

# THE IMPACT OF DIGITAL ENGAGEMENT, PERCEIVED VALUE, AND EXPERIENCE EVENT ON CONSUMER ATTENTION IN HARBIN'S ICE AND SNOW SPORTS TOURISM

## *O IMPACTO DO ENGAJAMENTO DIGITAL, DO VALOR PERCEBIDO E DA EXPERIÊNCIA EM EVENTOS NA ATENÇÃO DO CONSUMIDOR NO TURISMO DE ESPORTES DE GELO E NEVE DE HARBIN*

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### Abstract

This study focuses on the attention behavior of consumers in Harbin's ice and snow sports tourism, using quantitative research methods to construct a structural equation model that influences consumer attention behavior. It further examines the impact of digital participation, perceived value, and activity experiences on consumer attention behavior. This study used 240 questionnaires and statistical methods for processing and analysis. The study aims to achieve three objectives: 1. To investigate the current status of digital engagement, perceived value, and experience event among Harbin's ice and snow sports tourism consumers; 2. To analyze how these factors influence the attention behavior of Harbin's ice and snow sports tourism consumers; 3. To explore strategies for enhancing the attention behavior of Harbin's ice and snow tourism consumers. The research findings clearly demonstrate the significant impact of various factors on consumers' attention behaviors in Harbin's ice and snow tourism. Regarding digital engagement, active

### Resumo

*Este estudo enfoca o comportamento de atenção dos consumidores no turismo de esportes de gelo e neve em Harbin, utilizando métodos de pesquisa quantitativa para construir um modelo de equações estruturais que influencia o comportamento de atenção do consumidor. Além disso, examina o impacto da participação digital, do valor percebido e das experiências nas atividades sobre o comportamento de atenção do consumidor. Este estudo utilizou 240 questionários e métodos estatísticos para o processamento e a análise dos dados. O estudo visa atingir três objetivos: 1. Investigar a situação atual do engajamento digital, do valor percebido e da experiência de eventos entre os consumidores do turismo de esportes de gelo e neve em Harbin; 2. Analisar como esses fatores influenciam o comportamento de atenção dos consumidores do turismo de esportes de gelo e neve em Harbin; 3. Explorar estratégias para melhorar o comportamento de atenção dos consumidores do turismo de gelo e neve em Harbin. Os resultados da pesquisa demonstram claramente o impacto significativo de vários*



interactions on digital platforms—such as online bookings, information inquiries, and sharing—play a crucial role in attracting consumer attention to Harbin's winter sports tourism. Perceived value also plays a vital role in shaping consumer behavior. The diverse ice and snow activities, high-quality facilities, and unique cultural experiences offered by Harbin's winter sports tourism significantly enhance perceived value. Experiential activities also demonstrate remarkable effectiveness in capturing attention. Harbin's rich ice and snow experiences, including skiing, ice sculpture viewing, and folk culture immersion programs, attract consumers through their diversity, entertainment value, and interactive nature, thereby extending their stay. This study provides a comprehensive analysis of the complex relationships among digital engagement, perceived value, experiential activities, and attention behavior. Quantitative analysis reveals that digital engagement significantly enhances both perceived value and experiential activities. Notably, perceived value itself positively influences both experiential activities and attention behavior. Experiential activities serve as a significant mediating factor between digital engagement and attention behavior, as well as between perceived value and attention behavior. The conceptual model developed in this study integrates key variables including digital engagement, perceived value, experiential activities, and attention behavior, clearly demonstrating their dynamic relationships. Validated through empirical data and focus group feedback, the model provides tourism enterprises and relevant departments with a strategic tool for comprehensively understanding consumer behavior.

