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EDITED BY

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REVIEWED BY

Roberta De Cicco,
University of Urbino Carlo Bo, Italy
Daru Asih,
Mercu Buana University, Indonesia

*CORRESPONDENCE

Wengen Deng
✉ 040924@hainnu.edu.cn

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How the need for cognition influences film viewing intentions through narrative transportation: the moderating role of emotional contagion in short-video marketing

Lei Liu^{1,2} and Wengen Deng^{2*}

¹School of Journalism, Communication, Film and Television, Hainan Normal University, Haikou, Hainan Province, China, ²School of Psychology, Hainan Normal University, Haikou, Hainan Province, China

This study investigates how individual cognitive and affective traits shape viewers' intentions to watch films promoted through short-video platforms. Drawing on narrative transportation theory and the Extended Transportation-Imagery Model, we propose that need for cognition influences viewing intention directly and indirectly through narrative transportation, with emotional contagion moderating this indirect pathway. Data were collected from 362 Chinese users of Douyin and Kwai through an online survey and analyzed using structural equation modeling. The results show that individuals with higher need for cognition experience stronger narrative transportation and demonstrate higher intention to watch the promoted film. Narrative transportation serves as a significant mediator, revealing its central role in translating cognitive engagement into behavioral intention. Emotional contagion further strengthens the relationship between narrative transportation and intention, indicating that viewers who are more susceptible to emotional synchrony are more likely to convert immersive experiences into action. These findings extend narrative persuasion theory to short-form media and highlight the joint contributions of cognition and emotion in digital film marketing. The study offers practical implications for audience segmentation and the design of personalized promotional content on short-video platforms.

KEYWORDS

narrative transportation, emotional contagion, need for cognition, short-video marketing, moderated mediation

Introduction

The proliferation of short-video platforms, such as Douyin, Kwai, TikTok, and Instagram Reels, has fundamentally reshaped the landscape of film marketing (Zhuang, 2021; Ma et al., 2024). In response, major film studios have significantly increased their investment in producing and disseminating short promotional videos. These videos are designed not only to capture fleeting audience attention but also to stimulate deep engagement and motivate viewing behavior. However, within an increasingly saturated media environment, the psychological mechanisms that determine the effectiveness of these promotional strategies remain inadequately understood (Yang and Kang, 2021; Kubrak and Starostina, 2023). While empirical studies have demonstrated a stable positive correlation between exposure to short-form promotional content and box office performance (Jun and Wu, 2021; Xiong et al., 2021; Zhou, 2024), the specific cognitive and affective processes that underpin this link require further elaboration.

Existing research in media psychology has established narrative transportation—a state of immersive engagement into a story world—as a critical mechanism for persuasion (Green and Brock, 2000; Van Laer et al., 2014). Within audiovisual contexts, narrative transportation has been linked to positive emotional responses and an increased likelihood of generating word-of-mouth promotion (Wang and Tang, 2021; Dong et al., 2023). Despite these advances, significant gaps persist. Few studies have explicitly investigated the antecedent factors and boundary conditions of narrative transportation within the specific context of short-video promotions (Kubrak and Starostina, 2023; Matiza and Slabbert, 2024). Specifically, the role of individual differences, such as need for cognition—an individual's stable motivation to engage in and enjoy effortful cognitive activities (Cacioppo et al., 1996)—remains underexplored as a driver of transportation. Similarly, emotional contagion—the tendency to automatically synchronize emotions with others (Hatfield et al., 1994; Wei et al., 2023)—may serve as a crucial moderator, potentially enhancing or inhibiting the persuasive pathway from narrative engagement to behavioral intention.

To address these research gaps, this study proposes and tests a moderated mediation model grounded in the extended transportation-imagery model (Van Laer et al., 2014). This study therefore addresses the following research question: How do need for cognition and emotional contagion interact via narrative transportation to influence viewers' intentions to watch films promoted through short-video platforms? We investigate the mediating role of narrative transportation in the relationship between need for cognition and the intention to watch a film. Furthermore, we explore emotional contagion as a moderator of the relationship between transportation and viewing intention.

This paper is structured as follows. First, we review the literature on narrative transportation theory, need for cognition, and emotional contagion to develop our hypotheses. We then describe our methodology, which involves a survey of 362 Chinese users of short-video platforms, analyzed using structural equation modeling and bootstrap regression analysis. After presenting the results, we discuss their theoretical and practical implications, acknowledge the study's limitations, and suggest directions for future research.

The findings contribute to the theoretical understanding of narrative persuasion in new media formats by integrating cognitive and affective individual differences into a unified framework. Furthermore, they offer practical, evidence-based insights for filmmakers and marketers seeking to optimize short-video content. By delineating the interconnected roles of cognitive engagement, narrative immersion, and emotional transfer, this research provides a more nuanced blueprint for influencing consumer behavior in the digital attention economy, with implications that extend beyond the Chinese context to global short-video platforms. This study explicitly integrates cognitive (need for cognition) and affective (emotional contagion) processes throughout the theoretical framing. We emphasize that transportation operates as a bridge where cognitive engagement transforms into affective immersion, demonstrating how thought and emotion jointly drive persuasion in short-video contexts.

Literature review

Narrative transportation theory

The concept of narrative transportation, introduced by Green and Brock (2000), provides a foundational framework for understanding

how narratives exert persuasive effects. Transportation is defined as a state of immersive engagement, characterized by a “convergence of attention, imagery, and feelings,” wherein an individual becomes “lost in a story” (Green and Brock, 2000, p. 701). This immersive experience serves as a key mechanism through which narratives influence beliefs, attitudes, and intentions, primarily by reducing counter-arguing and enhancing the perceived realism and applicability of story outcomes (Green and Brock, 2000; Appel and Richter, 2007).

