



“Exploring the impact of social media engagement on brand image and brand love among senior tourists: The mediating role of emotional attachment and the moderating effect of digital literacy”

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EXPLORING THE IMPACT OF SOCIAL MEDIA ENGAGEMENT ON BRAND IMAGE AND BRAND LOVE AMONG SENIOR TOURISTS: THE MEDIATING ROLE OF EMOTIONAL ATTACHMENT AND THE MODERATING EFFECT OF DIGITAL LITERACY

Abstract

This study aims to explore the impact of social media engagement on brand image and brand love among senior tourists in Jiangsu Province, China. Additionally, the study investigates the mediating role of emotional attachment and the moderating role of digital literacy in shaping these relationships. A cross-sectional survey was conducted between August and September 2024 in Jiangsu Province, China, targeting 300 senior tourists aged 60 and above who were active users of social media and had recent interactions with tourism-related brands. Data were collected using a structured questionnaire and analyzed using SmartPLS 4. The results indicate that social media engagement has a strong positive effect on both brand image ($\beta = 0.598$, $t = 8.850$, $p < 0.001$) and brand love ($\beta = 0.352$, $t = 4.309$, $p < 0.001$). Emotional attachment significantly mediates the relationship between social media engagement and brand outcomes, including brand image ($\beta = 0.071$, $t = 2.162$, $p = 0.015$) and brand love ($\beta = 0.172$, $t = 3.935$, $p < 0.001$). Moreover, digital literacy moderates the effect of social media engagement on emotional attachment ($\beta = 0.155$, $t = 5.855$, $p < 0.001$), indicating that higher digital proficiency enhances emotional bonding with brands. These findings underscore the importance of personalized, emotionally resonant, and accessible digital marketing strategies when targeting the senior tourism segment.

Keywords

social media engagement, brand image, brand love,
emotional attachment, digital literacy

JEL Classification

M31, M37, D91, L86, O33

INTRODUCTION

The modern tourism environment has seen a fundamental shift with the digital revolution, with social media at the forefront in influencing consumer behavior (Li et al., 2021). One of the changing populations in this arena is the elderly tourists who have become a notable and burgeoning consumer segment, especially in societies such as Jiangsu Province, China (Moran et al., 2020). Their increased economic influence and unique preferences render them an increasingly important demographic for marketers in tourism (Abdallah et al., 2024). Nonetheless, owing to their significance, older tourists are still underrepresented in the digital marketing literature (Wasike, 2023). Specifically, scientific research on the role of social media interaction in shaping their cognitive and affective brand perceptions

is scarce (Kumar et al., 2021). This lack of consideration leaves a critical gap because digital media are increasingly dominating tourism service providers' and destinations' communication strategies (Donthu et al., 2021).

Simultaneously, the affective aspects of consumer, brand relationships are gaining momentum as fundamental drivers of brand equity in tourism (Fang & Xiang, 2023). Scholars have consistently underscored that brand image and brand love are not created by passive consumption of promotional content, but by active interaction and emotional connection (Chen et al., 2023). For older travelers, affective relationships can be all the more prominent because of their experience-based disposition and value invested in relational consumption (Huo et al., 2021). Still, the scholarly community does not yet possess a unified comprehension of how these affective experiences are developed within the realm of social media participation (Donthu et al., 2021). The theoretical gap that exists at this juncture relates to failure to explore emotional attachment as a mediating psychological mechanism by which social media engagement influences important brand outcomes (Liu & Jiang, 2020), despite having plentiful evidence that emotions are proximate mediators in consumer decision-making processes.

Even at this stage, another relatively unexplored area of scholarly significance pertains to the interface of technology and aging (Wasike, 2023). Digital literacy, how well consumers can access, understand, and engage with digital information, determines in large part the extent to which people use social media sites effectively (Noor et al., 2020). Although ample evidence exists to document that older adults are diverse in their level of digital skills, the research is scattered and inconclusive regarding the ways such diversity moderates the development of emotional connections to brands on the web (Slavković et al., 2023). This represents a significant scientific issue: the lack of a well-defined framework for how differences in digital literacy among individuals affect the efficacy of social media-driven marketing communication in eliciting emotional and cognitive brand reactions from elderly consumers (Maulana & Rosyidah, 2022).

When combined, the coincidence of these points describes a more general, unsettled scientific challenge: there is not enough theoretical and empirical knowledge about the psychological processes and environmental factors that direct the effect of social media involvement on brand understanding and affiliation with older tourists (Donthu et al., 2021). Until this issue is settled, the comprehension of online consumer action is incomplete and biased towards youth, more highly digitalized individuals. The present research is thus located in this rich and under-researched nexus, examining not only outcomes such as brand reputation and love, but also the complex psychological and technology-mediated processes that moderate and mediate these associations in the particular and increasingly significant setting of elderly tourism.