**Keywords:** Snow Sports Tourism, Digital Engagement, Perceived Value, Experience Event, Attention Behavior.

*fatores nos comportamentos de atenção dos consumidores no turismo de gelo e neve de Harbin. No que diz respeito ao engajamento digital, interações ativas em plataformas digitais — como reservas online, consultas de informações e compartilhamento — desempenham um papel crucial na atração da atenção do consumidor para o turismo de esportes de inverno de Harbin. O valor percebido também desempenha um papel vital na formação do comportamento do consumidor. As diversas atividades de gelo e neve, as instalações de alta qualidade e as experiências culturais únicas oferecidas pelo turismo de esportes de inverno de Harbin aumentam significativamente o valor percebido. As atividades experienciais também demonstram notável eficácia na captação da atenção. As ricas experiências de gelo e neve de Harbin, incluindo esqui, visitação de esculturas de gelo e programas de imersão na cultura folclórica, atraem os consumidores por meio de sua diversidade, valor de entretenimento e natureza interativa, prolongando assim sua estadia. Este estudo fornece uma análise abrangente das relações complexas entre engajamento digital, valor percebido, atividades experienciais e comportamento de atenção. A análise quantitativa revela que o engajamento digital aumenta significativamente tanto o valor percebido quanto as atividades experienciais. Notavelmente, o próprio valor percebido influencia positivamente tanto as atividades experienciais quanto o comportamento de atenção. As atividades experienciais atuam como um fator mediador significativo entre o engajamento digital e o comportamento de atenção, bem como entre o valor percebido e o comportamento de atenção. O modelo conceitual desenvolvido neste estudo integra variáveis-chave, incluindo engajamento digital, valor percebido, atividades experienciais e comportamento de atenção, demonstrando claramente suas relações dinâmicas. Validado por meio de dados empíricos e feedback de grupos focais, o modelo fornece às empresas de turismo e aos departamentos relevantes uma ferramenta estratégica para a compreensão abrangente do comportamento do consumidor.*

**Palavras-chave:** Turismo de Esportes de Neve. Engajamento Digital. Valor Percebido. Evento Experiencial. Comportamento de Atenção.

## 1 INTRODUCTION

In contemporary society, the tourism industry has seen significant growth and transformation. Harbin, a shining pearl in Northeast China, is renowned internationally for its unique ice and snow sports tourism products, attracting visitors from around the world each year. However, with the continuous development of the digital environment and the increasing personalization of consumer expectations, traditional tourism models are facing significant challenges (Sen, A, 2023). Understanding the factors that influence tourists' attention to Harbin's ice and snow sports tourism has become an urgent and critical issue, particularly in terms of the impact of digital engagement, the role of perceived value, the importance of experiential activities, and the combined effects of multiple factors.

The aim of this study is to explore the relationship between digital engagement, perceived value, activity experience, and attention behavior in the context of Harbin's ice and snow sports tourism industry, providing theoretical guidance and practical suggestions for its sustainable development. By analyzing how these factors influence tourists' attention, the study aims to offer empirical support to Harbin's tourism managers and marketers, helping them develop more precise and effective strategies to enhance the competitiveness of the destination and ultimately promote the prosperity of Harbin's ice and snow tourism industry. Therefore, this research not only holds significant academic importance but also practical value.

## 2 LITERATURE REVIEW

With the growing popularity of ice and snow sports and the thriving tourism industry, ice and snow sports tourism has gained significant attention as a new form of tourism. Accurately defining ice and snow sports tourism is essential for further research into its development patterns, market demands, and industrial policies. Due to different research objectives and perspectives, various documents define this concept differently.

In foreign countries, the development of ice and snow sports tourism is relatively early, and related research is also quite extensive. Some scholars define it based on the content of activities. For instance, Smith (2006) defines ice and snow sports

tourism as a form of tourism that primarily involves tourists participating in activities such as skiing, skating, and sledding, based on ice and snow resources. This definition highlights the central role of ice and snow sports in tourism and underscores the integration of sports and tourism.

Other scholars have explored the topic from the perspective of tourism experiences. For instance, Holt (2010) noted that ice and snow sports tourism involves not only engaging in ice and snow sports but also the unique experiences tourists have in such environments, such as enjoying the ice and snow scenery and immersing themselves in the local ice and snow culture. This perspective broadens the concept of ice and snow sports tourism by incorporating the diversity of tourism experiences.

