

Article

Sustainable Event Tourism: Risk Perception and Preventive Measures in On-Site Attendance

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Abstract: This study extends the theory of planned behavior (TPB) to examine behavioral intentions for attending on-site e-sports events during the COVID-19 pandemic, integrating perceived risk, non-pharmaceutical interventions (NPIs), and past behavior as contextual determinants. Specifically, it aims to identify effective strategies for maintaining event attendance intention despite unpredictable external shocks, thereby contributing to the sustainability and resilience of the event tourism industry. Using structural equation modeling, survey data from 415 Chinese *League of Legends* fans were analyzed to explore how pandemic-specific factors reshape traditional TPB frameworks in a sustainable tourism context. The findings revealed that NPIs ($\beta = 0.368, p < 0.001$), perceived behavioral control ($\beta = 0.225, p < 0.001$), and prior event attendance ($\beta = 0.404, p < 0.001$) were significant predictors of participation intent. In contrast, attitudes and subjective norms showed no significant influence, likely due to the homogeneous enthusiasm of the sampled Generation Z cohort. Notably, heightened perceived COVID-19 risk motivated attendees to adopt NPIs (e.g., masking, sanitization), indirectly bolstering participation intentions by alleviating safety concerns. Furthermore, frequent past attendance fostered habitual engagement, reducing reliance on deliberate decision-making. These insights advance the TPB and offer actionable strategies for event managers seeking sustainable solutions for maintaining participant engagement and economic resilience amid external disruptions.

Keywords: on-site e-sports event; theory of planned behavior; perceived risk; non-pharmaceutical interventions; COVID-19; habitual behavior



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1. Introduction

E-sports are organized video game competitions officially recognized as events at the 2022 Asian Games and the 2023 Olympics. These events leverage popular gaming genres as competitive platforms and include domestic leagues and high-profile tournaments (e.g., *League of Legends* World Championship). Audience enthusiasm for elite gaming skills makes e-sports events highly engaging and visually spectacular [1]. Consequently, popular e-sports games attract millions of concurrent gamers and, at the same time, become a popular spectator activity [2].

Within China's booming MICE (meetings, incentives, conventions, and exhibitions) industry, the domestic e-sports ecosystem has experienced tremendous commercial growth. Total market revenues grew from CNY 70.61 billion (USD 10.3 billion) in 2017 to a projected

CNY 165.14 billion in 2021, with over 500 million users participating. Driving engagement are game publishers prioritizing e-sports-compatible titles and expanding events like *League of Legends* competitions. However, MICE industry earnings from e-sports events accounted for only CNY 1.06 billion (1.2%) in 2021, signaling untapped commercialization potential as mainstream recognition grows [3,4].

Integrating e-sports events with locally resonant elements confers mutual benefits between gaming competitions and host destinations [5]. Spectator gatherings attract players, broadcasters, and media, generating tourist demand through amenities consumption. Simultaneously, e-sports spotlight host destinations internationally—exemplified by Wuhan’s 2017 *League of Legends*-themed Yellow Crane Tower event, which drew 10,000 attendees and global broadcasts [6]. Such synergies enhance locales’ economic and cultural vitality, demonstrating tourism’s role in cross-industry collaboration [1].

However, tourism flows faced abrupt suspensions in early 2020 due to COVID-19. External shocks like epidemics depress tourism demand by amplifying uncertainty [7,8]. COVID-19 triggered widespread travel restrictions and closures, with lingering risk perceptions deterring demand even after restrictions eased [9]. Tourism and MICE sectors reliant on in-person patronage, such as events and exhibitions, faced analogous struggles [10,11]. Revenue losses reached 60% despite persistent overheads, though e-sports thrived countercyclically due to virtual engagement [3,4]. Significant unpredictable external shocks such as the COVID-19 pandemic present fundamental challenges, particularly to the sustainability of the tourism and event industries. In this scenario, the key focus is on attracting participants and ensuring a continued intention to participate in e-sports events, which is crucial for the economic sustainability of the hosting e-sports events even in challenging circumstances. Therefore, it is important to determine how to improve participants’ intention in the face of external shocks—essential for the long-term resilience and sustainability of events.