1. LITERATURE REVIEW AND HYPOTHESES

The increasing ubiquity of social media in consumer markets has created a surge of interest in the extent to which online engagement affects brand-related consequences. Much of this work has concentrated on youth or digitally orientated populations, but the aging demographic is an increasingly significant and under-researched market. Older travelers, more specifically, are increasingly engaged in the online world, using social media to organize, communicate, and reminisce

about tourist experiences (Alkhasoneh et al., 2024; Rozak et al., 2023). Yet, existing academic literature is short of exploring how this age group engages with tourism brands on the internet and how these engagements affect their brand attitudes. Social media interaction, traditionally defined as the active work of users with brand content, in terms of liking, sharing, commenting, or producing content, has been extensively accepted as a metric influencing consumer-brand relationships (Erina & Kunnamkara, 2024; Redda, 2024). Empirical research has demonstrated that open and regular social media interaction reinforces

brand reputation by building trust, credibility, and perceived authenticity (Nadesan & Ariffin, 2023; Phokwane & Makhitha, 2023). In tourism and hospitality industries, that kind of interaction is particularly effective because of the experiential and emotionally stimulating nature of travel content (Asanprakit & Kraiwanit, 2024). Particularly, visually oriented and emotionally rich brand stories on social media sites like Instagram and WeChat have proven to be highly influential in shaping consumer opinion and building brand loyalty (Moran et al., 2020). In addition to image construction, social media engagement fosters the establishment of brand love, a strong emotional connection defined by passion, commitment, and loyalty. Brand love has been associated in earlier research with frequent and high-value interactions on social media, where brands are seen by consumers as being socially and emotionally involved (Safeer et al., 2021). Emotional reactions like warmth, appreciation, and pride may arise when consumers are recognized or noticed by brands in an online environment (Santini et al., 2020). Such affective experiences, built up from repeated interactions, reinforce attachment and deepen brand passion. On the psychological basis of the phenomenon is emotional attachment, a concept that describes how consumers come to feel a sense of familiarity and identification with a brand. Based on Attachment Theory (Bowlby, 1979), scholars have emphasized that emotional attachment is an inner process by which external cues such as social media posts are construed, internalized, and converted into long-term brand relationships (Ashaye et al., 2023). Customers who are emotionally involved with a brand are more prone to see it as part of their self-concept, react more positively to its messages, and champion it by word-of-mouth action (Shetty & Fitzsimmons, 2022; Yousaf et al., 2023). The psychological attachment has been identified not only as an effect but also as a path mediating the influence of social involvement on brand equity (Amaro et al., 2020).

Digital literacy adds yet another key aspect to this dynamic. As the capacity to access, understand, and critically analyze digital material, digital literacy has been demonstrated to influence users' ability to use and derive value from online communications by brands (Xie & Fu, 2024). In older users, digital competence is understood to differ

markedly, affecting both the extent and intensity of social media use. Elevated digital literacy can intensify emotional reactions by facilitating the use of sophisticated features like interactive advertisements, multimedia narratives, or user-generated content campaigns (Goyal & Kumar, 2021). Low digital literacy, on the other hand, can serve as a hindrance, preventing users from developing connections through digital touchpoints (Jabeen et al., 2024; Sudha et al., 2024). In light of these results, few have scrutinized systematically the role of emotional attachment as a mediator and digital literacy as a moderator in social media use and brand performance relationships, particularly among older adults. The literature is almost mute on how these forces manifest in senior tourists, a segment increasingly digitally engaged but psychologically and cognitively different from younger consumers. Besides, current frameworks tend to ignore the complex manner in which technological competence interacts with emotional processing within digital spaces. On their own, past research has demonstrated the significance of social media activity in influencing brand image and brand love and has underscored the salience of emotional attachment and digital literacy as causal mechanisms (Kusumadyahdewi & Firdiansyah, 2022). However, scant attention has been focused on the older group in this regard, particularly in the case of tourism, a sector that is bountiful in experiential and affective consumption. This research thus seeks to fill this void through an exploration of how social media interaction can affect brand image and brand love among older tourists, with emotional bond as a mediating variable and digital literacy as a condition moderating the relationship.

This research is based on two theoretical frames: Attachment Theory (Bowlby, 1979) and the Stimulus-Organism-Response (S-O-R) model. Attachment Theory accounts for the way human beings build emotional relationships with individuals as well as with symbolic objects like brands. The S-O-R model proposes that environmental stimuli (e.g., social media activity) affect internal psychological states (e.g., emotional attachment), which in turn generate behavioral responses (e.g., brand image and brand love). These theoretical perspectives underpin that both external digital interaction and internal psychological process-