Furthermore, from an economic and industrial perspective, Thompson, C (2007) proposed that ice and snow sports tourism is a comprehensive industry that encompasses the construction of facilities, operational management, and tourism services for ice and snow sports. By engaging tourists in these activities, it can stimulate related industries and boost regional economic growth. This definition underscores the industrial nature and economic value of ice and snow sports tourism.

Research on the concept of ice and snow sports tourism in China has increased with the rise of the ice and snow tourism market. Early studies primarily focused on the intuitive description of ice and snow sports tourism. Jones, S (2006) defined it as a form of tourism where people leave their usual residence to participate in or watch ice and snow sports activities. This definition succinctly highlights the purpose and spatial characteristics of ice and snow sports tourism.

In today digital age, digital technology has had a profound impact on peoples life and consumption behavior. Experience events, such as various online and offline marketing activities and cultural activities, attract increasing attention. As the degree of consumers interaction with activities in the digital environment, and the perceived value as the subjective evaluation of the benefits brought by consumers activities, the relationship between the three parties has become a research hotspot. Understanding their relationships helps businesses and event organizers better design and promote experiential activities, and increase consumer engagement and satisfaction.

Many studies have shown that digital engagement can positively affect the perceived value of consumers on experiential activities. Higher digital engagement

means that consumers are more deeply involved in the event and can better understand the content and value of the event, thus enhancing the perceived value. For example, when participating in online interactive activities, consumers can gain more information and inspiration through communication and sharing with other participants, so as to improve the evaluation of the functional value and emotional value of the activities (Mollen & Wilson, 2010).

Perceived value can also in turn affect digital engagement. When consumers perceive a high value of experiential activities, they are more willing to interact with the activities on digital platforms and share their experiences and feelings. For example, consumers may attend a great art show by posting photos and comments on social media to share their feelings with friends, thus increasing digital engagement (Chiu *et al.*, 2014).

Digital engagement and perceived value together influence the effects of experiential activities. High digital engagement and high perceived value can improve consumer satisfaction and loyalty to the event, increase word of mouth communication, and bring more potential participants to the event. For example, a successful online marketing campaign can increase brand awareness and product sales by attracting active participation from consumers and gaining high perceived value (Kim & Ko, 2012).

Through in-depth discussion of these aspects, it can present the current situation and trend of consumer attention behavior research of Harbin ice and snow sports tourism, as well as the important role of digital engagement, perception quality and experience events in it. It helps to provide a more comprehensive and robust background support for this study.

### **3 RESEARCH HYPOTHESES**

H1. Digital engagement has an impact on the attention behavior of ice and snow sports tourism consumers in Harbin

H2. The perceived value has an influence on the attention behavior of the ice and snow sports tourism consumers in Harbin

H3. Digital engagement has an impact on experiential event H4. Perceived value has implications for experiential event