Extant research focuses on COVID-19’s direct tourism impacts rather than behavioral intentions under risk [12,13]. Grounded in social psychology, the theory of planned behavior (TPB) models decisions through attitudes, subjective norms, and perceived behavioral control [14]. Tourism studies extend the TPB to decode travel motivations [15,16]. By integrating pandemic risks and public health measures into the TPB, this study addresses gaps in understanding e-sports event attendance intentions among China’s Generation Z during COVID-19. Thus, this study aims to identify effective strategies for maintaining the level of intention to attend e-sports events despite external threats, thereby contributing to the sustainable development and resilience of the event industry in a challenging time. By applying an extended TPB model to examine potential participants’ behavioral intentions, our research offers actionable and valuable practical implications for sustainable event tourism, informing strategies that balance safety protocols with efforts to maximize economic outcomes in unpredictable external situations.

2. Literature Review

2.1. Theory of Planned Behavior

The theory of planned behavior (TPB) developed by Ajzen [17,18] builds upon the prior theory of reasoned action (TRA) formulated by Fishbein and Ajzen [19,20]. At its core, the TPB seeks to elucidate how people formulate behavioral intentions and modify their actual behaviors in decision-making processes. While the TPB is one of the most well-known and widely applied theories for explaining human behaviors across different disciplines [16], the theory indeed requires well-defined behavior that is primarily controlled by volition [18]. In this regard, the TPB has been adopted by studies aiming to understand individuals’ decision-making process in risky situations. Al Rousan, Khasawneh, Sujood,

and Bano [21] investigated Indian consumers' intention to participate in events by incorporating the perception of COVID-19 into the TPB. Similarly, by combining the health belief model and the TPB, Bae and Chang [22] examined the effect of COVID-19 risk perception on behavioral intentions. Researchers in tourism also investigated tourists' decision-making process in other risky situations. Girish, Lee, Kim, and Kim [23] attempted to understand tourists' decision-making process during the Hong Kong protests using the TPB. Similarly, Choe [24] utilized the TPB to understand potential international tourists' decision-making process during bilateral conflicts between two countries. All of these studies empirically confirmed that the TPB has the explanatory power to predict individuals' behaviors in specific situations.

As a theoretical foundation, the TRA focuses primarily on examining how attitudes consciously influence individual behavior based on the assumption that people behave rationally using their accumulated beliefs and knowledge. According to the theory, attitudes are either positive or negative perceptions toward a specific behavior, which is determined by behavioral beliefs and individual experience [18,19]. Subjective norm is one's normative beliefs about others' perceptions regarding performing a target behavior, which can create perceived social pressure. While the TRA assumes that individuals are rational entities, researchers have criticized its basic assumption [16]. Moreover, the TRA has been criticized for presuming perfect volitional control without accounting for external situational factors that inevitably constrain real-world behaviors.

To address these limitations, Ajzen [18] introduced perceived behavioral control as an additional construct, expanding the TRA into the TPB. This enhancement accounts for external constraints and barriers that limit personal agency, thereby improving the model's predictive validity for complex organizational decisions. Specifically, the TPB posits that behavioral intentions and actions are shaped by three interrelated factors, namely personal attitudes, subjective norms (perceived social expectations), and perceived behavioral control (the capacity to overcome obstacles). By integrating both personal motivations and situational constraints, the TPB provides a more holistic framework for explaining variations in volitional and non-volitional behaviors rather than relying solely on reasoned attitudes [16].

2.1.1. Attitude

As theorized by Ajzen [18], attitude signifies an individual's holistic positive or negative evaluation of performing a specific behavior, encompassing the totality of their beliefs and emotions toward that action. Eagly and Chaiken [25] further define attitude as the degree to which individuals judge a behavior as favorable or unfavorable, reflecting a learned tendency to respond to specific actions.

Attitudes form based on perceived outcomes of performing the behavior [26]. The subjective likelihood of various outcomes influences how individuals evaluate and approach actions, with this reasoning process shaping behavioral decisions. These evaluations often arise spontaneously during behavior contemplation [27].

