0.341	107.995

From the *linear regression analysis* results in Table 7, it can be seen that firstly, in the relationship between emotion repair strategy and brand trust, apology strategy ($\beta=0.708, P<0.01$) and apology+commitment strategy ($\beta=0.828, P<0.01$) were significantly positively correlated with brand trust, confirming the hypotheses H1a and H1b. This suggests that consumer brand trust increases significantly when companies adopt an apology or apology and promise strategy. At the same time, the rejection + commitment strategy ($\beta=0.565, P<0.01$) also showed a positive correlation with brand trust, supporting the hypothesis of H1d, but its effect was relatively weak. The denial strategy ($\beta=-0.434, P<0.01$) was negatively correlated with brand trust, negating the hypothesis H1c.

Secondly, regarding the relationship between brand trust and positive emotion, the results showed that there was a significant positive correlation between the two ($\beta=0.845, P<0.01$), which verified the hypothesis H2. This shows that consumers’ positive emotions have a positive effect on brand trust.

Finally, in the analysis of the relationship between emotion repair strategies and positive emotions, the apology strategy ($\beta=0.815, P<0.01$), apology+commitment strategy ($\beta=0.833, P<0.01$), and rejection+commitment strategy ($\beta=0.587, P<0.01$) were significantly positively correlated with positive emotion, confirming the hypotheses H3a, H3b and H3d, respectively. Among them, the effect of apology and apology + commitment strategy on positive emotions is stronger, while the impact of rejection + commitment strategy is relatively small. However, the denial strategy ($\beta=-0.408, P<0.01$) was significantly negatively correlated with positive emotion, negating hypothesis H3c.

4.5 Mediation Effect of Positive Emotions

In this study, the Bootstrap method (Wen et al., 2004) was used, and the *SPSS PROCESS* plug-in was used to mediate the analysis with apology, apology + promise, denial, and denial + promise as independent variables. Table 8 summarizes the direct, indirect, and total impact of each variable on brand trust, as well as the impact value and percentage.

Table 8. *Bootstrap method of significance test of intermediary effect*

Dependent Variable		Brand Trust			
Examined Variables (mediators)		Positive Emotions			
Independent Variables		Apology	Apology + Promise	Denial	Denial + Promise
Indirect Effect(s)	Effect	0.4456	0.4985	-0.3294	0.5179
	Boot 95% CI	(0.333, 0.573)	(0.371, 0.625)	(-0.440, -0.239)	(0.394, 0.628)
	Effect Percentage	62.95%	40.21%	75.97%	88.18%
Direct Effect	Effect	0.2623	0.3295	-0.1042	0.0694
	Boot 95% CI	(0.158, 0.367)	(0.217, 0.442)	(-0.182, -0.027)	(-0.001, 0.140)
	Effect Percentage	37.05%	39.79%	24.03%	11.82%
Total Effect	Effect	0.7079	0.8280	-0.4336	0.5873
	Boot 95% CI	(0.627, 0.789)	(0.749, 0.907)	(-0.538, -0.330)	(0.476, 0.699)
	Effect Percentage	100%	100%	100%	100%

Table 8 shows that the three affective repair strategies (apology, apology + promise, denial) have significant overall, direct, and indirect effects on brand trust. Positive emotion played a certain mediating role between these three affective repair strategies and brand trust, and the mediating effect percentages were 62.95%, 40.21%, and 75.97%, respectively. In addition, since the direct effect of denial + promise on brand trust was not significant, positive emotion played a complete mediating role in the influence mechanism of denial + promise on brand trust, and the mediating effect was 88.18%.

4.6 Summary of Results

Based on the constructed research model and hypotheses, the study conducted a survey of the clothing industry, followed by statistical analysis and hypothesis testing. Table 9 summarizes the hypothesis test results:

Table 9. Summary of hypothesis test results

No.	Research hypothesis	Test results
H1a	Apology has a positive impact on brand trust.	Valid
H1b	Apology + Promise has a positive impact on brand trust.	Valid
H1c	Denial has a positive impact on brand trust.	Not valid
H1d	Denial + Promise has a positive impact on brand trust.	Valid
H2	Positive emotions have a positive impact on brand trust.	Valid
H3a	Apology positively influences positive emotions.	Valid
H3b	Apology + Promise positively influences positive emotions.	Valid
H3c	Denial positively influences positive emotions.	Not valid
H3d	Denial + Promise positively influences positive emotions.	Valid

The validation results showed that most of the hypotheses were confirmed, with the exception of H1c and H3c. The lack of substantiation of these two hypotheses may be attributed to the fact that brands respond to service failures in a denial manner, which creates an image of consumers as unwilling to take on mistakes (Heller & Darling, 2011), which naturally inspires a lot of negative emotions (Bai, 2022). There is a negative impact on both positive emotion and brand trust.

