

The Impact of Emotional Intensity in Tourism Short Videos on Travel Intention: Evidence from Behavior and EEG

Authors: Zhang Wuke, Niu Wanshu, Xie Zhaohan, Xie Zhaohan

Date: 2026-01-17T16:54:14+00:00

Abstract

Under the new e-commerce model, tourism merchants actively collaborate with short video influencers for promotion. This paper focuses on emotional expression as an affective factor and, by combining scenario-based experiments with EEG methods, investigates the impact of emotional expression intensity in short videos on travel intention, as well as the moderating role of emotional susceptibility. The results indicate that strong emotional expression in short videos leads to higher travel intention, as reflected in stronger self-reported behavioral intention and a higher FAA index associated with approach motivation, and this effect is more pronounced among consumers with high emotional susceptibility. This study extends the understanding of the positive role of emotional expression in tourism short videos and provides theoretical and practical guidance for the promotion of tourism short video content.

Full Text

The Impact of Emotional Expression Intensity in Tourism Short Videos on Travel Intention: Evidence from Behavioral and EEG Data

ZHANG Wuke, NIU Wanshu, XIE Zhaohan

Business School, Ningbo University, Ningbo 315211, China

This study suggests that tourism short-video bloggers should maintain a positive and high-arousal emotional state in their content to enhance consumers' travel intentions. Additionally, short-video platforms can identify consumers with higher emotional susceptibility based on their browsing behavior characteristics and deliver emotionally intense tourism short videos to them through targeted recommendations.

Under new e-commerce models, tourism businesses actively collaborate with short-video influencers for promotional purposes. This paper focuses on emotional expression as an affective factor, combining scenario-based experiments with EEG methods to investigate how emotional expression intensity in short videos influences travel intention and the moderating role of emotional susceptibility. Results show that strong emotional expression in short videos leads to stronger travel intention, reflected in both stronger self-reported behavioral intention and higher FAA indices associated with approach motivation. This effect is more pronounced among consumers with high emotional susceptibility. This research extends the positive role of emotional expression in the domain of tourism short videos and provides theoretical and practical guidance for tourism short-video marketing.

Keywords: tourism short video, emotional expression, emotional susceptibility, travel intention

Classification: B849

Abstract

Scientific Question: In the digital era, tourism promotion has shifted to short videos, with tourism marketers increasingly collaborating with short-video influencers for promotional purposes. Bloggers exhibit varying levels of emotional expression intensity in their videos. As tourism is a hedonic experience, blogger emotions significantly influence travel intention. Following the Heuristic-Systematic Model (HSM), this research examines how strong emotional expressions affect travel intentions and whether individual emotional susceptibility moderates this relationship. By integrating behavioral and EEG data, the study fills a research gap by revealing how high-intensity affect triggers consumer approach motivation through psychological and neural pathways, offering new insights into the emotional mechanisms of social media persuasion.

Method: The study employed a multi-method design with two experiments. Experiment 1 used a 2 (emotional intensity: strong vs. weak) \times 2 (emotional susceptibility: high vs. low) between-subjects design with 223 participants. Intensity was manipulated in the video using vocal tone, music, and facial expressions of the bloggers. Experiment 2 further provided neural evidence using an EEG mixed design with 47 participants. Frontal Alpha Asymmetry (FAA) was recorded at F3 and F4 electrodes to objectively measure approach motivation. By combining subjective self-reports from behavioral scales with objective neurophysiological signals, the research ensured high validity.

Results: Data analysis yielded significant results across behavioral and neural levels. Experiment 1 showed a significant main effect of emotional intensity, where strong expressions led to higher self-reported travel intentions. Crucially, a significant interaction was found: this effect was only significant for participants with high emotional susceptibility, while low-susceptibility individuals

remained unaffected. Experiment 2 replicated these patterns using EEG data. High-intensity emotional expressions triggered significantly higher FAA indices, indicating stronger approach motivation toward the destination. Similar to behavioral results, the interaction between emotional intensity and susceptibility was significant for FAA. These consistent findings confirm the strong effect of emotional cues, particularly for audiences naturally sensitive to emotional information.

Conclusion: In conclusion, emotional expression intensity is a fundamental driver of travel intention in short videos. Strong emotional displays act as heuristic cues that facilitate emotional contagion, allowing viewers to adopt the blogger's positive affect which further enhances their travel intention. Furthermore, individual emotional susceptibility serves as a critical boundary condition for this effect. While high-intensity expressions generally promote travel intention, their impact is significantly enhanced among consumers with higher levels of emotional susceptibility. In summary, travel intention formation is an affect-driven process, where strong emotional intensity triggers biological and behavioral responses in consumers with high susceptibility.