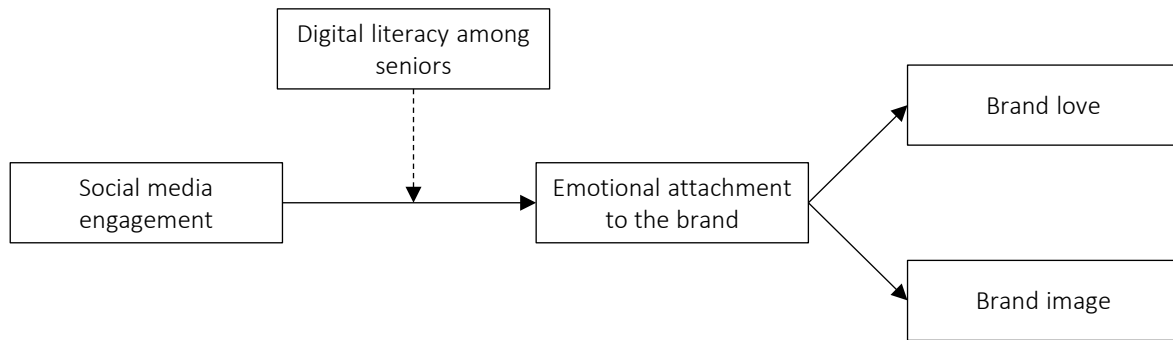


Figure 1. Conceptual framework

ing are implicated in influencing emotional and cognitive consequences in branding situations (Rasoolimanesh et al., 2022). For the purpose of this research, social media interaction is the external stimulus. Through liking, sharing, and commenting on brand posts, senior tourists are exposed to brand stories that have the potential to provoke cognitive judgments and emotional experiences (Khan et al., 2021). Emotional attachment is framed as a psychological state within an individual that mediates the impact of social media interaction on both brand image, an expression of the cognitive perception of the brand by the consumer, and brand love, an emotional attachment and loyalty. Additionally, the study views digital literacy as a moderating variable that would affect the intensity of the relationship between social media interaction and emotional attachment (Anas & Cahyawati, 2023; Li et al., 2024). Digitally literate users would be in a better position to engage with social content meaningfully, thus deepening emotional connections to the brand.

- H1: Social media engagement has a significant positive impact on brand image.*
- H2: Social media engagement has a significant positive impact on brand love.*
- H3: Emotional attachment to the brand mediates the relationship between social media engagement and brand image.*
- H4: Emotional attachment to the brand mediates the relationship between social media engagement and brand love.*
- H5: Digital literacy moderates the relationship between social media engagement and emo-*

tional attachment to the brand, such that the relationship is stronger for individuals with higher digital literacy.

2. METHODOLOGY

The research used a quantitative, cross-sectional, non-experimental design to investigate the impact of social media participation on brand image and brand love among elderly tourists. The model also investigates emotional attachment as a mediating variable and digital literacy as a moderating factor. Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied for data analysis since it can be effectively employed in analyzing complex relationships such as mediation and moderation, as well as small sample sizes and non-normal distribution of data.

The population of interest included older tourists 60 years old and older who live in Jiangsu Province, China, and had applied social media over the last six months to communicate with tourism brands. Jiangsu Province was chosen because it has an increasing number of digitally engaged older persons and is important as a domestic tourism destination. Data collection took place from August to September 2024. To maintain relevance, a screening question was applied to capture only those who have recent experience engaging with tourism brands through social media (e.g., following a brand page, liking or commenting on a post, sharing travel-related content). A non-probability convenience sampling method was employed because of the practical difficulties of targeting and reaching older users of social media. This method enabled researchers to recruit participants from online travel communities, WeChat groups, and

senior traveler groups. Minimum sample size according to the “10 times rule” for PLS-SEM was determined (Hair et al., 2021) as 250 responses for 25 indicators. 400 questionnaires were sent to maximize statistical power and adjust for potential non-responses. 400 questionnaires were sent, and 300 valid responses were kept for analysis.

The research was conducted in accordance with ethical standards for research with human participants. The participants were informed of the research aim, guaranteed anonymity and confidentiality, and gave informed consent prior to involvement. Voluntary participation was undertaken. No identifiable personal data were gathered. Review and approval of the research procedure were performed by the University Research Ethics Committee.

The tool used for data collection was a 5-section structured questionnaire: (1) demographic data, (2) social media usage, (3) emotional connection with tourism brands, (4) digital competence, and (5) brand image and brand love. All the items were assessed on a 5-point Likert scale (strongly disagree = 1, strongly agree = 5). All the constructs for the model were assessed through validated scales from existing research to ensure content validity:

- 1) social media engagement: modified from Santini et al. (2023), measuring frequency and depth of online brand interaction;
- 2) emotional attachment: items modified from Joshi and Garg (2021), assessing emotional closeness and identification with the brand;
- 3) digital literacy: derived from scales by Goyal and Kumar (2021), measuring comfort and ability of users with digital media.
- 4) brand image and brand love: derived from research like Salehzadeh et al. (2023) and Safeer et al. (2021), measuring cognitive and affective brand images.

The complete questionnaire is included in Appendix A.

Before complete deployment, the survey was pre-tested with 15 senior respondents to validate the

clarity, readability, and technical operation. Minor linguistic modifications were undertaken. Data were cleaned and screened for completeness, with incomplete responses removed from the analysis. Table 1 provides a summary of the respondents’ demographic characteristics. This descriptive information aids in assessing the representativeness and potential biases in the sample.