5. Discussion

5.1 Interpretation of Results

The research progress of this paper is interpreted in the following aspects. Compared with previous related studies, this study highlights the important mediating role of positive emotions in the impact of affective repair strategies on brand trust. This view is consistent with previous research on the role of positive emotions in brand trust building but provides a deeper understanding and empirical evidence, especially in the full mediating role of denial + promise strategies.

Moreover, as the study progresses, it reveals further insights into the complexities of affective repair strategies. This study empirically illustrates that under certain circumstances, the affective strategy of denial will negatively affect the generation of positive emotions and the recovery of brand trust. While this argument is contrary to the belief that denial can positively affect trust restoration, it is consistent with the argument that denial coping strategies can leave brands with an irresponsible image in the minds of consumers. This enriches the research on the effects of denial strategies in the field of trust repair. Then, while previous

studies have shown that apology and denial play an important role in emotional healing, there are relatively few studies on promise. This study found the positive impact of promise on brand trust repair, especially when combined with other strategies. This provides a basis for further exploration of the role of promise in affective repair. Finally, this study explores the combination of different affective repair strategies, while previous studies have mainly focused on the effects of a single strategy. This integrative research helps to better understand how to select and apply multiple strategies to restore brand trust after a brand service failure.

5.2 Management recommendations

Brands could adopt an apology and promise combination for effective trust repair. Brands facing trust crises should prioritize employing a combination of apology and promise strategies to repair trust effectively. Research indicates that this dual approach yields the strongest positive effect on brand trust ($\beta=0.828$), surpassing the impact of using apology or denial combined with promise. This finding underscores the importance of not only expressing regret for past mistakes but also providing assurances for future behavior. By acknowledging faults through an apology and offering commitments for improvement, brands can convey sincerity and reliability, essential elements for rebuilding trust (Radu et al., 2019). Such strategies are pivotal in ensuring that consumers perceive the brand as both accountable and dedicated to positive change.

Avoidance of sole reliance on denial to mitigate suspicion is of great significance. Contrary to some brands' tendencies to rely solely on denial as a trust repair strategy, our research reveals its adverse impact on brand trust. While denial may temporarily alleviate consumer suspicions, its long-term effect is detrimental to trust. Brands employing denial strategies fail to fully dispel consumer doubts and may be perceived as irresponsible. Moreover, denial weakens the effectiveness of promise-based approaches, further hindering trust repair efforts. Thus, brands should exercise caution and refrain from adopting denial as the primary strategy for addressing trust breaches (Gillespie et al., 2014). Instead, more comprehensive approaches should be considered to effectively mitigate suspicion and rebuild trust.

Brands should utilize positive emotions as catalysts for trust restoration. Recognizing the mediating role of positive emotions in trust repair processes, brands should prioritize strategies that evoke positive consumer sentiments. Our study highlights the significance of positive emotions, particularly in the context of denial combined with promise strategies. This emphasizes the importance of incorporating emotional elements into trust repair efforts, as positive emotions serve as key drivers in rebuilding trust post-crisis (Li et al., 2022). By fostering positive expectations through promises, brands can mitigate the adverse effects of denial, not only addressing cognitive aspects but also engaging consumers emotionally to facilitate trust restoration.

These recommendations underscore the pivotal role of apology and promise strategies in trust repair, caution against the detrimental effects of denial, and emphasize the cultivation of positive emotions to foster trust restoration. By aligning with these insights, brands can navigate trust crises more effectively and cultivate enduring consumer trust.

6. Conclusion

6.1 Key Findings

This study investigates the primary impacts of four prevalent affective repair strategies on brand trust following brand service failures. It unveils a positive association between apology, apology + promise, denial + promise, and brand trust, while denial exerts a negative influence on brand trust. Despite its potential to alleviate consumer suspicions to some extent (Signal et al., 1988), denial prompts ongoing scrutiny of the violator's subsequent actions, leading consumers to assess their connection to prior faults (Xue et al., 2019). Consequently, the brand's employment of a denial strategy ultimately undermines brand trust.