Implications: These findings offer practical guidance for bloggers, marketers, and platforms. Bloggers should maintain a high-energy, passionate state to maximize their persuasive impact, as enthusiastic delivery is more effective than neutral reporting. Tourism marketers should prioritize collaborations with influencers who possess strong emotional vitality. Additionally, platform managers can optimize recommendation algorithms to identify consumers with high emotional susceptibility based on historical browsing data. By specifically targeting these sensitive segments with high-arousal emotional content, brands can significantly improve advertising efficiency and conversion rates. Overall, the research highlights the necessity of using emotional intensity as a strategic tool in the modern e-commerce landscape to capture consumer attention and drive meaningful behavioral changes.

Keywords: tourism short video, emotional expression, emotional susceptibility, travel intention

1 Introduction

With the rapid evolution of internet technology, tourism promotion has shifted from traditional television, radio, and brochures to short videos on social media platforms. Information presented in short videos has proven effective at arousing consumer curiosity, and compared to image and text advertisements, it is particularly effective at stimulating potential tourists' interest and driving travel decisions (姚延波 and 贾广美, 2021). According to statistics, since 2020, the year-over-year growth rates of tourism-related video volume and video sharing volume on the Douyin platform have reached 65% and 117%, respectively. As tourism products actively embrace short videos, research is urgently needed to

investigate how short videos influence travel intention, in order to guide bloggers to optimize video expression and create effective content that enhances tourism promotion effectiveness (Nguyen et al., 2024).

Regarding the impact of short videos on travel intention, numerous studies have examined this from two perspectives: video content characteristics and blogger characteristics (Gan et al., 2023; Le & Hancer, 2021). On one hand, some research has focused on content features, analyzing how narrative perspective (first-person vs. third-person), content focus (activities vs. scenery), and hashtag quantity affect travel intention (Gan et al., 2023). For example, Gan et al. (2023) found that using third-person perspective to introduce scenery was more effective than first-person, while using first-person perspective to introduce activities was more effective than third-person. On the other hand, from the blogger characteristics perspective, studies have explored the positive effects of cognitive dimensions such as reliability, authenticity, professionalism, and technical competence on travel intention (Le & Hancer, 2021). However, these studies have primarily focused on cognitive aspects (Dewantara et al., 2025), neglecting emotional factors. In reality, bloggers often exhibit different intensities of emotional expression when presenting tourism destinations—that is, a multimodal dynamic behavioral pattern of facial expressions, eye contact, vocal tone, body movements, gestures, and posture (吴冉 and 任衍具, 2011), ranging from enthusiastic and passionate to gentle and calm. In the tourism consumption domain, this primarily refers to positive emotional expression that aligns with its hedonic attributes (Tang et al., 2024). Does the intensity of emotional expression in short videos influence consumers' travel intention?

Although existing literature has examined how video emotional expression intensity affects consumers' emotional responses and advertising attitudes (Zhang et al., 2014), tourism consumption has unique characteristics: high involvement and typically planned rather than impulse purchases (Sotiriadis & Van Zyl, 2013). Therefore, whether emotional expression effectively influences travel intention in short videos—a low-involvement, short-exposure medium—requires further investigation.

When browsing short videos, consumers typically do so for entertainment purposes with limited cognitive resource investment and without formed travel plans (Jiang & Ma, 2024). According to the Heuristic-Systematic Model (HSM) of information processing, in such low-motivation, low-attention states, individuals tend to rely more on heuristic processing of persuasive information, meaning they prefer to conserve cognitive resources and make decisions based on more intuitive cues (Chaiken, 1980). Bloggers' strong emotional expressions (such as exaggerated facial expressions and movements) constitute such heuristic cues. Emotional contagion theory suggests that individuals have a tendency to automatically mimic others' facial expressions, vocal tones, and movements, causing their own emotional states to gradually converge with others. Therefore, when watching short videos with strong emotional expression, viewers experience stronger positive emotions. Positive emotions significantly promote hedonic

consumption like tourism and can enhance consumers' travel intention (Tang et al., 2024). Consequently, we hypothesize that in short videos, when bloggers display strong emotional expression, they trigger stronger travel intention in consumers (Hypothesis 1).

The key to emotional expression' s effect lies in whether the blogger' s emotions can be sensitively perceived by consumers (Van Kleef, 2009). Due to individual differences in emotional awareness and capture ability, the degree to which individuals are susceptible to others' emotions—emotional susceptibility—also varies (Trautmann et al., 2018). Therefore, the effect of emotional expression intensity on travel intention may differ among individuals with different emotional susceptibility levels. Research indicates that individuals with high emotional susceptibility are more easily influenced by external emotional cues and use them as a basis for their own behavioral decision-making (Trautmann et al., 2018). We therefore infer that consumers' emotional susceptibility moderates the effect of emotional expression intensity on travel intention. Compared to those with low emotional susceptibility, the effect of short-video emotional expression intensity on travel intention is stronger for consumers with high emotional susceptibility (Hypothesis 2).