Table 1. Respondent demographic profile (n = 300)

Variable	Category	Frequency	Percentage (%)
Age	60-64	112	37.3%
	65-69	102	34.0%
	70 and above	86	28.7%
Gender	Male	148	49.3%
	Female	152	50.7%
Education level	High school or below	78	26.0%
	Bachelor’s degree	164	54.7%
	Postgraduate	58	19.3%
Social media use	Daily	187	62.3%
	Several times/week	91	30.3%
	Rarely	22	7.4%
Previous brand interaction	Yes	300	100.0%

3. RESULTS

The measurement model assessment shows strong construct reliability and validity for all constructs in Table 2 and Figure 2. All constructs have Cronbach’s Alpha ratings over 0.7, indicating good internal consistency (Hair et al., 2021). Social media involvement ranks best in reliability ($\alpha = 0.911$), followed by digital literacy ($\alpha = 0.865$), emotional attachment ($\alpha = 0.871$), brand affection ($\alpha = 0.872$), and brand image ($\alpha = 0.824$). The construct assessment instruments are reliable and have low measurement error. All composite reliability (CR) values above 0.7, from 0.877 to 0.929, show strong construct dependability. The results confirm internal consistency of research measurement items. Convergent validity was determined using item outer loadings and construct AVE values. All items had peripheral loadings over 0.6, with most reaching 0.7, indicating significant relationships between items and constructs. All constructs had AVE values over 0.5, ranging from 0.588 to 0.714. The constructs explain a large amount of the variance in their measurement items, proving the measurement model works. AVE = 0.714 for

Table 2. Construct reliability and validity

Variable	Items	Outer loading	Cronbach's Alpha	CR	AVE
Brand image	BI1	0.762	0.824	0.877	0.588
	BI2	0.833			
	BI3	0.787			
	BI4	0.756			
Brand love	BL1	0.691	0.872	0.907	0.661
	BL2	0.823			
	BL3	0.838			
	BL4	0.823			
Digital literacy	DL1	0.799	0.865	0.909	0.714
	DL2	0.779			
	DL3	0.858			
	DL4	0.856			
Emotional attachment	EA1	0.885	0.871	0.903	0.612
	EA2	0.777			
	EA3	0.804			
	EA4	0.758			
Social media engagement	SM1	0.832	0.911	0.929	0.652
	SM2	0.602			
	SM3	0.826			
	SM4	0.845			

digital literacy and 0.661 for brand love showed outstanding convergent validity, indicating excellent measurement qualities. The significance is great. The measurement model used in this study is suitable for structural model analysis due to its high reliability and validity statistics in Table 2. The findings show that brand image, brand affection, social media participation, digital literacy, and emotional attachment are reliably measured and highly valid. These data form the basis for

studying the structural model's postulated links. Since it uses reliable and rigorous indicators, the research is well-positioned to examine how emotional connection and digital literacy moderate the relationship between social media engagement and brand effects.

The discriminant validity study, shown in Table 3, shows that the model's constructs are unique and meet the HTMT requirement. Each construct in

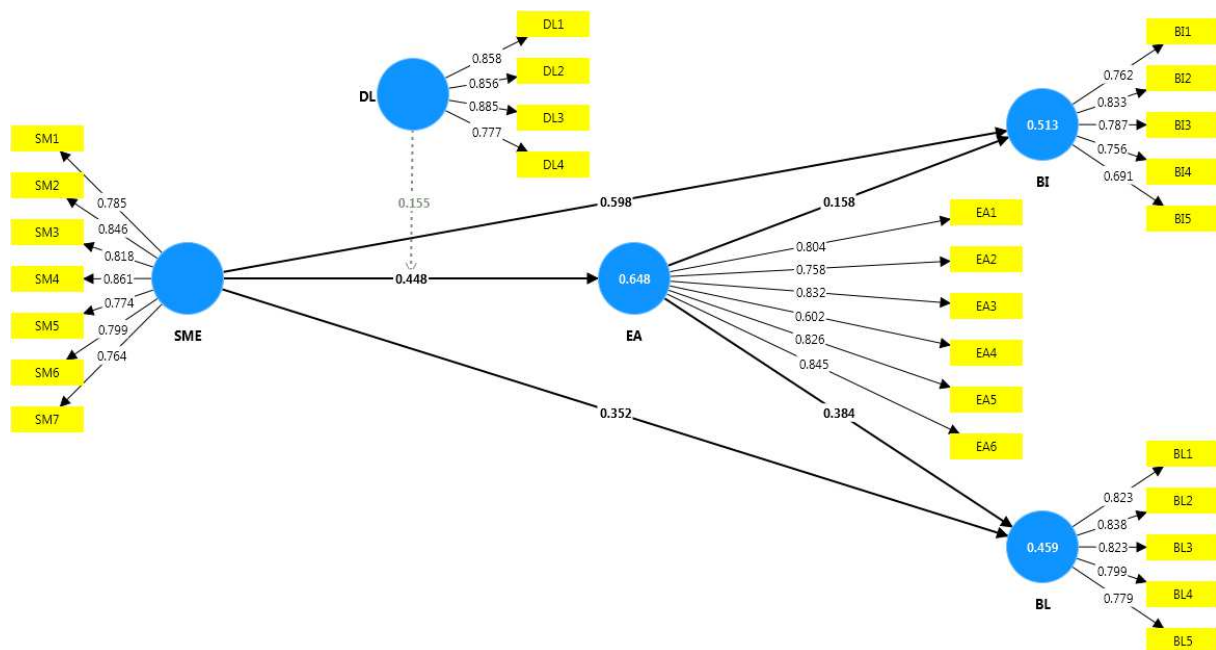


Figure 2. Measurement model

Table 3. Discriminant Validity (HTMT)