The expected value model clarifies this mechanism, stating that attitudes derive from behavioral beliefs about consequences [18]. Here, belief strength (probability of outcomes) and outcome evaluation (subjective value) are multiplied, generating an index that determines attitude valence [28]. For example, someone may hold favorable beliefs about e-sports as a concept but negative attitudes toward attending live events due to discomfort with crowded, noisy environments.

Critically, within the TPB, attitude specifically pertains to evaluations of performing the target behavior itself—not general dispositions. This distinction ensures precision;

even enthusiastic e-sports fans might avoid in-person events if their attitude toward attendance is shaped by context-specific barriers.

2.1.2. Subjective Norms

The second integral component of the TPB is subjective norms, which represent individuals' perceptions of social pressures to perform or avoid specific behaviors [18]. Specifically, subjective norms denote the perceived expectations of influential referents (e.g., family, peers) and one's motivation to comply with those expectations [29].

Ajzen [30] defines subjective norms as the collective influence of significant referent individuals or groups who endorse or oppose a behavior. Mathematically, this is expressed via the expected value model as follows: $Subjective\ Norms \propto \sum(n_i \times s_i)$, where (n_i) represents normative beliefs (perceptions of referents' approval/disapproval) and (s_i) denotes the motivation to comply with those referents. The product of these terms determines the strength of subjective norms.

As a form of social influence, subjective norms shape behavioral adjustments across contexts [18]. For example, if individuals perceive disapproval from key referents, they may avoid or conceal the behavior [31]. In the context of attending e-sports events, subjective norms reflect whether influential figures (e.g., peers, family) view participation positively or negatively. Teammates, friends, or classmates who endorse event attendance as socially desirable can enhance participation intent through collective approval. Conversely, referents like parents may equate e-sports with idle entertainment, exerting normative pressure that diminishes enthusiasm.

2.1.3. Perceived Behavioral Control

Fishbein and Ajzen [28] contend that attitudes and subjective norms alone cannot sufficiently explain behavioral intentions; perceived behavioral control (PBC)—a non-volitional factor—denotes an individual's belief in their capacity to execute target behaviors despite constraints [18]. PBC encompasses perceived challenges (e.g., resource limitations) and enablers influencing behavioral engagement.

PBC reflects assessments of one's ability to perform behaviors in specific contexts [32]. Many behaviors depend not only on motivation but also on external and internal resources such as skills, time, finances, and social support [33]. For instance, attending e-sports events requires overcoming logistical hurdles like ticket availability and travel arrangements, directly shaping perceived capability [34].

Ajzen [30] formalizes PBC through the following formula: $Perceived\ Behavioral\ Control \propto \sum(c_i \times p_i)$, where (c_i) represents the strength of control beliefs (e.g., confidence in securing tickets) and (p_i) denotes the perceived power of facilitating/constraining factors (e.g., ticket scarcity). The aggregated product of these terms determines overall perceived capacity.

In the context of e-sports event attendance, PBC reflects an individual's appraisal of participation ease/difficulty. Similarly to sports events, spectators cannot always choose freely due to venue constraints. Key factors include ticket acquisition, transportation, lodging, time commitment for spectating, and rapid online ticket sales. Accessible technology enabling swift, reliable purchases further shapes control beliefs. For example, limited venue capacities and competitive online sales necessitate confidence in navigating these barriers—critical for predicting attendance intent.

2.1.4. Intention

The TPB positions behavioral intention as the proximal determinant of behavior [18]. Aligning with the Rubicon model of action phases [35], intentions emerge when individuals assess the desirability and feasibility of potential actions. Specifically, behavioral inten-

tion reflects one's conscious commitment to enact target behaviors, signaling motivational readiness to execute plans [36,37]. The strength of intention correlates with the effort allocated toward behavioral execution [30].

Intentions quantify the planned effort individuals invest in performing behaviors, serving as the culmination of the TPB's attitudinal, normative, and control evaluations. According to the TPB, intentions directly predict behavior, moderated by actual control over requisite resources [18]. Thus, by elucidating how attitudes, subjective norms, and perceived behavioral control jointly shape intention, the TPB provides a framework to decode behavioral outcomes.