This study aims to verify these hypotheses from both behavioral and neural levels. Experiment 1 employs self-report methods through online scenario experiments to preliminarily verify the effect of emotional expression and the boundary condition of emotional susceptibility at the behavioral level. Experiment 2 uses EEG to further test this effect, avoiding potential overestimation of emotion-induced behavioral effects that may occur with self-report methods (Li et al., 2018). According to frontal asymmetry theory (Harmon-Jone & Allen, 1998), activation of the left and right frontal cortices is associated with approach and avoidance systems, respectively—the former leads to approach motivation, while the latter leads to stimulus avoidance (Davidson, 1998). The alpha asymmetry index (frontal alpha asymmetry, FAA) is based on this theory, calculated as the difference between right and left frontal power (Sharpley et al., 2023), with higher FAA values associated with stronger approach tendencies. Research has demonstrated that FAA is significantly associated with consumers' approach tendencies toward products and is commonly used to reflect potential approach or purchase intention (Touchette & Lee, 2017). Accordingly, this study treats FAA as a neural indicator related to approach motivation, combines it with self-report data, and infers that bloggers' strong emotional expression triggers higher FAA indices, particularly among individuals with high emotional susceptibility.

2 Experiment 1: Behavioral Evidence

2.1 Participants

For this experimental design (two-factor between-subjects), following Gignac and Szodorai (2016), we set the expected medium effect size to 0.2, significance

level to 0.05, and statistical power to 0.80. Using G*Power 3.1, the required sample size was at least 199 participants. We recruited 235 participants through the Credamo survey platform. Seven participants were excluded for failing attention checks and five for excessive response time, leaving a final sample of 223 valid participants (59.70% female; $M_{\text{age}} = 25.06$; $SD_{\text{age}} = 10.21$ years).

2.2 Materials

The experimental materials consisted of two 30-second short videos introducing the Zhangjiajie Seventy-Two Strange Tower, featuring either weak or strong emotional expression. Both videos had identical voice-over text content, with emotional expression intensity manipulated through background music, voice-over tone, blogger facial expressions, and body language. Specifically, the weak emotional expression group had no background music, while the strong emotional expression group had pleasant and upbeat background music. We invited students with broadcasting experience to provide voice-overs: the weak expression group used a calm, gentle tone, while the strong expression group used an excited, enthusiastic tone. The weak expression group showed fewer facial expressions and movements from the blogger, while the strong expression group featured more smiles and running/jumping actions. To ensure the effectiveness of the emotional intensity manipulation, 74 participants were recruited and randomly assigned to rate the emotional expression level in the videos using a 7-point Likert scale adapted from Watson et al. (1988) with five items. Results confirmed the manipulation was successful ($M_{\text{strong}} = 6.08$, $SE = 0.09$; $M_{\text{weak}} = 4.85$, $SE = 0.21$; $t_{72} = -5.34$, $p < 0.001$, Cohen's $d = -1.31$, $BF_{10} = 36693.00$).

2.3 Experimental Design and Procedure

A 2 (emotional expression intensity: weak vs. strong) \times 2 (emotional susceptibility: low vs. high) between-subjects design was employed, with participants randomly assigned to watch either the weak or strong emotional expression video. After video playback, participants reported their travel intention (e.g., "I have the intention to purchase tickets for this scenic area" ; adapted from Dodds et al. (1991), 3 items, Cronbach's $\alpha = 0.89$) and emotional susceptibility (e.g., "When someone smiles at me, I feel happy" ; adapted from 杜建刚 and 范秀成 (2009), 8 items, Cronbach's $\alpha = 0.72$). Subsequently, participants rated the emotional expression intensity in the video, using the same items as the manipulation check (e.g., "To what extent does this video present happy emotions" , Cronbach's $\alpha = 0.94$). Finally, they reported their short-video platform tourism product purchase experience, general preference for tourism, gender, and age. All experimental variables were measured using 7-point Likert scales: 1 represented "strongly disagree" and 7 represented "strongly agree" .

2.4 Data Analysis and Results

Using emotional expression ratings as the dependent variable, an independent samples *t*-test revealed that participants perceived significantly higher emotional expression intensity in the strong expression video compared to the weak expression video ($M_{\text{weak}} = 4.44$, $SE = 0.14$; $M_{\text{strong}} = 5.78$, $SE = 0.07$; $t_{221} = 8.34$, $p < 0.001$, Cohen's $d = 1.10$, $BF_{10} = 4.34 \times 10^{11}$), confirming the effectiveness of the emotional expression intensity manipulation.