Variable	BI	BL	DL	EA	SME
Brand image					
Brand love	0.818				
Digital literacy	0.465	0.498			
Emotional attachment	0.667	0.712	0.760		
Social media engagement	0.808	0.690	0.562	0.770	

this investigation has an HTMT value between 0.465 and 0.818, indicating a separate model element. Despite their theoretical correlations, brand image and brand love (0.818) and emotional attachment and social media involvement (0.770) have acceptable HTMT values, showing their individuality. Digital literacy and brand image had the lowest HTMT values (0.465), indicating a substantial difference. The moderate link between social media engagement and brand affection, shown by the HTMT value of 0.690, supports the theoretical framework. Emotional attachment's HTMT values, which ranged from 0.667 to 0.770, highlighted its role as a mediating variable between social media participation and brand outcomes. These results show that the constructs are conceptually distinct and experimentally distinct, ensuring measurement model resilience. Discriminant validity strengthens the study's structural model, reducing multicollinearity and overlapping variables and making expected correlation tests more reliable.

Table 4 shows the structural model's explanatory power and predictive accuracy, including R2 and Q2 values. R2 values measure how much the model's independent variables explain each dependent construct's variation. Social media participation and digital literacy explain 64.8% of emotional connection variance, according to the highest R2 value (0.648) for emotional attachment. The research highlights emotional connection's role as a mediator between brand outcomes and social media participation. Brand image (R2 = 0.513) and brand affection (R2 = 0.459) show that social media participation, emotional attachment, and digital literacy affect brand-related categories.

Since all Q2 values exceed 0, the model's prediction accuracy is sufficient. The Q2 value for emotional connection is again the highest at 0.631, indicating its predictive power in the model. The R2R^2R2 scores for brand image (Q2 = 0.459) and brand

love (Q2 = 0.420) indicate significant predictive power. Congruence of R2 and Q2 values among constructs shows the model's reliability and validity in reflecting variable relationships. The results support emotional connection as a mediator and digital literacy as a moderator, setting the groundwork for structural model interpretation.

Table 4. Coefficient of determination and Q2

Constructs	R2	Q2
Brand image	0.513	0.459
Brand love	0.459	0.420
Emotional attachment	0.648	0.631

Table 5 and Figure 3 shows the direct path analysis results, supporting the study's hypotheses. The data support Hypothesis *H1* that social media participation positively affects brand image ($\beta = 0.598, t = 8.850, p < 0.001$). Active participation in social media content improves consumers' brand perceptions, according to the enhanced path coefficient. The high t-value shows how social media platforms influence customers' brand perceptions. This conclusion supports prior study that social media participation improves brand impressions through targeted experiences and interactive communication.

Hypothesis *H2* shows a significant positive correlation between brand affection and social media participation ($\beta = 0.352, t = 4.309, p < 0.001$). Although the path coefficient for this relationship is moderate relative to *H1*, it shows that social media activity significantly affects customer-company emotional bonds. This effect's high t-value shows social media's potential to build strong emotional bonds with brands. Previous research have shown that prolonged and engaged social media connections create brand love and intimacy. Social media engagement influences cognitive constructs like brand image and emotional consequences like brand affection, highlighting the complex impact of social media on consumer-brand relationships.

Table 5. Direct path analysis

Hypotheses	Relationship	Path coefficient	t-value	p-value
H1	Social media engagement → brand image	0.598	8.850	0.000
H2	Social media engagement → brand love	0.352	4.309	0.000

Note: *p < 0.05.

Table 6. Mediation analysis

Hypotheses	Relationship	Path coefficient	t-value	p-value
H3	SME → EA → BI	0.071	2.162	0.015
H4	SME → EA → BL	0.172	3.935	0.000

Note: *p < 0.05.

The mediation analysis results in Table 6 provide compelling evidence for the role of emotional attachment as a mediator in the relationships between social media engagement and key brand outcomes. Hypothesis H3, which proposed that emotional attachment mediates the relationship between social media engagement and brand image, is supported by the findings ($\beta = 0.071$, $t = 2.162$, $p = 0.015$). Although the mediation effect is small, the significant t-value confirms that emotional attachment plays a meaningful role in transferring the effects of social media engagement to brand image. This finding highlight that while social media engagement directly influences brand image, the emotional connections formed during engagement further enhance consumers’ perceptions of the brand. Such connections, rooted in emotional attachment, help translate the interactive and personalized experiences on social media into stronger brand associations and favorable brand evaluations, as suggested by prior studies.