The theory has been extensively applied across diverse fields, particularly in marketing and consumer research. A substantial body of evidence demonstrates that narrative transportation enhances brand evaluations, increases positive word-of-mouth (PWOM), and strengthens purchase intentions (Van Laer et al., 2014; Wang and Calder, 2009). For instance, within a film context, Wang and Tang (2021) found that transportation into a movie narrative significantly heightened emotional responses—such as pleasure and arousal—which were positively correlated with PWOM. Notably, research indicates that the efficacy of narrative transportation is consistent across various media formats; for example, the brevity and audiovisual nature of short videos can effectively induce transportation through compelling storytelling and emotional resonance (Yang and Kang, 2021; Dong et al., 2023).

Building upon this foundational work, Van Laer et al. (2014) conducted a meta-analysis, leading to the development of the Extended Transportation-Imagery Model (ETIM). This model synthesizes a wide array of antecedents (e.g., story, audience, and contextual factors) and consequences of transportation, proposing that narrative persuasion depends on the audience's cognitive, affective, and imagery-based immersion into the narrative world. While this model offers a comprehensive framework, the majority of research has been conducted in Western contexts and with longer narrative forms (Wang and Tang, 2021). The application of this model to short-form video content—characterized by brevity, high sensory impact, and prevalence on platforms such as Douyin and Kwai—remains underexplored, particularly regarding how individual differences shape transportation in this unique context (Kubrak and Starostina, 2023; Matiza and Slabbert, 2024). This study directly applies this extended model to this novel context, seeking to validate and refine its core propositions within the fast-paced domain of short-video promotion.

Need for cognition as an antecedent to transportation

An individual's dispositional motivation to engage in and enjoy effortful cognitive activities is a key factor that may influence their response to narratives. Termed the need for cognition (NFC), this construct is defined as “the tendency for an individual to engage in and enjoy thinking” (Cacioppo et al., 1996, p. 197). Individuals high in NFC actively seek, acquire, and reflect on information, relishing complex problem-solving tasks. In contrast, those low in NFC tend to rely more on heuristic cues or emotional signals when forming judgments (Petty and Cacioppo, 1984; Liu and Nesbit, 2023).

From a theoretical standpoint, individuals with high NFC may find condensed short-video narratives especially engaging because they offer a cognitive challenge within a limited duration. Such viewers may derive enjoyment from piecing together implied story elements, identifying causal relations, and inferring subtext or

symbolism embedded within brief narratives. This aligns with the notion that high NFC individuals experience a unique form of cognitive absorption—a blend of mental effort and interpretive pleasure—when processing compact yet information-rich content. Consequently, short-form storytelling may stimulate deep engagement by appealing to these individuals' intrinsic motivation to make sense of complex ideas, thereby facilitating a state of narrative transportation.

An individual's dispositional motivation to engage in and enjoy effortful cognitive activities is a key factor that may influence their response to narratives. Termed the need for cognition (NFC), this construct is defined as “the tendency for an individual to engage in and enjoy thinking” (Cacioppo et al., 1996, p. 197). Individuals high in NFC actively seek, acquire, and reflect on information, relishing complex problem-solving tasks. In contrast, those low in NFC tend to rely more on heuristic cues, superficial attributes, or emotional signals when forming judgments (Petty and Cacioppo, 1984; Liu and Nesbit, 2023).

The relationship between NFC and narrative transportation is nuanced and contingent on context. While individuals high in NFC might be expected to deeply process a narrative's content, potentially leading to greater transportation, they may also be more critical of its logical consistency, which could hinder immersion (Kubrak and Starostina, 2023). Conversely, those low in NFC might be more easily swept away by a narrative's emotional and visual elements without such critical appraisal. This tension is illustrated by Green et al. (2008), who found that NFC had a marginally significant effect on transportation that depended on the mode of presentation; high-NFC individuals experienced greater transportation through text-based narratives, while low-NFC individuals were more transported by visual media. This finding directly aligns with the audiovisual, sensation-rich context of short-form videos, suggesting that need for cognition is a significant yet complex antecedent that can drive an audience's immersion into a promotional video's narrative world. This study aims to clarify this relationship by investigating NFC as a direct predictor of transportation within the short-video format.

Emotional contagion as an affective amplifier

Emotional contagion is conceptualized in this study as a distinct, stable individual difference rather than an intrinsic component of narrative transportation. It reflects the enduring tendency of individuals to automatically synchronize their emotional states with those of others through subconscious mimicry of verbal and non-verbal cues (Hatfield et al., 1994; Doherty, 1997). This conceptual clarification distinguishes emotional contagion from temporary affective immersion. While transportation represents a transient, story-induced psychological state, emotional contagion is an enduring predisposition that moderates how intensely individuals internalize emotions during such experiences.

In mediated contexts, such as watching a short video, this dispositional trait determines how strongly viewers “catch” the on-screen characters' emotions, thereby amplifying or attenuating the emotional resonance of the experience (Coplan, 2006; Wei et al., 2023). Viewers high in emotional contagion are more likely to experience heightened empathy and synchrony with characters' expressions, vocal tones, and postures, whereas those low in contagion remain more affectively detached. Accordingly, we posit

that emotional contagion operates as a moderator of the transportation–intention pathway rather than a component of transportation itself. This refined conceptualization strengthens the theoretical contribution by aligning emotional contagion with stable affective individual differences that shape narrative persuasion effects.