To examine the role of emotional susceptibility in the effect of tourism video emotional expression intensity on travel intention, the continuous emotional susceptibility variable was dichotomized at the mean, with participants above the mean labeled as high susceptibility and those below as low susceptibility. The high susceptibility group scored significantly higher than the low susceptibility group ($M_{\text{high}} = 6.01$, $SE = 0.03$; $M_{\text{low}} = 5.02$, $SE = 0.05$; $t_{221} = 18.15$, $p < 0.001$, Cohen's $d = 2.40$, $BF_{10} = 1.8 \times 10^{43}$), confirming valid grouping. The final groups consisted of 60 high-susceptibility and 50 low-susceptibility participants in the strong expression condition, and 61 high-susceptibility and 52 low-susceptibility participants in the weak expression condition. A 2 (emotional expression intensity: weak vs. strong) \times 2 (emotional susceptibility: low vs. high) between-subjects ANOVA was conducted with travel intention as the dependent variable. Levene's test was used to assess homogeneity of variance; for cases of heterogeneity, Welch's correction was applied (following Blanca Mena et al. (2017), though uncorrected *F* test results are still reported). Results revealed a significant main effect of emotional expression intensity, with the strong expression group showing higher travel intention ($M_{\text{weak}} = 5.21$, $SE = 0.13$; $M_{\text{strong}} = 5.91$, $SE = 0.07$; $F(1, 219) = 19.14$, $p < 0.001$, $\eta_p^2 = 0.08$, $BF_{10} = 3361.19$). The main effect of emotional susceptibility was not significant ($F(1, 219) = 0.03$, $p = 0.864$, $\eta_p^2 = 0.01$, $BF_{10} = 1.27$). The interaction between emotional expression intensity and emotional susceptibility was significant ($F(1, 219) = 9.13$, $p = 0.003$, $\eta_p^2 = 0.04$, $BF_{10} = 6.03$). Simple effects analysis indicated that for consumers with high emotional susceptibility, strong emotional expression in videos significantly enhanced travel intention ($M_{\text{weak}} = 4.98$, $SE = 0.22$; $M_{\text{strong}} = 6.11$, $SE = 0.09$; $F(1, 219) = 29.91$, $p < 0.001$, $\eta_p^2 = 0.12$, $BF_{10} = 2.14$). However, for consumers with low emotional susceptibility, emotional expression intensity did not significantly affect travel intention ($F(1, 219) = 0.845$, $p = 0.359$, $\eta_p^2 = 0.01$, $BF_{10} = 0.41$). These results remained robust after controlling for participants' short-video platform tourism product purchase experience and general preference for tourism.

These findings demonstrate that emotional expression in tourism videos can enhance consumers' travel intention, but this effect only emerges among consumers with high emotional susceptibility, supporting our hypothesis.

[FIGURE:1] The effect of emotional expression intensity and emotional susceptibility on travel intention

Figure 2

Figure 1: Figure 2

3 Experiment 2: Neural Evidence

3.1 Participants

For this experimental design (two-factor mixed design), following Herrando and Constantinides (2021) and their summary of research on approach motivation and FAA, we set the expected medium effect size to 0.25, significance level to 0.05. Additionally, in response to calls for improving research replicability (Brysbær, 2019) and considering research feasibility, statistical power was set to 0.9. Using G*Power 3.1, the required sample size was at least 46 participants. We recruited 50 university students, of which 3 were excluded due to excessive EEG artifacts from sweating or inability to concentrate, leaving 47 valid participants (51.06% female; $M_{\text{age}} = 22.04$; $SD_{\text{age}} = 2.40$ years). Participants signed informed consent forms after understanding the experimental procedure.

3.2 Experimental Procedure

This experiment employed a 2 (emotional expression intensity: weak vs. strong, within-subjects) \times 2 (emotional susceptibility: low vs. high, between-subjects) mixed design. The experimental procedure was programmed using E-Prime 3.0 software. Two scenic spots—Baili Azalea and Weizhou Island—were selected as experimental materials, each including high and low emotional expression videos, totaling four videos, each 30 seconds long. The manipulation method for emotional expression intensity was consistent with Experiment 1.

Before the experiment began, participants were instructed to adjust to a comfortable sitting posture, with eyes approximately 50 cm from the screen and direct line of sight at the center of the screen, while maintaining moderate laboratory lighting. During the formal experimental phase, participants were asked to imagine they were randomly browsing short videos on a short-video platform and, after each video ended, rate their travel intention for that scenic spot based on actual feelings. Video materials were presented through the Douyin short-video interface (i.e., including the interactive function area on the side, as shown in

) to maximize participants' sense of realism in daily short-video browsing. Travel intention was assessed with a single item ("I have the intention to purchase tickets for this scenic area"), with ratings made via keypad (1 = "strongly disagree" , 7 = "strongly agree"). The experiment was divided into high and low emotional expression blocks based on video emotional expression intensity, with block order randomized between participants. A 2-minute rest period was set between blocks to help participants calm their emotions. The entire experimental process recorded participants' EEG data.