Similarly, Hypothesis H4 posited that emotional attachment mediates the relationship between social media engagement and brand love, which is strongly supported by the analysis ($\beta = 0.172$, $t = 3.935$, $p < 0.001$). The higher path coefficient and t-value for this mediation effect compared to H3 underscore the stronger role of emotional attachment in driving emotional outcomes like brand love. This suggests that the emotional bonds nurtured through social media interactions significantly contribute to the development of deep af-

fection and loyalty toward the brand. Consumers who feel emotionally connected to a brand via social media engagement are more likely to form long-lasting emotional attachments that enhance their overall love for the brand. Together, these results emphasize the dual pathways through which social media engagement influences brand outcomes, both directly and indirectly through emotional attachment, highlighting the importance of fostering emotional connections in consumer-brand relationships.

The moderation analysis results in Table 7 provide strong support for hypothesis H5, which proposed that digital literacy moderates the relationship between social media engagement and emotional attachment to the brand. The findings ($\beta = 0.155$, $t = 5.855$, $p < 0.001$) demonstrate a significant and positive moderating effect, indicating that the influence of social media engagement on emotional attachment is stronger for individuals with higher levels of digital literacy. The path coefficient suggests that digital literacy amplifies the ability of consumers to effectively engage with social media content, allowing them to derive more meaningful interactions and emotional connections with the brand. This result aligns with existing literature highlighting that digital literacy enhances consumers’ capacity to interpret, interact with, and respond to digital brand communications, thereby fostering deeper emotional ties. The significant t-value reinforces the robustness of this moderating effect, emphasizing the critical role of digital

Table 7. Moderation analysis

Hypothesis	Relationship	Path coefficient	t-value	p-value
H5	SME × DL → EA	0.155	5.855	0.000

Note: *p < 0.05.

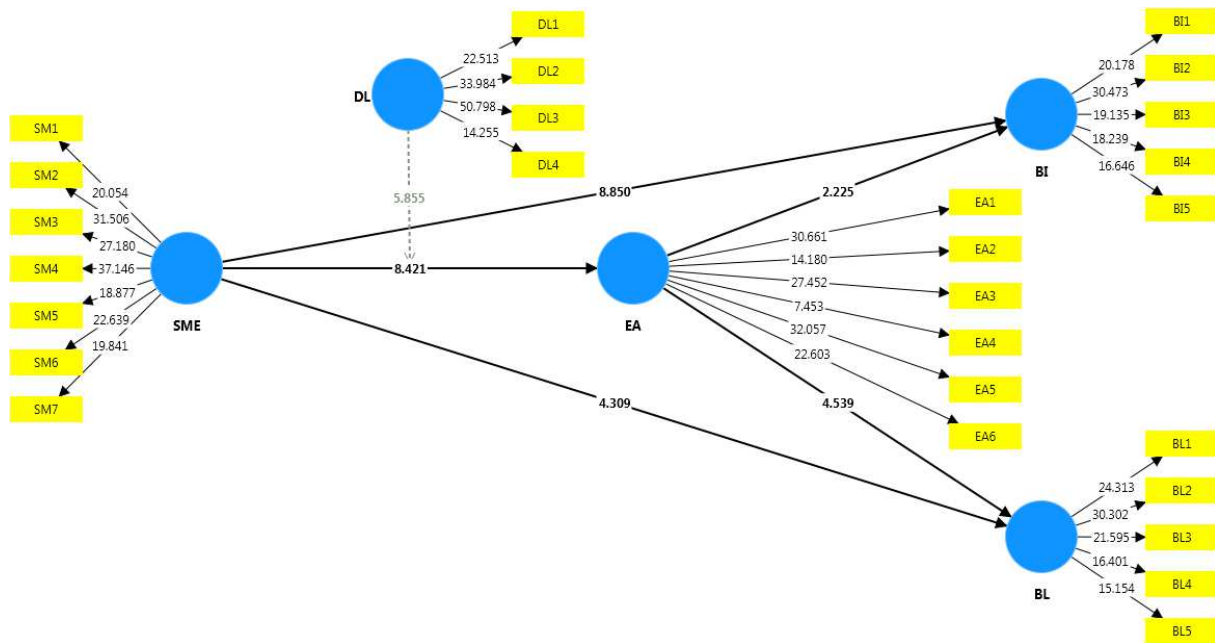


Figure 3. Structural model

literacy in strengthening the pathway between social media engagement and emotional attachment. These findings underscore the necessity for brands to consider the varying levels of digital proficiency among their target audiences and to design inclusive social media strategies that cater to both digitally literate and less digitally adept consumers to maximize emotional brand connections.

4. DISCUSSION

This research aims to examine the ways in which social media activity affects brand image and brand love for older tourists in Jiangsu Province, and how emotional connection and digital literacy act as a mediator and moderator, respectively, in these processes. The results provide strong empirical evidence for the model and shed new light on the branding dynamics of older consumer groups in digital spaces. The findings affirm that social media interaction plays a strong and positive role in creating brand image and brand love, as found by other studies proving the branding strength of online interaction (Safeer et al., 2021). For elderly tourists, interacting with the content of a brand on WeChat or Douyin increases their belief in the reliability and applicability of the brand. This confirms the idea that older adults are not passive consumers of the digital world but active contributors with the potential to create positive impressions

through social interaction (Moorlock et al., 2023). One especially significant finding is the greater path coefficient between social media interaction and brand image ($\beta = 0.598$) than for brand love ($\beta = 0.352$). This implies that although digital interaction easily influences cognitive judgments (e.g., perceived quality and trustworthiness), the creation of more profound emotional connections like brand love demands longer-lasting or more meaningful interaction. This is a relevant point, since existing literature commonly assumes cognitive and emotional response to brands as the same in strength, while the present research indicates they are multifaceted and may develop at varying rates (Tyson et al., 2021).