2.1.5. Application of the Theory of Planned Behavior to Tourism

The TPB stands as one of the most widely adopted models for explaining behaviors and intentions, with extensive applications across social sciences—including 238 tourism-related studies [38]. Researchers have utilized the TPB to elucidate both general tourist conduct and intentions toward specific activities or travel choices.

In examining general tourist motivations, Hayes [39] employed the TPB to reveal how attitudes, norms, and perceived control jointly drive noncompliance with glacier-protection policies. Similarly, Brown et al. [40] applied the TPB to assess visitor behaviors in protected areas, identifying how these factors influence actions at Mount Field National Park. The TPB has also explained resident attitudes toward tourism development; Lepp [41] demonstrated that economic and community benefits foster positive perceptions, encouraging pro-tourism behaviors among Ugandan villagers.

For specific travel contexts, the TPB demonstrates predictive utility. Studies on medical tourism include that by Martin et al. [42], who identified attitudes, norms, and control as drivers of American undergraduates' willingness to seek treatment abroad. Lee et al. [43] adapted this framework to analyze Japanese medical tourists' preferences for South Korea. Beyond healthcare, the TPB has been applied to niche tourism segments. For instance, Sparks [44] revealed that perceptions of wine regions' offerings shape intentions to undertake wine-focused vacations in Australia.

2.2. Extension of the Theory of Planned Behavior

The TPB allows adaptations to enhance explanatory power by modifying relationships between existing components or integrating additional variables [18]. However, new factors must meet Ajzen's [30] criteria as follows: alignment with TPB predictors under compatibility principles, causal relevance to intentions/behaviors, conceptual distinctiveness from existing constructs, and broad applicability. Empirical studies have extended the TPB with supplementary variables, demonstrating improved predictive validity in tourism contexts.

Frequently integrated variables include self-identity (individuals' self-conception tied to behaviors) [45,46], anticipated affect (emotions expected post-action) [7,47], and past behavior (habitual patterns) [48,49]. Contextual extensions further enhance the TPB's utility. For example, Yarimoglu and Gunay [50] incorporated environmentally conscious practices and hotel image, finding that both factors influenced green hotel selection. Han et al. [26] identified visa exemption expectations as amplifying Chinese tourists' South Korea visitation intentions beyond attitudinal/normative drivers. Wang et al. [33] demonstrated that perceived consumer effectiveness and environmental concern bolstered Chinese tourists' green hotel preferences alongside traditional TPB motivators.

This study extends the TPB to COVID-19 contexts by integrating perceived pandemic risks (e.g., COVID-19 transmission concerns), non-pharmaceutical interventions (e.g., masking mandates), and historical behavioral patterns (e.g., prior event attendance).

This framework clarifies how tourists weigh risk–benefit trade-offs and navigate evolving constraints when evaluating e-sports event participation, thereby addressing gaps in understanding attendance intentions amid public health crises.

2.2.1. Perceived Risk for COVID-19

Perception signifies individuals' interpretations of information, events, objects, or behaviors rooted in accumulated knowledge and experiences [51]. Risk comprises potential negative outcomes and their likelihoods [52]. In consumer behavior contexts, purchasing decisions inherently carry uncertainties regarding expected satisfaction [53]. Perceived risk taxonomies classify these uncertainties into categories such as financial, functional, health, psychological, social, and temporal risks [54].

In more recent studies [55,56], different risk perceptions influence potential tourists' intention to travel and participate in mega-sporting events. These studies clearly demonstrated that risk perception and event attendance intention are significantly associated. Complementing this perspective, Kemp [57] proposed an event recovery framework in the pre-, during-, and post-event period. This strategic model integrates intelligence, communication, and counter-risk measures to foster resilience by reinforcing the importance of risk preparedness and adaptive planning.

Health risk perception specifically influences travel decisions, as tourists weigh vulnerabilities when selecting destinations and activities [58]. Brewer et al. [59] and Huang et al. [60] define it as subjective assessments of illness/infection susceptibility during travel. Contagious diseases like COVID-19 exemplify severe risks that deter visitation by threatening personal safety [61,62].