Emotional contagion is the tendency to automatically synchronize one's own emotions with those of others through the subconscious mimicry of verbal and non-verbal cues (Hatfield et al., 1994). It is a foundational process of emotional transfer that operates outside conscious awareness, leading individuals to “catch” the emotions of those around them (Coplan, 2006; Wei et al., 2023). In mediated contexts, such as watching a short video, this process can occur with on-screen characters or influencers, as the audience mimics their expressions, vocal tones, and postures, subsequently experiencing congruent emotional states (Howard and Gengler, 2001; Moorthy et al., 2022; Hofmann et al., 2024).

Extensive research has shown that visual content is a potent trigger for emotional contagion, which in turn can significantly affect audience attitudes, engagement, and sharing behaviors (Moorthy et al., 2022; Kramer et al., 2014; Brady et al., 2019). The strength of this contagion is moderated by individual susceptibility, with some people being inherently more prone to “catch” emotions than others (Doherty, 1997). Within the narrative transportation framework, emotional contagion has traditionally been viewed as a key component of the affective involvement dimension (Van Laer et al., 2014). However, we posit a more dynamic role: emotional contagion acts not just as a component of transportation but as a critical moderator that amplifies its persuasive effect. When a viewer is highly susceptible to emotional contagion, the emotions conveyed in a short video are more likely to be internalized and intensify the immersive experience, thereby strengthening the link between feeling transported by the narrative and forming a consequent intention to act (Wei et al., 2023; Zhang et al., 2022). When emotional contagion is low, this pathway is expected to be weaker. This proposition integrates discrete theoretical domains, bridging narrative theory with recent advances in affective science and social media research (Ferrara and Yang, 2015).

Hypotheses development

Based on this integrated theoretical foundation, the present study constructs a moderated mediation model (Figure 1). We position need for cognition as an antecedent to narrative transportation, proposing that an individual's inherent motivation to process information deeply will influence their level of immersion in a short promotional video. Individuals with a high NFC are more likely to engage thoughtfully with a narrative's structure and details, potentially leading to deeper cognitive absorption and immersion (Liu and Nesbit, 2023; Cacioppo et al., 1996). This deeper engagement is posited to directly increase their intention to seek out the full narrative experience, i.e., to watch the movie. Therefore, we hypothesize:

H1: Need for cognition is positively related to the intention to watch a particular movie.

Furthermore, we propose that the influence of need for cognition on viewing intention is not direct but operates primarily through the psychological mechanism of narrative transportation. A high NFC

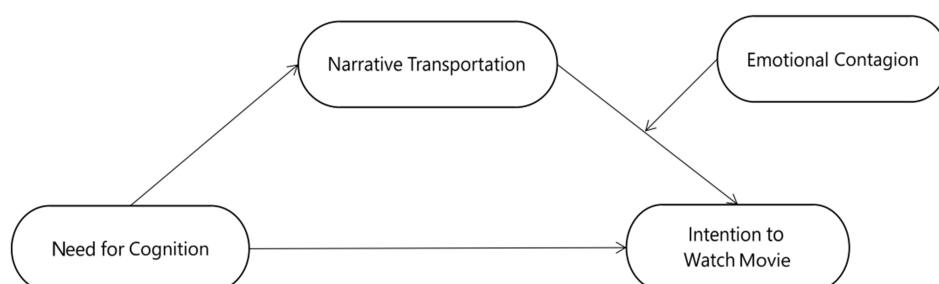


FIGURE 1
Proposed research model.

drives individuals to become more deeply “lost” in a story (Green et al., 2008), and it is this state of transportation that subsequently fosters a stronger desire to continue the experience by watching the film. This mediating pathway aligns with findings that narrative transportation is a key driver of positive behavioral outcomes in marketing, such as word-of-mouth and purchase intention (Wang and Tang, 2021; Van Laer et al., 2014). Thus, we hypothesize:

H2: Narrative transportation mediates the relationship between need for cognition and the intention to watch a movie.

Finally, we clarify that emotional contagion is not treated as a separate, co-occurring construct but as a moderating affective mechanism that amplifies the persuasive pathway between transportation and behavioral intention but as a critical moderator of the relationship between transportation and behavioral intention. While transportation creates immersion, emotional contagion determines the affective potency of that immersion. We argue that the emotional resonance facilitated by contagion is essential for translating narrative immersion into a concrete desire to act. When a viewer is highly susceptible to emotional contagion, the emotions conveyed by characters in the short video (e.g., joy, excitement, suspense) are more readily internalized (Wei et al., 2023; Hatfield et al., 1994). This emotional synchronization amplifies the immersive experience, making the narrative feel more personal and impactful, thereby strengthening the link between being transported and forming a subsequent intention to watch the movie. Conversely, when emotional contagion is low, the pathway from transportation to intention is expected to be weaker, as the experience lacks this affective catalyst. This proposition is supported by research showing that emotional contagion significantly enhances engagement and persuasion in mediated contexts (Hofmann et al., 2024; Moorthy et al., 2022). This leads to our final hypothesis:

H3: Emotional contagion moderates the relationship between narrative transportation and the intention to watch a movie, such that the relationship is stronger when emotional contagion is high.

Materials and methods

Participants and procedure

Data were collected via an online survey distributed to users of short-video platforms in China between December 2023 and January

2024. A total of 423 responses were received. After excluding participants who reported never having watched short video content on Douyin or Kwai, 362 valid responses were retained for analysis. The sample consisted of 93 men (25.7%) and 269 women (74.3%). Participants ranged in age from 18 to 50 years ($M = 22.08$, $SD = 6.42$). The vast majority ($n = 316$, 87.3%) held a college or university degree. Participants were recruited through a combination of platform-based invitations on Douyin and Kwai communities and postings on university social media groups. A convenience sampling approach was adopted. Respondents who completed the survey received a small monetary incentive equivalent to approximately 10 RMB, delivered via WeChat Pay.