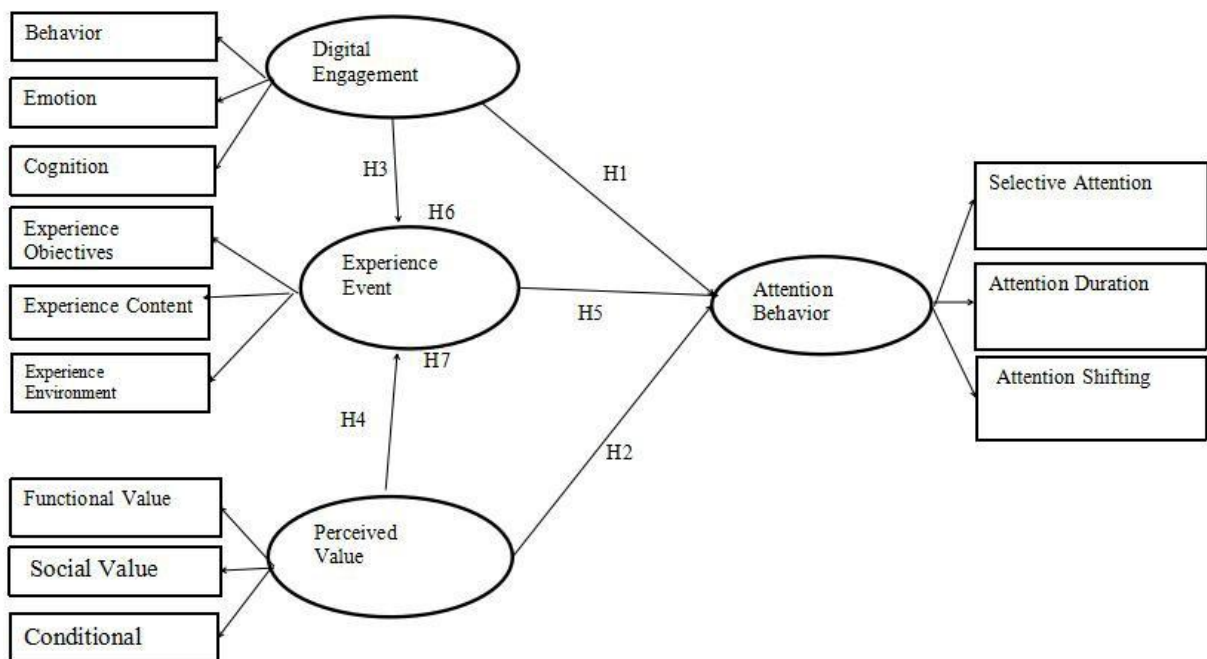
H5. The experience event has an impact on the attention behavior of the ice and snow sports tourism consumers in Harbin

H6. Experience event play an intermediary role between digital engagement and consumer attention behavior of ice and snow sports tourism in Harbin

H7. Experience events play an intermediary role between perceived value and consumer attention behavior of ice and snow sports tourism in Harbin

**Figure1:**

*Variable structure diagram*



## 4 RESEARCH METHODOLOGY

### 4.1 Qualitative research

Through the interview of Harbin ice and snow sports tourism consumers, we can understand the current situation of attention behavior of Harbin ice and snow sports tourism consumers and further understand the specific situation of consumers.

## 4.2 Quantitative research

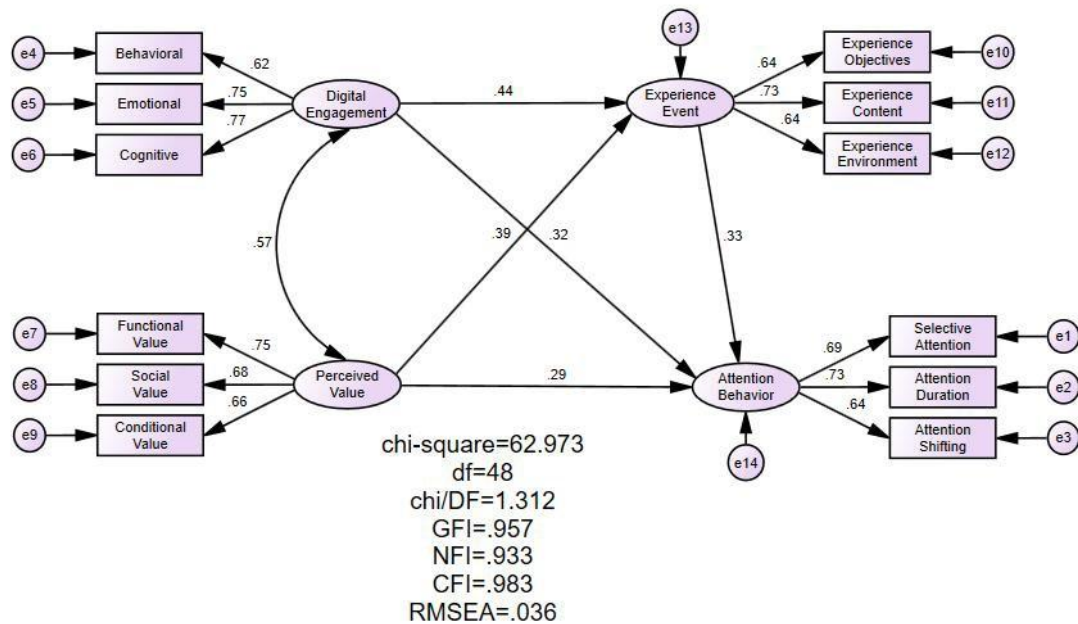
**Sample size:** This study plans to randomly select 240 samples from consumers of ice and snow sports tourism in Harbin. The variables include digital engagement, perceived value, activity experience, and consumer attention behavior. Based on previous research, each variable is expected to have 3-5 measurement items, and this study will use 12 measurement items.