COVID-19 represents an unprecedented health risk context for e-sports event attendance. Prospective attendees evaluate perceived vulnerability to infection across travel components, including transportation (exposure in confined spaces), lodging (shared facilities), and event venues (dense crowds). Interactions with asymptomatic carriers amplify contagion risks [9]. High perceived susceptibility may dissuade participation even among enthusiasts, as subjective interpretations of infection probabilities outweigh motivations [51,52]. Constraints such as limited venue capacity necessitate swift ticket procurement, often via competitive online platforms. Accessible technology enabling reliable purchases and reduced physical overcrowding at venues further shape control beliefs. For instance, attendees may perceive crowded environments as high-risk, opting to avoid events despite a strong interest in e-sports.

2.2.2. Non-Pharmaceutical Interventions for COVID-19

Controlling influenza outbreaks involves pharmaceutical interventions (e.g., vaccines, antivirals) and non-pharmaceutical interventions (NPIs)—preventative measures implemented by individuals and communities [63]. While pharmaceutical solutions are vital, they face constraints in development timelines and production capacities during extensive outbreaks like COVID-19 [64]. Limited immunity against novel viruses further facilitates rapid transmission, making NPIs critical tools for curbing spread before pharmaceuticals become widely available [65].

In our study, NPIs are considered a distinct construct rather than as part of the PBC construct. PBC is defined as one's ability to execute specific behaviors, leading to personal capability in connection to external constraints [18]. However, NPIs represent specific health prevention and protective actions [63]. The examples of NPIs are mask-wearing (or face-covering), sanitization, and social distancing measures. Indeed, Lee et al. [7] considered NPIs as a separate construct from control beliefs, as the concept of NPIs is more closely

aligned with active coping strategies. Furthermore, NPIs are generally motivated by specifically perceived risk (e.g., disease threats) rather than individual capability constraints.

China's Center for Disease Control and Prevention (CCDC) defines NPIs as actions that reduce disease transmission by minimizing contact rates and exposure risks [66]. These measures include administrative controls (e.g., contact tracing, quarantines, crowd restrictions) and personal protections (e.g., hand hygiene, respiratory etiquette, disinfection, mask usage, physical distancing) [67]. Authorities may isolate confirmed cases, trace exposures, discourage public gatherings, or restrict movement in high-infection areas [64]. Individuals, meanwhile, can adopt hygiene practices, improve ventilation, wear masks in crowded settings, and avoid contact with symptomatic individuals or contaminated surfaces—critical steps given COVID-19's transmission via respiratory droplets and fomites [66]. Similar results were found and suggested by Drury et al. [68], whose paper indeed carefully reviewed publicized evidence and recommendations from UK authorities and suggested mitigation strategies such as non-pharmaceutical interventions including ventilation, low density, face coverings, and hand sanitization. More importantly, their paper suggested that not only the event itself but also the various attendees' behaviors (e.g., traveling to the event, walking together to the venue, entry, exit, and even meeting at the pub) should be carefully considered to mitigate COVID-19.

NPIs mitigate community transmission by reducing points of viral exposure until vaccines or treatments scale. While vaccination offers robust protection, individual adherence to NPIs remains essential for lowering infection risks [64,66]. Widespread voluntary compliance strengthens administrative efforts, creating layered defenses against outbreak escalation. The adoption of these measures depends on subjective risk assessments and contextual factors such as public trust and resource accessibility. In a recent study conducting a meta-analysis on the effectiveness of NPIs [69], it was found that NPIs had a significantly larger impact than vaccination in mitigating COVID-19, covering different geographical scopes and time periods.

2.2.3. Past Behavior

Past behavior, while frequently examined as an extension of TRA/TPB frameworks, lacks a unified definition. Sommer [70] broadly defines it as learned responses to prior stimuli. Ouellette and Wood [48] distinguish habitual behaviors (automatically cued by context with minimal conscious control) from non-habitual behaviors (guided by deliberate intent). Habitual actions emerge from repeated goal-directed performances in stable contexts [71], where environmental cues—such as event announcements or venue familiarity—trigger automatic responses without deliberative reasoning [72]. Non-habitual behaviors, even when repeated, remain under conscious cognitive control [73]. Frequency alone does not guarantee habit formation if actions require ongoing intentional regulation [48].