All participants provided informed consent online before proceeding with the survey. The study protocol was reviewed and approved by the Hainan Normal University Technology Ethics Committee prior to data collection. The research complied with the ethical standards of the Declaration of Helsinki and the ethical guidelines for human research in social sciences. Anonymity and confidentiality were strictly maintained, and no personally identifiable or sensitive information was collected. Participants were informed that their participation was voluntary and that they could withdraw at any time without penalty. To ensure data quality, an attention-check item (e.g., ‘Please select Strongly Agree for this item’) was embedded midway through the questionnaire; responses failing this check were excluded from analysis.

Measures

All constructs were measured using established scales adapted to the context of short-form video marketing. Participants were instructed to recall and base their responses on the most recent short promotional video for a movie they had viewed on Douyin or Kwai. This approach was chosen to enhance ecological validity by capturing responses to real-world content. All items were translated from English to Mandarin Chinese using a standard back-translation procedure to ensure conceptual equivalence (Table 1). Responses were collected on Likert scales as specified below. Sample items are provided for each scale to enhance transparency. While this recall-based approach enhances ecological validity, it introduces potential recall bias because participants may inaccurately remember or reconstruct their viewing experience. Additionally, because participants recalled heterogeneous videos differing in content and style, response comparability is limited. Individual algorithmic recommendations may also have shaped exposure patterns, introducing systematic bias. These limitations are acknowledged and discussed further in the Limitations section.

Narrative Transportation. Transportation was measured using four items from the Ad and Media Transportation Scale (Wang and Calder, 2009), adapted to specify “short video.” Participants rated their agreement on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Cronbach’s α for this scale was 0.912.

Intention to Watch Movie. Behavioral intention was assessed with three items adapted from Putrevu and Lord (1994). Responses were captured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Cronbach’s α was 0.944.

Emotional Contagion. The 12-item Emotional Contagion Scale (Doherty, 1997) was used to measure individual susceptibility to catching emotions from others. Responses were recorded on a 5-point Likert scale (1 = never, 5 = always). Cronbach’s α was 0.932.

Need for Cognition. The short form of the Need for Cognition scale (Cacioppo and Petty, 1984) was administered using six items rated on a 6-point Likert scale (1 = extremely uncharacteristic of me, 6 = extremely characteristic of me). Cronbach’s α was 0.887.

Demographics and Viewing Habits. Participants also reported their gender, age, education level, average weekly frequency of watching movie-related short videos, and typical duration per viewing session.

Results

Validation of the dimensional structure of the questionnaires

First, confirmatory factor analysis (CFA) was conducted using MPLUS 8.1 to validate the dimensional structures of the narrative transportation, emotional contagion, and cognitive need questionnaires. For narrative transportation, cognitive need, and intention to watch movie, single-factor models were constructed. For the emotional contagion questionnaire, a second-order factor model was established, in which four first-order factors (sadness, happiness, love, and anxiety contagion) loaded onto a single second-order factor of emotional contagion. The model-data fit was then assessed for each of these models.

The results of the model-data fit tests are presented in Table 2. As shown in the table, all three questionnaires exhibited CFI and TLI indices greater than 0.90, while RMSEA and SRMR values were below 0.10 and less than 5. These results indicate an acceptable fit between the models and the data. Specifically, the model for viewing intention was a saturated model, demonstrating a perfect fit. Among the

TABLE 1 Survey instruments and sources.

Variable	Items	Sources
Short video transportation	1. I felt caught up in the content of the short video.	Wang and Calder (2009)
	2. Watching the short video was relaxing.	
	3. My mind was only on the short video and not on other things.	
	4. Short video captured my attention.	
Emotional contagion	1. If someone I’m talking with begins to cry, I get teary-eyed	Doherty (1997)
	2. I clench my jaws, and my shoulders get tight when I see the angry faces on the news.	
	3. Listening to the shrill screams of a terrified child in a dentist’s waiting room makes me feel nervous.	
	4. I get filled with sorrow when people talk about the death of their loved ones.	
	5. When I look into the eyes of the one I love, my mind is filled with thoughts of romance.	
	6. It irritates me to be around angry people.	
	7. Watching the fearful faces of victims on the news makes me try to imagine how they might be feeling.	
	8. I melt when the one I love holds me close.	
	9. I tense when overhearing an angry quarrel.	
	10. I sense my body responding when the one I love touches me.	
	11. I notice myself getting tense when I’m around people who are stressed out.	
	12. I cry at sad movies.	
Intention to watch a movie	1. I plan to purchase movie tickets to watch the movie promoted in the video through this advertisement.	Putrevu and Lord (1994)
	2. If necessary, I am willing to purchase a ticket to watch the movie promoted in this video.	
	3. It is very likely that I will purchase tickets to watch the movie promoted in the video through this advertisement.	
Cognitive needs	1. I find satisfaction in deliberating hard and for long hours.	Cacioppo and Petty (1984)
	2. Learning new ways to think does not excite me very much.*	
	3. I prefer my life to be filled with puzzles that I must solve.	
	4. The notion of thinking abstractly is appealing to me.	
	5. I would prefer a task that is intellectual, difficult, and important but does not require much thought.*	
	6. I usually end up deliberating about issues even when they do not affect me personally.	

*Reverse scoring was used for this item.

remaining questionnaires, the narrative transportation model showed the best fit, followed by cognitive need, while the emotional contagion model exhibited a slightly poorer fit.