Regression analysis indicated that Apology + Promise had the strongest positive impact on Brand Trust, followed by Apology alone, with Denial + Promise being comparatively weaker. While all three strategies address the emotional dimension of the breach and restore credibility in the relationship (Chen et al., 2013; Nakayachi & Watabe, 2005), their efficacy varies. Following a trust crisis, an apology communicates brand regret (Lewicki & Bunker, 1996), while a promise assures consumers about the future, yielding better trust repair results than an apology alone (Han & Ning, 2013). However, combining promise with denial risks conveying irresponsibility, diminishing the positive impact of Denial + Promise on brand trust compared to the other strategies.

Additionally, positive emotions mediate the impact of affective repair strategies on brand trust. They partially mediate between apology, apology + promise, denial, and brand trust individually. However, positive emotions completely mediate the influence of denial + promise on brand trust. When brands employ a denial + promise strategy to rebuild trust, promises foster positive expectations (Zheng et al., 2017), stimulating positive emotions in consumers and mitigating the negative effects of denial (Kim et al., 2003). Consequently, positive emotions significantly contribute to the mechanism by which denial + promise influences brand trust.

Overall, the key findings of this study suggest that consumers' trust in a brand after a major brand fails is influenced by which affective repair strategy the brand adopts. If a brand employs a denial strategy, consumers will be more distrustful of the brand. Positive emotion plays a mediating role in this process. This finding provides guidance for brands to repair trust and improve market competitiveness.

6.2 Limitations and Future Studies

This study has three main limitations. Firstly, the survey sample was restricted, primarily consisting of women aged 18 to 30 with predominantly undergraduate degrees. Secondly, the research focuses solely on common affective repair strategies, neglecting to explore the efficacy of alternative strategies on brand trust. Moreover, employing a survey-to-verify model raises concerns about the external validity of the findings, as the scenarios presented may not accurately reflect real-world situations.

Given these limitations, future research can significantly enhance its impact in three key areas. Firstly, diversifying the sample would be advantageous. Expanding the survey's scope to encompass a broader age range, varying education and occupational backgrounds, and cultural diversity would provide deeper insights into the effects of affective repair strategies across different demographics. Specifically, increasing male participation rates would bolster the representativeness of findings and illuminate gender-based differences in response to such strategies. Secondly, beyond the conventional strategies discussed, future studies could explore a broader array of repair methods, including silence, compensation, and brand engagement. A comparative analysis of these strategies' impacts on brand trust would elucidate their efficacy and applicability, thereby furnishing enterprises with a wider array of options and recommendations. Lastly, to bolster the credibility and relevance of research findings, employing diverse research methodologies such as experimental studies, case analyses, and in-depth interviews would be beneficial. Integrating quantitative and qualitative approaches would offer a more holistic understanding of affective repair strategy effectiveness across different contexts, validating the survey results' applicability and reliability in real-world scenarios.

Future research can delve deeper into the influence mechanisms of various affective repair strategies, particularly in diverse cultural settings. Integration with emerging technologies like artificial intelligence and big data analysis can enhance understanding of brand trust repair mechanisms. To enrich the scope of trials, additional external factors such as product type, brand reputation, and consumer characteristics should be considered to explore the broader impact of affective repair strategies.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Acknowledgements: We express our sincere gratitude to the School of Innovation and Entrepreneurship Education at Guangdong University of Foreign Studies and *the Innovation and Entrepreneurship Project (E-commerce customer service consulting and training: Countermeasures and response mechanism in online business complaints)* for their generous support and provision of a venue for this research endeavor.