**Questionnaire design:** This questionnaire covers the basic information of consumers, digital participation, perceived value, experience activities and consumer attention behavior. Based on relevant theories and literature, the measurement scales of each variable are designed and evaluated in the form of Likert scale (1-5 points).

**Data collection and analysis:** A total of 240 valid questionnaires were collected, with an effective recovery rate of 100%. Descriptive statistics, reliability analysis, validity analysis, exploratory and confirmatory factor analysis and structural equation modeling were conducted using Excel, SPSS, AMOS and other software.

## 5 STRUCTURAL EQUATION MODELLING

Based on the correlation analysis between variables and previous assumptions, this study constructed the correlation path between structural equation model and independent variables. After data fitting by AMOS 26 software, the following results were obtained:

**Figure 2***Operating results of structural equation model diagram (standardized)*

The figure shows a structural equation model involving variables such as digital engagement, perceived value, experience event and attention behavior.

The data analysis shows that the  $\chi^2/df$  value is 1.312, which is less than 3; the RMSEA is 0.036, below the standard level of 0.08, indicating a good fit; the GFI value is 0.957, the NFI value is 0.933, and the CFI value is 0.983, all meeting acceptable standards. All goodness-of-fit indicators meet general standards, indicating a well-fitted model. Regarding the relationships between variables, digital participation and perceived value directly influence experiential events, which in turn directly affect attention behavior. Additionally, digital participation, perceived value, and experiential events also directly impact attention behavior. Experiential events play a partial mediating role, with each path coefficient reflecting the degree of influence among the variables.

**Table1***Factor load coefficient table of Attention Behavior*

Divisor	variable	Non-standard load factor	S.E.	C.R.	P	Standardized load coefficient	CR	AVE
Selective Attention	SA1	1				0.784		
	SA2	0.994	0.079	12.578	***	0.786		
	SA3	0.862	0.072	11.902	***	0.749	0.880	0.595
	SA4	1.045	0.082	12.732	***	0.795		
	SA5	0.981	0.084	11.726	***	0.74		
Attention Duration	AD1	1				0.741		
	AD2	1.153	0.094	12.251	***	0.815		
	AD3	1.041	0.088	11.846	***	0.788	0.878	0.591
	AD4	0.986	0.09	10.935	***	0.729		
	AD5	1.015	0.088	11.526	***	0.767		
Attention	AS1	1				0.736	0.873	0.578

Divisor	variable	Non-standard load factor	S.E.	C.R.	n	Standardized load coefficient	CR	AVE
Shifting	AS2	1.048	0.089	11.745	***	0.717		
	AS3	0.996	0.087	11.486	***	0.719		
	AS4	0.869	0.083	10.46	***	0.719		
	AS5	1.036	0.09	11.477	***	0.718		