In the context of e-sports event attendance, past behavior refers to prior participation in on-site e-sports events. Frequent attendance under similar circumstances cultivates habitual engagement, where contextual stimuli (e.g., game schedules, peer invitations) automatically activate attendance behaviors. These automated pathways bypass conscious intent, contrasting with the TPB's deliberative decision-making drivers like attitudes or norms. Repeated experiences shape cognitive scripts [74], positioning past behavior as a continuum, from reflexive habits (context-driven) to reflective actions (intention-driven). Thus, habitual attendees may prioritize ingrained routines over the TPB's attitudinal/normative evaluations when deciding future participation.

2.3. Hypotheses Development

Research across disciplines demonstrates that attitudes—positive or negative evaluations of performing target behaviors—constitute a key antecedent of behavioral intentions [18,75]. Individuals weigh prospective benefits and risks when contemplating actions, pursuing behaviors perceived favorably while avoiding those judged negatively [76].

In the e-sports context, Shi and Ren [77] found empirical evidence that attitudes toward watching online e-sports games are positively associated with future intention. In tourism contexts, studies reveal that attitudes directly shape participation intentions. Kaplan et al. [78] showed that tourists' attitudes toward cycling influenced transportation mode choices during vacations. Similarly, Han et al. [79] found that favorable environmental attitudes toward green hotels positively predicted visitation intentions. Multiple studies corroborate that destination-specific attitudinal assessments—such as perceived value and service quality—correlate with visitation choices [42,80,81]. For example, Hsu [81] demonstrated that Taiwanese tourists' attitudes toward recreational activities in the Kenting Water Recreation Area significantly influenced attraction visitations. Martin et al. [42] identified beliefs in overseas healthcare advantages as the strongest attitudinal predictor of medical tourism intent. Al Ziadat [80] confirmed that tourists' evaluations of Jordanian destinations positively impacted revisit intentions. Derived from this empirical evidence, the following hypothesis is proposed:

H1: *Individuals' attitudes toward attending on-site e-sports events are positively associated with their intentions to participate.*

A breadth of research demonstrates that subjective norms—reflecting perceptions of what important others believe someone should do—shape behavioral intentions [26,32,75]. Individuals often align their intentions with the perceived norms of significant referents (e.g., family, peers) to gain social approval. In tourism contexts, Han et al. [26] revealed that endorsement from family, friends, or colleagues portraying visits to South Korea as valuable significantly heightened Chinese tourists' travel intentions. Similarly, Hsu and Huang [32] extended the TPB framework, finding that subjective norms exerted the strongest influence on destination selection due to compliance with referents' opinions. Wine tourism studies corroborate this pattern, showing that perceived support from important others (e.g., partners, friends) amplified participation intentions [82]. Hsu et al. [83] further confirmed that recommendations from intimate contacts (e.g., family, close friends) influenced destination choices more powerfully than those from impersonal sources (e.g., agencies, colleagues). However, a recent study by Shi and Ren [77] failed to find a significant relationship between subjective norms and future intentions to watch e-sports in the context of e-sports viewership. Given this empirical evidence, the following hypothesis is proposed:

H2: *Individuals' subjective norms toward attending e-sports events are positively associated with their intentions to attend.*

A wealth of research demonstrates that PBC constitutes a key driver of intentions and actions as a non-volitional determinant. Studies highlight that individuals' confidence in their ability to perform specific behaviors significantly influences their decisions [26,37,44]. Enhanced perceived control over necessary resources and opportunities boosts engagement intentions [18]. Furthermore, Ajzen [18] established that control beliefs directly shape desires, intentions, and subsequent behaviors.