References

- [1] Ahmad, F., & Guzmán, F. (2021). Negative online reviews, brand equity, and emotional contagion. *European Journal of Marketing*, 55(11), 2825–2870. <https://doi.org/10.1108/ejm-10-2019-0820>
- [2] Bansal, G., & Zahedi, F. M. (2015). Trust violation and repair: The information privacy perspective. *Decision Support Systems*, 71, 62–77. <https://doi.org/10.1016/j.dss.2015.01.009>
- [3] Bolat, E., Robson, J., Sit, K. J., Birch-Chapman, S., Ashraf, S., Memery, J., & Jackson, C. (2020). Service brand rehab: Diagnosing trust repair mechanisms. *Qualitative Market Research: An International Journal*, 23(4), 725–746. <https://doi.org/10.1108/qmr-12-2017-0187>
- [4] Cao, T., Shi, G., & Yin, Y. (2014). How to repair customer trust of high-risk products after negative publicity. *Nankai Business Review International*, 5(4), 382–393. <https://doi.org/10.1108/nbri-03-2014-0015>
- [5] Chen, M. J., & Ayoko, O. B. (2012). Conflict and trust: The mediating effects of emotional arousal and self-conscious emotions. *International Journal of Conflict Management*, 23(1), 19–56. <https://doi.org/10.1108/10444061211199313>
- [6] Chen, Y., Ganesan, S., & Liu, Y. (2013). Does a firm's product-recall strategy affect its financial value? An examination of strategic alternatives during product-harm crises. *Journal of Marketing*, 77(6), 48–64. <https://doi.org/10.1509/jm.11.0501>
- [7] Chen, Y., Wu, J., & Chang, H. (2013). Examining the mediating effect of positive moods on trust repair in e-commerce. *Internet Research*, 23(3), 355–371. <https://doi.org/10.1108/10662241311331772>
- [8] Delgado-Ballester, E., & Luis Munuera-Alemán, J. (2001). Brand trust in the context of consumer loyalty. *European Journal of Marketing*, 35(11/12), 1238–1258. <https://doi.org/10.1108/eum0000000006475>
- [9] Ferrin, D. L., Cooper, C. D., Kim, P. H., & Dirks, K. T. (2007). Silence speaks volumes: The effectiveness of reticence in comparison to apology and denial for responding to integrity- and competence-based trust violations. *Journal of Applied Psychology*, 92, 893–908. <https://doi.org/10.1037/0021-9010.92.4.893>
- [10] Fredrickson, B. L. (2013). Positive emotions broaden and build. *Advances in Experimental Social Psychology*, 47, 1–53.
- [11] Gillespie, N., Dietz, G., & Lockey, S. (2014). Organizational reintegration and trust repair after an integrity violation: A Case Study. *Business Ethics Quarterly*, 24(3), 371–410. <https://doi.org/10.5840/beq2014437>
- [12] Gregoire, Y., Laufer, D., & Tripp, T. M. (2010). A comprehensive model of customer direct and indirect revenge: Understanding the effects of