The table provides the factor loadings for attention behaviors. The standardized loading coefficient for SA1 is 0.784, and the non-standardized loading coefficient is 1; for SA2, it is 0.786, with a non-standardized loading coefficient of 0.994; for SA3, it is 0.749, with a non-standardized loading coefficient of 0.862; for SA4, it is 0.795, with a non-standardized loading coefficient of 1.045; for SA5, it is 0.74, with a non-standardized loading coefficient of 0.981. For AD1, the standardized loading coefficient is 0.741, and the non-standardized loading coefficient is 1. For AD2, the standardized loading coefficient is 0.815, and the non-standardized loading coefficient is 1.153; for AD3, the standardized loading coefficient is 0.788, and the non-standardized loading coefficient is 1.041; for AD4, the standardized loading coefficient is 0.729, and the non-

standardized loading coefficient is 0.986; for AD5, the standardized loading coefficient is 0.767, and the non-standardized loading coefficient is 1.015. For AS1, the standardized loading coefficient is 0.736, and the non-standardized loading coefficient is 1; for AS2, the standardized loading coefficient is 0.797, and the non-standardized loading coefficient is 1.048; for AS3, the standardized loading coefficient is 0.7779, and the non-standardized loading coefficient is 0.996; for AS4, the standardized loading coefficient is 0.709, and the non-standardized loading coefficient is 0.869; for AS5, the standardized loading coefficient is 0.778, and the non-standardized loading coefficient is 1.036. All AVE values are greater than 0.5 and CR values are greater than 0.7, indicating that the questionnaire structure model has good convergent validity.

## 6 MEDIATED EFFECTS TEST

The Bootstrap method can directly test the existence of mediating effects. The hypothesis for direct testing is  $H_0: ab=0$ . If the confidence interval obtained from the test results contains 0, it indicates that there is no mediating effect.

Based on the results of path analysis, the hypothesis test is valid. In order to explore whether there is a mediating effect in these significant paths, we ran the Bootstrap method on AMOS 26.0, and bias correction method for testing.

**Table 2**

*Mediation Effect*

Path regression	Type of effect	Estimate	Lower	Upper	P
Digital Engagement=>Experience Event=>Attention Behavior	Direct effect	0.346	0.094	0.673	0.012
	Indigo effect	0.157	0.023	0.423	0.024
	Total effect	0.504	0.255	0.778	0.001
Perceived Value=>Experience Event=>Attention Behavior	Direct effect	0.271	0.049	0.574	0.022
	Indigo effect	0.121	0.016	0.377	0.022
	Total effect	0.392	0.151	0.679	0.001

Since the confidence interval does not contain the number 0, it is significant. The mediation path from Digital Engagement to Experience Event to Attention Behavior is established, which indicates that Experience Event plays a mediating role between Digital Engagement and Attention Behavior.

The intermediary path of perceived value => Experience event => Attention behavior is established, which shows that Experience event plays an intermediary role between Digital engagement and Attention behavior.

## 7 CONCLUSION

Taking the consumers of ice and snow sports tourism in Harbin as the subjects, this study evaluates the attention behavior, digital engagement, perceived value and experience event of the consumers of ice and snow sports tourism in Harbin by combining qualitative and quantitative research methods.

Through qualitative research, we aim to understand the impact of digital engagement, perceived value, and experience event on the attention behavior of Harbin ice and snow sports tourism consumers, laying the groundwork for future quantitative studies. Quantitative methods were used for surveys and data collection. Descriptive statistics, exploratory and confirmatory factor analysis, and correlation analyses were conducted on 240 valid questionnaires. The modeling revealed the effects of digital engagement, perceived value, and experience event on the attention behavior of Harbin ice and snow sports tourism consumers. Ultimately, the following conclusions were drawn:

Digital participation significantly positively influences attention behavior. Perceived value has a significant positive impact on attention behavior. Experiential events have a significant positive impact on attention behavior. Digital engagement significantly positively influences experiential events. Perceived value also has a significant positive impact on experience events. Experiential events serve as a mediator between digital engagement and attention behavior. Additionally, experiential events act as a mediating effect between perceived value and attention behavior.

## 8 SUGGESTIONS FOR FURTHER RESEARCH

Future research could delve deeper into the specific characteristics of digital participation that most influence the attention behavior of ice and snow sports tourism consumers in Harbin. Additionally, it would be beneficial to explore the long-term effects of digital engagement, perceived value, and experience event on consumer behavior. Moreover, studies could examine the differences in these factors among various demographic groups, such as age, gender, and income level. By expanding the scope and depth of research, a more comprehensive understanding of the factors influencing the attention behavior of ice and snow sports tourism consumers in Harbin can be achieved.