Common method bias test

To assess common method bias, this study performed confirmatory factor analyses comparing a four-factor correlated model (with the factors being narrative transportation, cognitive need, intention to watch movie, and emotional contagion) against a single-factor model. The model-data fit indices are presented in Table 3. The results indicated that the four-factor correlated model demonstrated a good fit to the data, whereas the single-factor model showed a poor fit. This suggests that common method bias was not a substantial concern in this study.

Validity and reliability of the scales

The study further examined the Average Variance Extracted (AVE), Composite Reliability (CR), Cronbach's alpha coefficients, and inter-construct correlations within the four-factor correlated model. The results are presented in Table 4. As shown in the second column of Table 4, the Average Variance Extracted (AVE) values for all four factors exceeded 0.50, indicating high convergent validity of the respective scales. Columns 5 to 8 demonstrate that the square roots of the AVE for each factor were greater than the correlation coefficients between that factor and any other factor, supporting the discriminant validity of the four scales. Regarding reliability, both the Composite Reliability (CR) and Cronbach's alpha values for all factors exceeded 0.80, demonstrating high reliability for the four questionnaires.

Results of difference tests

Table 5 presents the results of the difference tests for narrative transportation and intention to watch movie across gender, the average frequency of watching film-related short videos per week, and

the duration of each viewing session. The key findings from Table 5 are as follows:

- (1) No significant gender differences were found in either narrative transportation or intention to watch movie.
- (2) A significant difference in narrative transportation scores was observed across different average weekly viewing frequencies. Post-hoc analyses revealed a trend wherein scores in narrative transportation increased with higher viewing frequency.
- (3) Significant differences were also identified in the scores of both narrative transportation and intention to watch movie across different viewing durations per session. Similarly, longer viewing durations were associated with higher scores in both constructs.

Additionally, correlation analyses were conducted to examine the relationship between age and the two key variables. The results indicated that age was not significantly correlated with narrative transportation ($r = -0.026, p > 0.05$) but showed a significant negative correlation with intention to watch movie ($r = -0.148, p < 0.01$).

Test of the moderated mediation effect

In accordance with the proposed model and the results of the preliminary difference tests, this study employed Structural Equation Modeling (SEM) to test a moderated mediation model. The model specified need for cognition as the independent variable, narrative transportation as the mediator, and intention to watch movie as the dependent variable. Emotional contagion was included as the moderator, regulating the effect of narrative transportation on intention to watch movie. Additionally, age, viewing frequency, and viewing duration were included as covariates.

Prior to the analysis, the indicators for narrative transportation and emotional contagion were mean-centered. Following this, four interaction terms were created and subsequently mean-centered to serve as indicators for the latent interaction construct. Furthermore, viewing frequency and duration were dummy-coded, with "rarely or never" and "less than 30 min" serving as the reference groups, respectively.

TABLE 2 Model-data fit indices of the four questionnaires.

Variables	χ^2	df	χ^2/df	CFI	TLI	RMSEA	SRMR
Narrative transportation	3.628	2	1.814	0.999	0.996	0.047	0.008
Need for cognition	29.865	9	3.318	0.982	0.969	0.080	0.024
Intention to Watch Movie ^a	0	0	—	1.00	1.00	0	0
Emotional contagion	206.873	50	4.137	0.955	0.940	0.093	0.051

^aThe intention to watch movie model is a saturated model, indicating perfect model fit.

TABLE 3 Model-data fit results for common method bias test.

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA	SRMR
Four-factor correlated model ^b	274.297	113	2.427	0.963	0.955	0.063	0.048
Single-factor model	2685.412	119	22.567	0.404	0.319	0.244	0.165

^bThe indicators for narrative transportation, need for cognition, and intention to watch movie are item scores; emotional contagion indicators are aggregated mean scores.

TABLE 4 Average variance extracted (AVE), Composite reliability (CR), Cronbach's alpha coefficients, and correlations for each factor.

Variables	AVE	CR	α	1	2	3	4
1. Need for cognition	0.575	0.889	0.887	0.758 ^c			
2. Narrative transportation	0.738	0.918	0.912	0.142	0.859		
3. Emotional contagion	0.612	0.862	0.932	0.453	0.330	0.782	
4. Intention to watch movie	0.851	0.945	0.944	0.362	0.426	0.442	0.922

^cThe values displayed on the diagonal of the correlation matrix represent the square roots of the Average Variance Extracted (AVE). The fully standardized factor loadings for each construct are presented: Need for Cognition: 0.703, 0.672, 0.871, 0.872, 0.690, 0.712. Narrative Transportation: 0.913, 0.915, 0.898, 0.690. Emotional Contagion (on the four item parcels): 0.853, 0.846, 0.687, 0.730. Intention to Watch Movie: 0.892, 0.925, 0.950.

TABLE 5 Tests of differences in narrative transportation and viewing intention across different levels of the three categorical variables.