- perceived greed and customer power. *Journal of the Academy of Marketing Science*, 38, 738-758. <https://doi.org/10.1007/s11747-009-0186-5>
- [13] Han, P., & Ning, J. (2013). Research on trust repair strategies based on two types of trust violations. *Management Journal*, 03, 390-396.
- [14] Han, S. P., & Ning, F. (2013). When apologies backfire: Mind perception as an explanation. *Journal of Experimental Social Psychology*, 49(5), 938-941. <https://doi.org/10.1016/j.jesp.2013.05.002>
- [15] Harrison-Walker, L. J. (2012). The role of cause and affect in service failure. *Journal of Services Marketing*, 26, 115-123. <https://doi.org/10.1108/08876041211215275>
- [16] Heller, V. L., & Darling, J. R. (2011). Toyota in crisis: Denial and mismanagement. *Journal of Business Strategy*, 32(5), 4-13. <https://doi.org/10.1108/02756661111165426>
- [17] Hsu, L. C., Wang, K. Y., Chih, W. H., & Lin, W. C. (2019). Modeling revenge and avoidance in the mobile service industry: Moderation role of technology anxiety. *The Service Industries Journal*, 41(15-16), 1029-1052. <https://doi.org/10.1080/02642069.2019.1585428>
- [18] Kähkönen, T., Vanhala, M., & Blomqvist, K. (2023). Employee trust-repair practices: Scale development and validation. *Journal of Advances in Management Research*, 20(3), 539-563. <https://doi.org/10.1108/jamr-08-2021-0294>
- [19] Kim, P. H., Dirks, K. T., Cooper, C. D., & Ferrin, D. L. (2006). When more blame is better than less: The implications of internal vs. external attributions for the repair of trust after a competence- vs. integrity-based trust violation. *Organizational Behavior and Human Decision Processes*, 99(1), 49-65. <https://doi.org/10.1016/j.obhdp.2005.07.002>
- [20] Kim, P. H., Ferrin, D. L., Cooper, C. D., & Dirks, K. T. (2004). Removing the shadow of suspicion: The effects of apology versus denial for repairing competence-versus integrity based trust violations. *Journal of Applied Psychology*, 89, 104-118. <https://doi.org/10.1037/0021-9010.89.1.104>
- [21] Kim, P. H., Ferrin, D. L., Cooper, C., & Dirks, K. (2003). Removing the shadow of suspicion: The effects of apology versus denial for repairing competence- versus integrity-based trust violations. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.398221>
- [22] Knight, J. G., Mather, D. W., & Mathieson, B. (2015). The key role of sincerity in restoring trust in a brand with a corporate apology.
- [23] Laer, T. V., & Ruyter, K. D. (2010). In stories, we trust: How narrative apologies provide cover for competitive vulnerability after integrity-violating blog posts. *International Journal of Research in Marketing*, 27, 164-174. <https://doi.org/10.1016/j.ijresmar.2009.12.010>
- [24] Lewicka, D. (2022). Building and rebuilding trust in higher education institutions (HEIs). Student's perspective. *Journal of Organizational Change Management*, 35(6), 887-915. <https://doi.org/10.1108/jocm-02-2022-0037>
- [25] Lewicki, R. J., & Bunker, B. B. (1996). Developing and maintaining trust in work relationships. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in Organizations: Frontiers of Theory and Research* (pp. 114-139). Thousand Oaks: Sage.
- [26] Li, C. (2014). *The impact mechanism of e-commerce platform service quality on brand equity. A doctoral dissertation*. Shandong: [Shandong University](https://doi.org/10.1108/02756661111165426).
- [27] Li, C. Y. (2015). Switching barriers and customer retention. *Journal of Service Theory and Practice*, 25(4), 370-393. <https://doi.org/10.1108/jstp-10-2013-0220>
- [28] Li, S., Wang, Y., Filieri, R., & Zhu, Y. (2022). Eliciting positive emotion through strategic responses to COVID-19 crisis: Evidence from the tourism sector. *Tourism Management*, 90, 104485. <https://doi.org/10.1016/j.tourman.2021.104485>
- [29] Mattila, A. S. (2009). How to handle PR disasters? An examination of the impact of communication response type and failure attributions on consumer perceptions. *Journal of Services Marketing*, 23, 211-218. <https://doi.org/10.1108/08876040910965548>
- [30] Nakayachi, K., & Watabe, M. (2005). Restoring trustworthiness after adverse events: The signaling effects of voluntary "hostage posting" on trust. *Organizational Behavior and Human Decision Processes*, 97(1), 1-17. <https://doi.org/10.1016/j.obhdp.2005.02.001>
- [31] Nelson, C. A., Cui, A. P., & Walsh, M. F. (2021). Breach of trust and repair: The impact of salespersons words and actions on buyer trust. *Qualitative Market Research: An International Journal*, 24(3), 375-395. <https://doi.org/10.1108/qmr-08-2019-0101>
- [32] Omar, N. A., Zainol, Z., Thye, C. K., Ahmad Nordin, N., & Nazri, M. A. (2017). Halal violation episode: Does severity and trust recovery impact negative consumption behavior? *Journal of Islamic Marketing*, 8(4), 686-710. <https://doi.org/10.1108/jima-10-2015-0081>
- [33] Orbell, J., Dawes, R., & van de Kragt, A. (1988). Explaining discussion induced cooperation. *Journal of Personality and Social Psychology*, 54, 811-819. <https://doi.org/10.1037//0022-3514.54.5.811>
- [34] Radu, A. G., Arli, D., Surachartkumtonkun, J., Weaven, S., & Wright, O. (2019). Empathy and apology: The effectiveness of recovery strategies. *Marketing Intelligence & Planning*, 37(4), 358-371. <https://doi.org/10.1108/mip-03-2018-0080>
- [35] Schweitzer, M. E., Hershey, J. C., & Bradlow, E. T. (2004). Promises and lies: Restoring violated trust. *Behavioral & Experimental Economics*. <https://doi.org/10.2139/ssrn.524782>
- [36] Siebert, S., & Martin, G. (2014). People management rationales and organizational effectiveness. *Journal of Organizational Effectiveness: People and Performance*, 1(2), 177-190. <https://doi.org/10.1108/joep-03-2014-0011>
- [37] Signal, A., Ursery, M. W., & Pilviano, L. J. (1988). When apologies don't help: The paradox of apology and defense. *Journal of Applied Social Psychology*, 18(1), 42-55. <https://doi.org/10.1111/j.1559-1816.1988.tb00004.x>
- [38] Signal, J., Hsu, L., Foodim, S., et al. (1988). Affecting perceptions of political candidates accused of sexual and financial misconduct. *Political Psychology*, 9(2), 273-280. <https://doi.org/10.2307/3790956>
- [39] Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research*, 36, 356 - 372. <https://doi.org/10.2307/3152082>
- [40] Tomlinson, E. C., Dineen, B. R., & Lewicki, R. J. (2004). The road to reconciliation: Antecedents of victim willingness to reconcile following a broken promise. *Journal of Management*, 30, 165 - 187. <https://doi.org/10.1016/j.jm.2003.01.003>
- [41] Tong, Z., Feng, J., & Liu, F. (2022). Understanding damage to and reparation of brand trust: A closer look at image congruity in the context of negative publicity. *Journal of Product & Brand Management*, 32(1), 157-170. <https://doi.org/10.1108/jpbm-07-2021-3550>
- [42] Wang, D., Zhou, Z., & Lu, Y. (2021). Combined strategy of trust repair in construction project organizations: An exploratory study in Chinese management scenario. *International Journal of Managing Projects in Business*, 14(7), 1463-1484. <https://doi.org/10.1108/ijmpb-05-2020-0143>
- [43] White, L. S. (1992). Assumptions about human nature: Implications for research and practitioners (2nd ed.). Newbury Park: Sage.
- [44] Xie, Y., & Peng, S. (2009). How to repair customer trust after negative publicity: The roles of competence, integrity, benevolence, and