Figure 2

Figure 2: Figure 2

EEG experimental procedure diagram

After the experiment, participants completed a post-test questionnaire rating the emotional expression intensity of a randomly selected set of high/low emotional expression videos from the experiment and filled out the emotional susceptibility scale, with items identical to Experiment 1. Finally, they reported their short-video platform tourism product purchase experience, general preference for tourism, gender, and age.

3.3 EEG Recording and Analysis

A NeuroScan Synamps 2 system (Compumedics NeuroScan Inc.) was used to collect EEG signals through a 64-channel Ag/AgCl electrode cap, with a gain of 500, sampling frequency of 500 Hz, and band-pass filter of 0.05-100 Hz. The reference electrode was placed on the left mastoid, and the ground electrode was located between FPz and Fz. Vertical electrooculogram (VEOG) was recorded from two electrodes above and below the left orbit, and horizontal electrooculogram (HEOG) was recorded from two electrodes 1.5 cm lateral to each eye. Electrode impedance was maintained below 10 k Ω .

EEG data preprocessing was conducted using MATLAB EEGLAB toolbox v14.1.1 (Delorme & Makeig, 2004). First, a 0.1-30 Hz band-pass filter was applied to the EEG data, and data were re-referenced to the average of the left and right mastoids. Subsequently, EEG data were segmented into analysis epochs from 1 second before to 30 seconds after each video onset. Next, after removing blink and other artifacts from EEG data through Independent Component Analysis (ICA), the CSD toolbox (spline flexibility parameter (m) = 4, smoothing parameter $\lambda = 1.0 \times 10^{-5}$, 50 iterations for all scalp locations) was used for Current Source Density (CSD) transformation. Thereafter, the alpha band (8-12 Hz) was analyzed, with 0-10 seconds selected as the time window (Hamzah & Abdalla, 2024), and prefrontal central electrodes (F4 and F3) were selected as regions of interest for average power analysis. Following Cohen (2014), single-trial EEG data were decomposed into time-frequency representations by multiplying each EEG trial's power spectrum with the power spectrum of complex Morlet wavelets ($e^{i2\pi tf} e^{-t^2/(2\sigma^2)}$), where t represents time, f represents frequency (1-30 Hz in 30 logarithmic steps), and σ was set to 3-10 logarithmic cycles. Inverse short-time Fourier transform was then applied. To ensure oscillatory power comparability across all conditions and participants, oscillatory power was normalized to decibel (dB) scale (conversion equation: dB power = $10 \times \log_{10}(\text{power}/\text{baseline})$), with baseline activity from -300 ms to -100 ms used for baseline correction to obtain alpha power values.

Given that the frontal alpha asymmetry index (FAA) primarily appears at F3

and F4, consistent with previous research, FAA index values were calculated by subtracting left alpha power from right alpha power (i.e., $\alpha_{F4} - \alpha_{F3}$) (Sharpley et al., 2023).

3.4 Behavioral and EEG Results

First, using emotional expression intensity ratings as the dependent variable, an independent samples t -test revealed that participants perceived significantly higher emotional expression intensity in strong expression videos compared to weak expression videos, confirming the effectiveness of the manipulation ($M_{\text{weak}} = 3.66$, $SE = 0.19$; $M_{\text{strong}} = 5.26$, $SE = 0.13$; $t_{45} = 4.88$, $p < 0.001$, Cohen's $d = 1.42$, $BF_{10} = 1798.00$).