Group	Narrative transportation		Intention to watch movie	
	M \pm SD	Test results	M \pm SD	Test results
1. Gender				
a Male	21.14 \pm 5.66	$t = 1.277, p = 0.202 > 0.05$	9.89 \pm 3.42	$t = 0.020, p = 0.984 > 0.05$
b Female	20.30 \pm 5.35		9.88 \pm 3.18	
2. Frequency of watching short videos				
a 4 days or more per week	21.74 \pm 4.90	$F = 15.185, p < 0.001$, among a > b, c, d, b > d	10.18 \pm 3.39	$F = 2.345, p = 0.073 > 0.05$
b 2–3 days per week	19.64 \pm 4.79		9.73 \pm 2.95	
c 1 day per week	18.19 \pm 5.23		8.96 \pm 2.44	
d Basically not used	16.72 \pm 6.54		9.11 \pm 3.02	
3. Duration of each watching short video				
a 2 h and above	22.89 \pm 4.46	$F = 20.034, p < 0.001$, among a > b, c, d; b,c > d	10.43 \pm 3.67	$F = 3.181, p = 0.024 < 0.05$, among a > d
b 1 h ~ 2 h	20.97 \pm 4.69		10.19 \pm 2.92	
c 30 min ~ 1 h	20.35 \pm 4.71		9.44 \pm 3.18	
d within 30 min	17.45 \pm 6.14		9.19 \pm 2.95	

The model-data fit indices suggested a good fit to the data: $\chi^2(318) = 649.899$, RMSEA = 0.054, CFI = 0.935, TLI = 0.927, SRMR = 0.064. The results of the structural model are presented in Figure 2.

As illustrated in Figure 2:

- (1) While the frequency and duration of viewing short-form movie videos did not directly affect viewing intention, they exerted a significant influence on narrative transportation. Specifically, audiences who watched short-form movie videos more than 4 days per week and/or for more than 30 min per session scored significantly higher on narrative transportation than those who rarely watched or watched for less than 30 min.
- (2) The age of the respondents had a significant negative impact on intention to watch movie, indicating that viewing intention decreased with age among the adult audience.
- (3) Need for cognition demonstrated a significant direct and positive effect on intention to watch movie. Furthermore, it also positively influenced narrative transportation, which, in turn, was a significant positive predictor of intention to watch movie. This pattern of relationships confirms the significant mediating role of narrative transportation.
- (4) The interaction term between narrative transportation and emotional contagion had a significant positive effect on

intention to watch movie, confirming a significant moderating effect of emotional contagion.

The study further probed the simple slopes of narrative transportation on intention to watch movie at different levels of emotional contagion. When emotional contagion was set at -1 SD (one standard deviation below the mean), the slope of narrative transportation was significant ($\beta = 0.186, p < 0.01$). When emotional contagion was set at $+1$ SD (one standard deviation above the mean), the slope was also significant and stronger ($\beta = 0.291, p < 0.01$). This pattern indicates that the positive predictive effect of narrative transportation on intention to watch movie intensifies as the level of emotional contagion increases.

Discussion

This study investigated the interplay between cognitive needs, emotional contagion, and narrative transportation in shaping viewers' intentions to watch films promoted via short-form videos. Addressing the gap in understanding how these factors interact within the rapidly evolving landscape of digital video marketing, we tested a moderated mediation model rooted in narrative transportation theory. Our findings offer novel insights into the psychological mechanisms driving audience engagement with short-form video content, highlighting the significant and interconnected roles of cognitive and affective

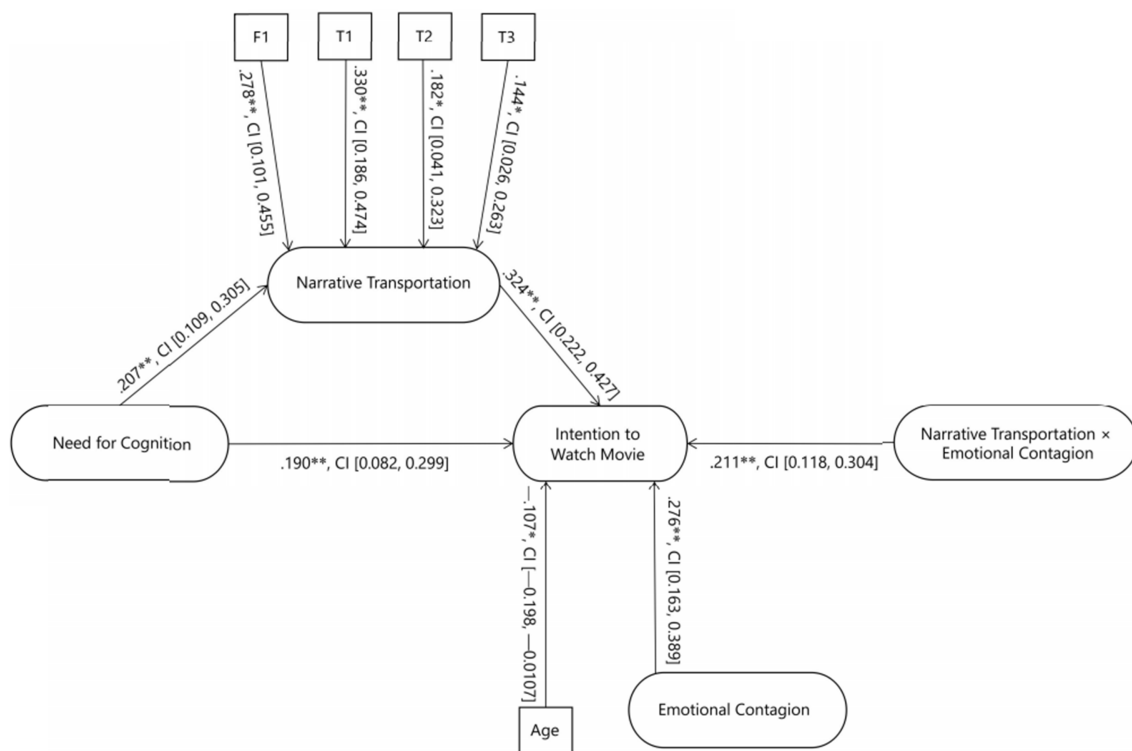


FIGURE 2

The effect of need for cognition on viewing intention. F1 represents the frequency of 4 days or more per week. T1 represents the duration of 2 h and above. T2 represents the duration of 1 h ~ 2 h. T3 represents the duration of 30 min ~ 1 h.

processes. Specifically, we addressed the research question: How do need for cognition and emotional contagion interact via narrative transportation to influence viewers' intentions? Grounded in narrative transportation theory (Green and Brock, 2000; Van Laer et al., 2014), we proposed and tested a moderated mediation model. Our findings provide strong support for the hypothesized model, revealing that both cognitive and affective processes play integral and interconnected roles in shaping audience behavior in the context of short-video marketing.