This study is the author's first specialized research on the factors influencing consumer attention behavior in Harbin's ice and snow sports tourism. After the initial findings are established, a more comprehensive and in-depth survey will be conducted, expanding the scope to include not only tourists but also local residents, tourism professionals, and tourism enterprise managers. This will provide a comprehensive understanding of the perceptions, experiences, and expectations of all stakeholders regarding ice and snow sports tourism. Surveys will be conducted at different times of the year and seasons to analyze how consumer attention behavior changes over time, such as identifying potential needs and influencing factors during non-peak seasons for ice and snow activities.

## REFERENCES

- Aleksandra Djurdjevic. (2023). How long do snowboards last? *Snowboarding Magazine*.
- Brown, K., & Smith, J. (2015). The role of technology in enhancing winter sports tourism. *Journal of Travel Research*, 54(1), 89–102.
- Burgos, D., et al. (2020). Accessibility within open educational resources and practices for disabled learners: A systematic literature review. *Smart Learning Environments*, 7, Article 1.
- Chen, X., & Li, Y. (2011). The role of attention in consumer behavior: A review. *Journal of Marketing Theory and Practice*, 19(3), 255–268.

- Cohen, R. A. (2013). Focused and sustained attention. In *The neuropsychology of attention* (pp. 89–112). [Editora não identificada — recomenda-se completar]
- Dimick, S. (2022). Seasonal processions. In *The Cambridge companion to literature and climate* (Chap. 1). Cambridge University Press.
- Harrison, R., Flood, D., & Duce, D. (2013). Usability of mobile applications: Literature review and rationale for a new usability model. *Journal of Interaction Science*, 1, Article 1.
- Petrick, J. F. (2002). Development of a multi-dimensional scale for measuring the perceived value of a service. *Journal of Leisure Research*, 34(2), 119–134.
- Posner, M. I. (1980). Orienting of attention. *Quarterly Journal of Experimental Psychology*, 32(1), 3–25.
- Razzaghipour, A., Ashrafi, M., & Mohammadzadeh, A. (2024). A review of auditory attention: Neural mechanisms, theories, and affective disorders. *Indian Journal of Otolaryngology and Head & Neck Surgery*, 76, 2250–2256.
- Roberts, M., & Clark, J. (2009). Winter sports tourism: A review of the literature. *Journal of Sport & Tourism*, 14(2), 123–135.
- Rubinstein, J., Evans, J. E., & Meyer, D. E. (2001). Executive control of cognitive processes in task switching. *Journal of Experimental Psychology: Human Perception and Performance*, 27(4), 763–797.
- Rühlemann, C. (2022). How is emotional resonance achieved in storytellings of sadness/distress? *Frontiers in Psychology*, 13, Article 952119.
- Schwaba, T., Denissen, J. J. A., Luhmann, M., Hopwood, C. J., & Bleidorn, W. (2023). Subjective experiences of life events align with individual differences in personality development. *Journal of Personality and Social Psychology*. Advance online publication.
- Sen, A., & Tai, X. Y. (2023). Sleep duration and executive function in adults. *Current Neurology and Neuroscience Reports*, 23, 801–813.
- Shannon, C. E., & Weaver, W. (1949). *The mathematical theory of communication*. University of Illinois Press.
- Shepherd, D. A., & Tannenbaum, S. I. (2017). Adapting to environmental change: The role of attention in organizational learning. *Journal of Organizational Change Management*, 30(1), 123–135.
- Shipp, B., & Phillips, B. (2013). Social networks, interactivity and satisfaction: Assessing socio-technical behavioral factors as an extension to technology acceptance. *Journal of Theoretical and Applied Electronic Commerce Research*, 8(1), 35–52.

### **Authors' Contribution**

All authors contributed equally to the development of this article.

### **Data availability**

All datasets relevant to this study's findings are fully available within the article.

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