3.4.1 Behavioral Results The continuous emotional susceptibility variable was dichotomized at the mean, with participants above the mean labeled as high susceptibility and those below as low susceptibility. The high susceptibility group scored significantly higher than the low susceptibility group ($M_{\text{high}} = 5.89$, $SE = 0.07$; $M_{\text{low}} = 4.94$, $SE = 0.13$; $t_{221} = 6.96$, $p < 0.001$, Cohen's $d = 1.98$, $BF_{10} = 6.75 \times 10^5$), confirming valid grouping. The final groups consisted of 27 high-susceptibility and 20 low-susceptibility participants. ANOVA was conducted with emotional expression intensity and emotional susceptibility as independent variables and travel intention as the dependent variable. Results showed that the main effect of emotional expression intensity was not significant ($M_{\text{weak}} = 4.64$, $SE = 0.20$; $M_{\text{strong}} = 4.95$, $SE = 0.18$; $F(1, 45) = 2.64$, $p = 0.111$, $\eta_p^2 = 0.06$, $BF_{10} = 1.08$). The main effect of emotional susceptibility was also not significant ($M_{\text{low}} = 4.53$, $SE = 0.25$; $M_{\text{high}} = 5.07$, $SE = 0.21$; $F(1, 45) = 2.72$, $p = 0.106$, $\eta_p^2 = 0.06$, $BF_{10} = 1.03$). The interaction between emotional expression intensity and emotional susceptibility was marginally significant ($F(1, 45) = 3.54$, $p = 0.067$, $\eta_p^2 = 0.07$, $BF_{10} = 1.26$), providing preliminary support for the hypothesis. In conjunction with Experiment 1 results, simple effects analysis was still conducted, revealing that for high-susceptibility consumers, short videos with strong emotional expression significantly enhanced travel intention ($M_{\text{weak}} = 4.72$, $SE = 0.05$; $M_{\text{strong}} = 5.41$, $SE = 0.04$; $F(1, 27) = 7.21$, $p = 0.010$, $\eta_p^2 = 0.14$, $BF_{10} = 4.14$). For low-susceptibility consumers, emotional expression intensity did not significantly affect travel intention ($F(1, 18) = 0.03$, $p = 0.867$, $\eta_p^2 = 0.01$, $BF_{10} = 0.24$). This pattern is consistent with Experiment 1 and generally supports our hypothesis.

3.4.2 EEG Results ANOVA with FAA index as the dependent variable revealed a significant main effect of emotional expression intensity, showing higher FAA values when participants watched strong emotional expression videos ($M_{\text{weak}} = -0.04$, $SE = 0.01$; $M_{\text{strong}} = 0.11$, $SE = 0.01$; $F(1, 45) = 8.65$, $p = 0.005$, $\eta_p^2 = 0.16$, $BF_{10} = 27.41$). The main effect of emotional susceptibility was not significant ($F(1, 45) = 0.33$, $p = 0.572$, $\eta_p^2 = 0.01$, $BF_{10} = 0.68$). The interaction between emotional expression intensity and emotional susceptibility

Figure 3

Figure 3: Figure 3

Figure 4

Figure 4: Figure 4

was significant ($F(1, 45) = 4.67$, $p = 0.036$, $\eta_p^2 = 0.09$, $BF_{10} = 2.18$). Simple effects analysis indicated that for high emotional susceptibility consumers, short videos with strong emotional expression significantly enhanced FAA indices ($M_{\text{weak}} = -0.08$, $SE = 0.01$; $M_{\text{strong}} = 0.19$, $SE = 0.01$; $F(1, 27) = 15.30$, $p < 0.001$, $\eta_p^2 = 0.25$, $BF_{10} = 41.27$). For low emotional susceptibility consumers, emotional expression intensity did not significantly affect FAA ($F(1, 18) = 0.27$, $p = 0.609$, $\eta_p^2 = 0.01$, $BF_{10} = 0.27$), as shown in

. No aforementioned effects were found in occipital alpha power values indicating attention level, and all results remained robust after controlling for participants' short-video platform tourism product purchase experience and general preference for tourism. Additionally, to more clearly demonstrate the spatial distribution of alpha band intensity,

shows topographic maps under each condition.

FAA indices under different emotional expression intensities and emotional susceptibility levels

Alpha wave topographic maps under different experimental conditions (color figure available in online version)

This study verifies the positive effect of emotional expression intensity in short videos on consumers' travel intention. Experiment 1 results indicate that consumers who watch short videos with strong emotional expression develop stronger travel intention, and this effect is more pronounced among consumers with high emotional susceptibility. This finding extends the role of emotional expression from traditional offline contexts to online contexts (Tsai, 2001). Experiment 2 combined behavioral and EEG methods, with EEG results showing that when consumers watch short videos with strong emotional expression, they exhibit stronger FAA indices related to approach motivation. Notably, the interaction effect in behavioral results was marginally significant, providing preliminary support for our research hypothesis in terms of trend.

This finding fills a gap regarding the effect of emotional expression on travel intention in short-video media. Unlike traditional consumption, tourism con-

Figure 3

Figure 5: Figure 3

Figure 4

Figure 6: Figure 4

sumption involves high involvement and strong planning. Therefore, investigating the effect of emotional expression in low-involvement, short-exposure media like short videos is of significant importance. Based on the Heuristic-Systematic Model, when consumers are in a low cognitive investment state of casual browsing, their decisions are more susceptible to heuristic cues, making emotional arousal rather than rational persuasion more likely to effectively stimulate users' latent needs. This study explores short-video effects from an affective dimension, demonstrating the positive significance of emotional expression—primarily positive emotional expression—in tourism short-video marketing. This finding is consistent with research on the effects of strong emotional expression in traditional contexts (Tsai, 2001).