Our findings provide empirical support for Hypothesis 1, demonstrating a significant positive relationship between cognitive needs and intention to watch a movie ($B = 0.20, p < 0.001$). This aligns with the Elaboration Likelihood Model (Petty and Cacioppo, 1986), suggesting that individuals with a high need for cognition engage in central route processing even when exposed to brief, affect-rich short video content. This reinforces that cognitive engagement is a key driver of persuasion in this medium.

Supporting Hypothesis 2, we found that narrative transportation mediates the relationship between cognitive needs and viewing intention (indirect effect = 0.27, $p < 0.001$). This corroborates Wang and Calder's (2009) assertion that transportation is a crucial mechanism influencing advertising effectiveness, extending it to the specific context of short-form videos. Our results indicate that even in these concise formats, the power of storytelling to immerse viewers remains potent. The significant positive association between need for cognition and viewing intention (H1) is consistent with the Elaboration Likelihood Model (Petty and Cacioppo, 1986), which posits that individuals high in NFC are more likely to engage in central route processing of persuasive messages. This finding suggests that even in

brief, affect-rich formats, individuals with a high innate drive to think deeply are more persuaded by content that engages them cognitively, leading to stronger behavioral intentions (Liu and Nesbit, 2023).

Furthermore, the mediating role of narrative transportation (H2) corroborates the work of Wang and Calder (2009), who found that transportation serves as a key mechanism through which media engagement influences advertising effectiveness. Our study extends this finding by demonstrating that this mechanism holds for short-form video content, a format characterized by its brevity and high sensory impact (Dong et al., 2023; Yang and Kang, 2021). This suggests that the power of storytelling to immerse viewers is not diminished by shorter durations but is effectively condensed.

The most noteworthy contribution of our study is the empirical demonstration of emotional contagion's moderating role (H3) in the relationship between narrative transportation and viewing intention (interaction effect = 0.15, $p < 0.001$). This finding advances the narrative transportation framework by revealing that emotional contagion acts as a critical amplifier. While transportation creates immersion, our results indicate that the emotional resonance viewers experience is a catalyst that transforms immersion into behavioral intention. Individuals with higher susceptibility to emotional contagion exhibit a stronger relationship between transportation and their intention to watch the movie. This nuanced understanding challenges the assumption that 'being lost in a story' is sufficient for persuasion, highlighting the importance of emotional internalization. The interaction effect indicates that the pathway from transportation to viewing intention is not uniform across all viewers but is significantly amplified for individuals higher in emotional contagion. This finding resonates with research

highlighting the automaticity of emotional transfer in mediated contexts (Hatfield et al., 1994; Wei et al., 2023; Hofmann et al., 2024) and integrates it into the narrative transportation framework. It suggests that being “lost in a story” is not sufficient; the emotional resonance that viewers internalize from the video acts as a critical catalyst that transforms immersion into behavioral intention. This provides a more nuanced, contingent understanding of the transportation-intention link, positioning emotional contagion as an amplifier rather than just a component of the experience.

Contrary to expectations, our findings did not reveal a direct relationship between viewing frequency/duration and viewing intention ($p > 0.05$), despite their significant positive associations with narrative transportation (Table 5). This supports the notion that mere exposure or time spent on platforms does not automatically translate into a desire to watch a movie, suggesting qualitative engagement is a more powerful predictor, despite their significant positive association with transportation. This suggests that mere exposure or time spent on platforms does not directly translate into a desire to watch a movie. Instead, these factors operate indirectly by facilitating a state of narrative transportation. This aligns with the concept of “qualitative engagement” over “quantitative exposure” (Dong et al., 2023), implying that the depth of immersion during viewing is a more powerful predictor than the sheer volume of consumption.

While our model is well-supported, it is important to consider other variables that could account for the observed relationships. For instance, individuals with a high need for cognition may have a pre-existing interest in film as a medium, which could influence both their engagement with promotional content and their viewing intention. Similarly, personality traits such as openness to experience—which is linked to narrative transportation (Kubrak and Starostina, 2023)—or cultural background could influence susceptibility to both transportation and emotional contagion. Furthermore, platform-specific algorithms that curate content based on user preferences create an echo chamber effect, potentially reinforcing existing interests (Brady et al., 2019). While our use of covariates and focus on psychological mechanisms helps isolate the effects of our key constructs, future research should incorporate these additional factors, such as personality measures and platform data, to build more comprehensive models and rule out alternative explanations.

Theoretical contributions

This research contributes to the theoretical landscape of media psychology and narrative persuasion in several ways. First, we extend the Extended Transportation-Imagery Model (ETIM) (Van Laer et al., 2014) by providing empirical evidence for its applicability in the burgeoning domain of short-form video marketing. Our study also highlights the predictive power of cognitive needs as an antecedent to narrative transportation, addressing the gap in the literature. Additionally, we demonstrate the critical moderating role of emotional contagion in influencing the relationship between transportation and behavioral intention. Furthermore, it extends the Extended Transportation-Imagery Model (Van Laer et al., 2014) by empirically validating and contextualizing its framework within the understudied domain of short-form video marketing. Our study identifies and operationalizes need for cognition as a specific, influential antecedent that drives narrative transportation in short-video content, addressing

a gap in the literature regarding which individual traits most saliently predict transportation in high-velocity, condensed narratives.