- forgiveness. *Psychology & Marketing*, 26, 572-589. <https://doi.org/10.1002/mar.20289>
- [45] Xue, J., Huang, L., & Liang, X. (2019). How should online stores implement coping strategies to fight against deceptive promotions? *Electronic Commerce Research and Applications*, 36, 100860. <https://doi.org/10.1016/j.elerap.2019.100860>
- [46] Yang, Z., & Fang, X. (2004). Online service quality dimensions and their relationships with satisfaction. *International Journal of Service Industry Management*, 15(3), 302–326. <https://doi.org/10.1108/09564230410540953>
- [47] Zhang, Z. (2012). The study on consumer trust repair based on the interaction of person & environment. *Procedia Engineering*, 29, 1467-1470. <https://doi.org/10.1016/j.proeng.2012.01.156>
- [48] Zhang, Z., Wen, Z., Hou, J., & Liu, H. (2004). Testing procedures and applications of mediating effects. *Acta Psychologica Sinica*, 05.
- [49] Zheng, X., Song, X., Zhang, S., & Gao, Y. (2017). Identification of trust-repair strategies and their effectiveness in the chinese construction industry. *Journal of Management in Engineering*, 33(6). [https://doi.org/10.1061/\(asce\)me.1943-5479.0000557](https://doi.org/10.1061/(asce)me.1943-5479.0000557)
- [50] Zhou, T., & Wang, L. (2021). The effects of perceived CSR on consumer trust: A case of Chinese food brands. *Journal of Business Ethics*, 170(2), 245-260. <https://doi.org/10.1007/s10551-020-04448-5>

Appendix: Sources of scales for this study

Variables	Nos	Questions
Apology	A1	The brand acknowledges the error and apologizes, feeling regretful and remorseful for it.
Apology + Promise	A2	The brand acknowledges the error, apologizes, feels regretful and remorseful for it, and then promises not to repeat similar mistakes in the future.
Denial	A3	The brand does not admit to having committed such an error.
Denial + Promise	A4	The brand does not admit to having committed such an error and promises not to commit it in the future.
Positive emotions	B1	After the brand adopts a repair strategy, I feel satisfied.
	B2	After the brand adopts a repair strategy, I feel happy.
	B3	After the brand adopts a repair strategy, I feel emotionally and mentally content.
Brand trust	C1	I still believe the brand meets my consumer expectations.
	C2	I still feel confident in the brand.
	C3	I think the brand is genuine when it comes to solving problems.