This study identifies emotional susceptibility as a moderating variable, revealing the boundary conditions for the positive effect of emotional expression. Previous research has found that the effect of emotional expression varies depending on situational factors such as product type and message framing (Zhou et al., 2021). This paper, however, starts from individual factors, identifying the differential effect of emotional susceptibility—a personality trait—on emotional expression effectiveness: for individuals with high emotional susceptibility, short videos with strong emotional expression are more effective at stimulating travel intention. This is because high emotional susceptibility individuals are more easily influenced by external emotional cues and use them as a basis for their own behavioral decision-making (Trautmann et al., 2018).

Previous studies have primarily used self-report methods to examine the effect of expressers' emotions on consumption intention. For example, research investigating how emotional intensity expressed in online product reviews affects product evaluation measured product evaluation through questionnaires (Kim & Gupta, 2012). This study employs more objective EEG measurement methods, using the FAA component related to behavioral motivation to confirm the formation process of tourism motivation in online marketing contexts, providing neural evidence for the effect of bloggers' emotional expression on consumers' approach motivation. Through cross-method validation combining behavioral and neural measures, the robustness of conclusions is enhanced.

These findings offer practical implications for tourism marketing. For scenic area managers and businesses, when communicating on social media (commonly through short videos), they should prioritize collaboration with bloggers who display higher emotional arousal and more passionate personal styles to exert more positive influence on consumers who have not yet formed clear travel plans. For tourism bloggers, they should maintain a positive and high-arousal emotional state, demonstrating positive emotions. However, some limitations remain. First, the interaction effect in behavioral results of Experiment 2 was

marginally significant, suggesting some preliminary nature of our conclusions; future research should conduct replication tests to further enhance the robustness of findings. Second, although this study maximally controlled for alternative explanations in experimental design, FAA may be influenced by various emotional and cognitive processes such as emotional valence and cognitive load; future research could combine additional neural indicators and alter experimental paradigms for further validation. Additionally, this study design measured consumers' travel intention based on simulated short-video browsing scenarios; future research could consider designing field experiments to track consumers' actual travel behavior. Finally, this study did not account for potential influences of participants' residence location and travel experience; future research should further investigate these relevant factors.

Key Message: Emotional expression in short videos affects travel intention: when bloggers display high-intensity emotions, they are more likely to stimulate consumers' travel intention, and this effect is particularly pronounced among individuals with high emotional susceptibility.

References

- 杜建刚, 范秀成. (2009). 服务消费中多次情绪感染对消费者负面情绪的动态影响机制. *心理学报*, 41(04), 346-356.
- 吴冉, 任衍具. (2011). 微表情的启动效应研究. *应用心理学*, 17(3), 241-248.
- 姚延波, 贾广美. (2021). 社交媒体旅游分享对潜在旅游者冲动性旅游意愿的影响研究: 基于临场感视角. *南开管理评论*, 24(03), 72-82.
- Blanca Mena, M. J., Alarcón Postigo, R., Arnau Gras, J., Bono Cabré, R., & Bendayan, R. (2017). Non-normal data: Is ANOVA still a valid option? *Psicothema*, 29(4), 552-557.
- Brybaert, M. (2019). How many participants do we have to include in properly powered experiments? A tutorial of power analysis with reference tables. *Journal of Cognition*, 2(1), 16.
- Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5), 752-766.
- Cohen, M. X. (2014). *Analyzing neural time series data: Theory and practice*. MIT Press.
- Davidson, R. J. (1998). Affective style and affective disorders: Perspectives from affective neuroscience. *Cognition & Emotion*, 12(3), 307-330.
- Delorme, A., & Makeig, S. (2004). EEGLAB: An open source toolbox for analysis of single-trial EEG dynamics including independent component analysis. *Journal of Neuroscience Methods*, 134(1), 9-21.