The mediational role of emotional attachment is also supported. Emotional attachment strongly mediated the associations between social media interaction and both brand reputation and brand love. These findings support the theoretical foundations of Attachment Theory (Bowlby, 1979) insofar as emotional bonds operate as psychological mechanisms for transforming external stimuli, like brand interaction, into internalized brand significance and loyalty. These results corroborate with previous research from Kusumadyahdewi and Firdiansyah (2022) who have also listed emotional attachment as an important antecedent to brand advocacy and consumer loyalty. In senior tourists, this attachment can be developed from

values like trust, familiarity, or shared cultural resonance features particularly vital for elderly segments (Donthu et al., 2021).

Notably, the research shows that digital literacy strongly mediates the impact of social media participation on emotional attachment. The connection is greater for individuals with greater digital literacy ($\beta = 0.155$, $t = 5.855$, $p < 0.001$), indicating that seniors with more powerful digital abilities are better able to participate meaningfully and emotionally in brand content. This replicates and builds upon earlier work by Hasni et al. (2022) who claimed that digital literacy allows consumers to decode brand stories more effectively, engage with multimedia functions, and assess brand credibility more critically. Against popular stereotypes of digitally disengaged older adults, this finding serves to reinforce that digital literacy is centrally a driver of emotional brand attachment among the elderly (Anas & Cahyawati, 2023; Li et al., 2024).

Relative to previous research that either did not include older consumers or grouped them as homogenous in online behavior, this work offers a more sophisticated insight. It illustrates that seniors are not just different in terms of how frequently they use social media, but also differ in how actively they interact with and emotionally interpret online brand experiences (Bright et al., 2021). By incorporating digital literacy as a moderating construct, this research builds on earlier models that considered social media interaction as an equal influence across different groups of users (Salehzadeh et al., 2023).

The findings are overall consistent with the Stimulus-Organism-Response (S-O-R) model. Social media interaction as the external stimulus, affective attachment as the internal organismic state, and brand image/love as the response outcomes. Notably, digital literacy acts as an enabler that amplifies this stimulus-organism connection (Kusumadyahdewi & Firdiansyah, 2022). Consistent with this model and empirical findings, the added evidence contributes to the increasing body of work that argues that digital branding effects are not merely the result of exposure, but are heavily influenced by psychological as well as human capability factors (Rasoolimanesh et al., 2022).

This research therefore fills an important gap in the literature by examining older consumers in the tourism industry, a segment previously under-represented in digital branding studies. It demonstrates that emotional processes, technological abilities, and brand relationships are equally applicable, and frequently different, in older segments as they are in younger ones. Besides, it provides actionable advice for practitioners who seek to adapt digital content to meet diverse levels of digital expertise and emotional expectations on the part of older consumers.

The practical significance of this research is important for brands that want to build their online reputation and develop strong emotional bonds with consumers, particularly in the case of elderly tourists. To begin with, the research emphasizes the significance of social media interaction as an effective means of shaping brand image and brand love. Brands need to focus on producing relevant, meaningful content that appeals to the emotional level of their target audience, instead of concentrating on how many more times they can post or interact. By developing emotional attachment through social media interactions, brands are able to develop a stronger relationship with their audience, resulting in increased brand loyalty and advocacy. Further, the research advises that brands would need to shape their content such that it adapts to address the differences in digital literacy of their target group. As digital literacy moderates the connection between social media interactions and emotional ties, brands must make sure their social media communication is readable and comprehensible for all consumers but especially for lower levels of digital literacy. This could include streamlining content, employing more intuitive design elements, and offering greater support to users who might find it difficult to use complicated digital interfaces. Brands can also gain from carrying out periodic checks of their audience's digital literacy and tastes to maximize their content delivery so that it is suitable for a diverse consumer market. In total, the research offers insightful information that can enable brands to streamline their social media strategies, enhance consumer engagement, and ultimately establish more powerful and longer-lasting emotional bonds with their consumers.

From a theoretical perspective, this research adds to the existing literature on the use of social media in influencing consumer-brand relationship, including emotional attachment and digital competence. The research validates the fact that affective attachment serves as a salient mediator to the association of social media use and both brand image and brand love, building on earlier investigations into the prevalence of emotional engagement in consumer purchasing behavior. By ascertaining that social media interaction results in greater emotional affinity, which in its turn strengthens brand reputation and love, the study confirms that emotions are an important factor in creating consumers' brand perceptions and attitudes in the age of the Internet. Besides, the study identifies the moderating effect of digital literacy, providing a new insight into how users' digital abilities impact their engagements with brand posts on social media. It is a significant contribution to the literature since it broadens our knowledge of how customers' digital capabilities can impact the success of social media strategies. Future studies can extend these results by investigating the ways in which digital literacy combines with other variables, like trust and brand authenticity, to form the consumer-brand connection. Overall, this research offers useful theoretical contributions to the mechanisms by which social media activity impacts brand performance, providing a basis for future research on the interdependency of digital engagement, emotional bonds, and consumer conduct.