Second, this study re-conceptualizes the role of emotional contagion within narrative transportation theory. Moving beyond its traditional view as a mere component of affective involvement, our findings position emotional contagion as a critical moderating variable that governs the strength of the relationship between transportation and behavioral intention. This introduces a more nuanced, contingent perspective to the theory, suggesting that the persuasive outcome of transportation is not automatic but is instead potentiated by an individual's susceptibility to emotional synchrony.

Finally, the research integrates the Elaboration Likelihood Model (Petty and Cacioppo, 1986) with narrative transportation theory, demonstrating that the central route to persuasion (cognitively effortful processing) and narrative processes (experiential and affective immersion) are not mutually exclusive but are synergistic. A high need for cognition can predict deeper narrative engagement, which in turn is more effectively converted into intention when coupled with high emotional contagion. This integration provides a more holistic theoretical framework for understanding persuasion in contemporary digital environments.

Practical and policy implications

The findings of this study offer actionable insights for filmmakers, marketing professionals, platform designers, and policymakers.

Our findings offer actionable insights for practitioners in short-form video marketing. The roles of cognitive needs and emotional contagion provide a framework for audience segmentation and content personalization strategies. Marketing professionals can tailor video content to resonate with the audience. The algorithmic metrics that could be used is to measure qualitative engagement, emotional sentiment analysis, average watch time. The significant roles of need for cognition and emotional contagion provide a robust framework for audience segmentation and content personalization. Marketers can target users based on psychographic profiles: crafting thought-provoking, nuanced narratives for users high in need for cognition, and prioritizing visceral, emotion-driven storytelling for users high in emotional contagion. Algorithmic recommendation systems can move beyond collaborative filtering to incorporate inferred psychographic profiles, suggesting content that is psychologically most persuasive for a specific individual. Performance metrics should evolve to gauge qualitative engagement (e.g., emotional sentiment analysis, average watch time) rather than just view count (Dong et al., 2023). Specifically, relevant psychographic dimensions may include cognitive engagement level, emotional susceptibility, and narrative preference orientation. These can be inferred through behavioral analytics (e.g., content interaction patterns, comment sentiment) and used to tailor message tone and narrative complexity.

Ethical considerations arise from the significant impact that emotional contagion has. Policies should focus on informing individuals of the effects that short-form videos have on them, and what the effects of emotional contagion are. Media policies should focus on transparency and ethics. The demonstrated power of emotional contagion to amplify persuasion raises important ethical considerations. We recommend the development of industry guidelines and potential platform policies that encourage transparency in advertising content that is specifically designed to elicit high emotional

contagion. This is not to stifle creativity but to empower users with awareness. Furthermore, these findings underscore the urgent need for media literacy education that helps users, particularly younger audiences, recognize how narrative transportation and emotional contagion are used in marketing (Brady et al., 2019). Educating users on these psychological mechanisms can foster resilience against potential manipulation and promote more conscious media consumption habits. It should be clarified that emotional contagion functions as a stable individual difference rather than an outcome of exposure. Therefore, policy recommendations should focus on recognizing that individuals high in baseline emotional contagion are more susceptible to persuasive effects, rather than implying that short-video exposure increases emotional contagion itself.

Limitations and future research directions

Several limitations should be considered when interpreting these findings. The study's reliance on self-report measures and its cross-sectional design limit our ability to draw strong causal inferences. Future research should employ experimental or longitudinal designs to establish causality more definitively. Additionally, the instructional approach of asking participants to recall a recent video introduces uncontrolled variability and potential recall bias. Future studies could enhance internal validity by utilizing standardized video stimuli. Furthermore, the sample was predominantly young, female, and well-educated, potentially limiting the generalizability of the results. Future research should strive for greater demographic diversity. Finally, while this study focused on cognitive needs and emotional contagion, other individual differences (e.g., personality traits, cultural orientation) and content-specific features (e.g., genre, narrative structure) likely influence the observed mechanisms and warrant further investigation. First, the reliance on self-report measures and a cross-sectional design precludes strong causal inferences. Although the proposed model is theoretically grounded, experimental or longitudinal designs are needed to establish causality. Second, the instructional approach—asking participants to recall a recent video—introduces uncontrolled variability in the stimulus material and potential recall bias. Future studies should enhance internal validity by using standardized video stimuli in experimental designs. Third, the sample, though adequate in size, was predominantly young, female, and well-educated, limiting the generalizability of the findings. Future research should employ stratified or quota sampling to ensure demographic diversity and enhance external validity. Finally, while we focused on need for cognition and emotional contagion, other individual differences (e.g., personality traits, cultural orientation) and content-specific features (e.g., genre, narrative structure) likely influence these mechanisms and should be incorporated into more complex models.

Additionally, because emotional contagion and narrative transportation were self-reported, common-method variance may influence the results despite statistical checks. Moreover, recall-based stimulus variability and the lack of standardized emotional-response measures limit internal validity. Future studies could include direct emotional measures (e.g., physiological or observational data) and controlled video exposure to better contextualize responses.

In conclusion, our study enriches understanding of how short-form videos work, highlighting the interconnected roles of cognition, emotion, and narrative. These findings are for both future and current use.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Ethics statement

The studies involving humans were approved by the Hainan Normal University Technology Ethics Committee. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

LL: Conceptualization, Formal analysis, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing, Data curation, Funding acquisition. WD: Data curation, Formal analysis, Methodology, Writing – original draft.

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Conflict of interest

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