- Dewantara M H, Jin X, Gardiner S. (2025). What makes a travel vlog attractive? Parasocial interactions between travel vloggers and viewers. *Journal of Vacation Marketing*, 31(1), 113-129.
- Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research*, 28(3), 307-319.
- Gan, J., Shi, S., Filieri, R., & Leung, W. K. (2023). Short video marketing and travel intentions: The interplay between visual perspective, visual content, and narration appeal. *Tourism Management*, 99, 104795.
- Gignac, G. E., & Szodorai, E. T. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences*, 102, 74-78.
- Harmon-Jones, E., & Allen, J. J. (1998). Anger and frontal brain activity: EEG asymmetry consistent with approach motivation despite negative affective valence. *Journal of Personality and Social Psychology*, 74(5), 1310-1316.
- Hamzah, H. A., & Abdalla, K. K. (2024). EEG-based emotion recognition systems: A comprehensive study. *Heliyon*, 10(10), e31485.
- Herrando, C., & Constantinides, E. (2021). Emotional contagion: A brief overview and future directions. *Frontiers in Psychology*, 12, 712606.
- Jiang, Q., & Ma, L. (2024). Swiping more, thinking less: Using TikTok hinders analytic thinking. *Journal of Psychosocial Research on Cyberspace*, 18(3), Article 1.
- Kim, J., & Gupta, P. (2012). Emotional expressions in online user reviews: How they influence consumers' product evaluations. *Journal of Business Research*, 65(7), 985-992.
- Le, L. H., & Hancer, M. (2021). Using social learning theory in examining YouTube viewers' desire to imitate travel vloggers. *Journal of Hospitality and Tourism Technology*, 12(3), 512-532.
- Li, S., Walters, G., Packer, J., & Scott, N. (2018). A comparative analysis of self-report and psychophysiological measures of emotion in the context of tourism advertising. *Journal of Travel Research*, 57(8), 1078-1092.
- Nguyen, P. M. B., Pham, L. X., Tran, D. K., & Truong, G. N. T. (2024). A systematic literature review on travel planning through user-generated video. *Journal of Vacation Marketing*, 30(3), 553-581.
- Sharpley, C. F., Evans, I. D., Bitsika, V., Arnold, W. M., Jesulola, E., & Agnew, L. L. (2023). Frontal alpha asymmetry argues for the heterogeneity of psychological resilience. *Brain Sciences*, 13(9), 1354.
- Sotiriadis, M. D., & Van Zyl, C. (2013). Electronic word-of-mouth and online reviews in tourism services: The use of Twitter by tourists. *Electronic Commerce Research*, 13(1), 103-124.

- Tang, Y. T., Ruan, W. Q., Zhang, S. N., Li, X., & Zhou, Y. (2024). What makes you palpitate with excitement? The differentiation effect and mechanism of message appeal in tourism short videos. *Journal of Travel Research*, 64(4), 767-782.
- Touchette, B., & Lee, S.-E. (2017). Measuring neural responses to apparel product attractiveness: An application of frontal asymmetry theory. *Clothing and Textiles Research Journal*, 35(1), 3-15.
- Trautmann, S., Reineboth, M., Trikojat, K., Richter, J., Hagenaars, M. A., Kanske, P., & Schäfer, J. (2018). Susceptibility to others' emotions moderates immediate self-reported and biological stress responses to witnessing trauma. *Behaviour Research and Therapy*, 110, 55-63.
- Tsai, W.-C. (2001). Determinants and consequences of employee displayed positive emotions. *Journal of Management*, 27(4), 497-512.
- Van Kleef, G. A. (2009). How emotions regulate social life: The emotions as social information (EASI) model. *Current Directions in Psychological Science*, 18(3), 184-188.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Zhang, H., Sun, J., Liu, F., & G. Knight, J. (2014). Be rational or be emotional: Advertising appeals, service types and consumer responses. *European Journal of Marketing*, 48(11/12), 2105-2126.
- Zhou, Y., Zheng, D., Chen, X., & Yu, Y. (2021). A study on the influence of the facial expressions of models on consumer purchase intention in advertisements for poverty alleviation products. *Personality and Individual Differences*, 172, 110578.

Appendix 1: Experiment 1 Questionnaire

Experiment 1 questionnaire scale items

Construct	Items	Source	Cronbach' s alpha
Travel Intention	I have the intention to purchase tickets for this scenic area; The likelihood that I would purchase tickets for this scenic area is high; When I need to buy tickets for travel, I would consider this scenic area	Dodds et al. (1991)	0.89

Construct	Items	Source	Cronbach' s alpha
Emotional Susceptibility	When someone smiles at me, I feel happy; Seeing others in low spirits also makes me feel down; When I see touching scenes, I find it hard to contain my excitement; I am very sensitive in detecting others' emotional changes; Seeing provocative faces immediately makes me angry; Being with people I like makes me happy; Seeing intense arguments makes my heart race	杜建刚 and 范秀成 (2009)	0.72

Construct	Items	Source	Cronbach' s alpha
Emotional Expression Intensity	To what extent does this video present happy emotions; To what extent does this video present pleasant emotions; To what extent does this video present excited emotions; To what extent does this video present thrilling emotions; To what extent does this video present active emotions	Watson et al. (1988)	0.94

Appendix 2: Experiment 2 Stimulus Materials

Screenshots of Baili Azalea group experimental materials
Screenshots of Weizhou Island group experimental materials

Figure 5

Figure 7: Figure 5

Figures

Source: ChinaXiv – Machine translation. Verify with original.