While the study gives worthwhile insight into social media engagement as a driver of brand image and brand love, there are quite a number of limitations that can be noted and that can steer future research work in this regard. First, the study has considered senior tourists in Jiangsu province,

hence potentially limiting generalizability across other demographic sections or geographical areas. Future studies may widen the sample to cover a more heterogeneous population, e.g., younger consumers or consumers from other regions or nations, to determine whether the relationships found here are generalized across consumer segments. The current study is also based on self-report measures that, by their nature, are susceptible to social desirability or recall bias, although the accuracy of the findings is likely to be minimally impacted. Future research might employ longitudinal data or utilize other methods of data collection, like behavioral monitoring or observational studies, to reduce these biases and more accurately assess how social media interaction impacts brand attitudes over time. The cross-sectional nature of the study is another limitation since it does not allow for causal inferences. Future studies may use experimental or longitudinal study designs to more fully examine the cause-and-effect relationships between social media activity, emotional bonding, and brand love. Additionally, although this research treated digital literacy as a moderator, other contextual variables like cultural differences or personality traits may affect the ways consumers interact with brands on social media. Future research may investigate these variables to develop a more complete picture of the complexities surrounding social media participation and its influence on consumer-brand relationships. Lastly, the research largely concentrated on emotional attachment as a mediator, yet other psychological variables, like trust or perceived value, may also contribute to building brand love and brand image. Subsequent research might explore such factors to enhance the theoretical context and provide a better insight into the drivers behind consumer behavior during the digital era.

CONCLUSION

The current research aimed to investigate the impact of social media on brand image and brand love for elderly tourists, with emotional attachment as the mediating factor and digital literacy as the moderating condition. The study was underpinned by Attachment Theory and the Stimulus-Organism-Response (S-O-R) model, and it focused on an understudied group, older people in the digital tourism context. The empirical study showed that social media interaction strongly increases both brand image and brand love, validating its pivotal position in influencing cognitive and affective brand results. Emotional attachment was discovered to moderate these relationships, showing that emotional connections are critical for converting offline engagement into enduring brand loyalty and favorable percep-

tion. Besides, digital literacy enhanced the connection between social media interaction and emotional bonding, indicating that more digitally competent users are in a better position to establish strong emotional bonds with brands online. These results lend evidence to the notion that successful digital branding initiatives for older consumers need to cater not just to the frequency of use but also to emotional richness and usability of the content. Brands looking to serve elderly tourists need to think about reducing complexity in digital interfaces, employing emotionally engaging narratives, and encouraging two-way communication to build attachment and loyalty. Concurrently, policy and learning initiatives in raising digital literacy among seniors would build the accessibility and success of digital marketing campaigns. The research enriches branding and tourism scholarship through the deeper understanding of an older consumer's relationship with brands. It identifies emotional processes and tech savviness as significant in the formation of brand experiences during the digital era. Future studies should use longitudinal designs to follow up on how emotional attachment and online engagement change over time. Cross-cultural comparisons and the inclusion of other psychological mediators, like trust, perceived value, or nostalgia, would add more insights into how various consumer segments build relationships with brands across online platforms.

AUTHOR CONTRIBUTIONS

Conceptualization: Hasnizam Hasan.

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APPENDIX A

QUESTIONNAIRE

Social media engagement

1. I frequently interact with brand posts on social media platforms.
2. I often share content related to my favorite brands on social media.
3. I actively comment on posts made by brands I follow.
4. I like and react to posts from brands I am interested in.
5. I participate in online discussions related to the brands I follow.
6. I feel involved when brands communicate with me on social media.
7. I follow brands on social media to keep up with their latest news and updates.

Brand image

1. I perceive the brand as trustworthy.
2. The brand has a positive reputation in the market.
3. The brand is known for its quality products or services.
4. The brand's values align with my personal values.
5. I have a favorable view of the brand.

Brand love

1. I feel emotionally connected to this brand.
2. I would be sad if this brand stopped existing.
3. I feel passionate about this brand.
4. I feel a strong attachment to this brand.
5. I consider this brand to be one of my favorites.

Emotional attachment to brand

1. I feel a strong emotional connection to this brand.
2. The brand makes me feel special and valued.
3. I feel a sense of loyalty towards this brand.
4. I care deeply about the future of this brand.
5. I feel attached to the brand as if it were a close friend.
6. The brand's messages and campaigns resonate deeply with me.

Digital literacy

1. I am confident in using social media platforms to engage with brands.
2. I can easily understand online content shared by brands.
3. I feel comfortable navigating social media to learn more about a brand.
4. I know how to evaluate and interpret brand messages on social media platforms.