In tourism research, perceived behavioral control has repeatedly emerged as a critical factor. For instance, Han et al. [26] found that mainland Chinese tourists' perceptions of ease in traveling to South Korea significantly enhanced their visitation intentions. The authors suggested that tailored strategies—such as short, affordable packages addressing limited vacation time—could strengthen perceived control and amplify intent. Similarly, Song et al. [37] demonstrated that confidence in overcoming logistical barriers (e.g., transportation, language) positively predicted intentions to attend the Korean Oriental Medicine Festival. Sparks [44] identified time and cost constraints as core inhibitors of wine vacation intentions, emphasizing that addressing these barriers is essential for fostering participation. Additionally, Sparks and Pan [31] noted that Chinese tourists' financial and temporal resources critically influenced destination choices by shaping perceived control. Derived from this empirical evidence, the following hypothesis is proposed:

H3: *Individuals' perceived behavioral control over attending e-sports events is positively associated with their intentions to attend.*

In health psychology, the Health Belief Model posits that perceived vulnerability—comprising perceived severity and susceptibility to threats—drives protective actions by heightening threat salience [84,85]. Empirical evidence confirms that heightened risk perception motivates precautionary behaviors in contexts like HIV prevention [86] and skin cancer avoidance [87]. When individuals perceive personal exposure to health risks, they engage in preventative measures to mitigate infection likelihood [88,89].

In tourism, perceived vulnerability to contagious diseases (e.g., COVID-19) increases adherence to non-pharmaceutical interventions (NPIs), even when vaccines/treatments are unavailable [7,8]. NPIs (e.g., mask-wearing, distancing) reduce infection risks by minimizing exposure pathways [64]. Enhanced risk awareness further amplifies precautionary intent [90]. Derived from this empirical evidence, the following hypothesis is proposed:

H4: *Perceived risk of COVID-19 is positively associated with adherence to non-pharmaceutical interventions during e-sports event attendance.*

Research demonstrates that NPIs enhance resilience across tourism stakeholders (industries, consumers, organizations) during COVID-19 by providing accessible safeguards that mitigate perceived risks and enable continued travel engagement. For instance, Kim et al. [91] found that 62% of American tourists voluntarily adopted NPIs (e.g., masks, hand sanitization) during travel, with 38% avoiding unfamiliar crowds—reflecting behavioral adaptability to reduce infection anxieties.

Prior studies confirm NPIs' role in balancing risk perceptions and travel intent. For H1N1, Lee et al. [7] observed that tourists perceived NPIs as rational safeguards, lowering contagion fears to manageable levels while maintaining international travel plans. Similarly, Zhu and Deng [11] revealed Chinese tourists' COVID-19 risk concerns hinged more on psychological comfort than objective safety; adopting NPIs reduced anxieties, bolstering rural destination visitations. Liu et al. [92] synthesized that NPIs act as adaptive precautions—minimizing infectious disease threats while reinforcing participation confidence. Therefore, the following hypothesis is proposed:

H5: *Individuals' adherence to non-pharmaceutical interventions (NPIs) is positively associated with their intention to attend on-site e-sports events during COVID-19.*

Forward [93] determined that past behaviors strongly predict future actions independent of traditional TPB antecedents. Repeated performances cultivate context-driven

habits—automated responses activated by environmental cues rather than conscious intent [48]. Over time, frequent behavioral execution becomes reflexive, with ingrained response patterns overriding deliberative decision-making. Even non-habitual acts accumulate experiential knowledge, shaping beliefs and intentions about future engagement.

Empirical tourism studies corroborate this mechanism. For example, Phetvaroon [94] revealed that emotional destination attachments and accumulated knowledge reduced perceived risks among tsunami-affected tourists, motivating sustained revisits/recommendations to Phuket despite crises. Similarly, Bianchi et al. [95] demonstrated frequent Chile visits enhanced return intentions through risk-mitigating familiarity. In sustainable tourism contexts, Han and Kim [96] showed that past eco-friendly actions increased future engagement by reinforcing identity-driven habits. Song et al. [37] further found that repeated purchases lowered perceived risks, enabling consistent patronage.

Applied to e-sports events, recurrent participation establishes contextual habits (e.g., pre-event ticket purchases, venue navigation routines) while fostering confidence through accumulated familiarity. These ingrained patterns bypass novel behavior uncertainties, reducing reliance on deliberative TPB processes.

H6: *Individuals' past attendance behaviors are positively associated with their intentions to attend e-sports events.*

Figure 1 presents the proposed research framework and the hypotheses.

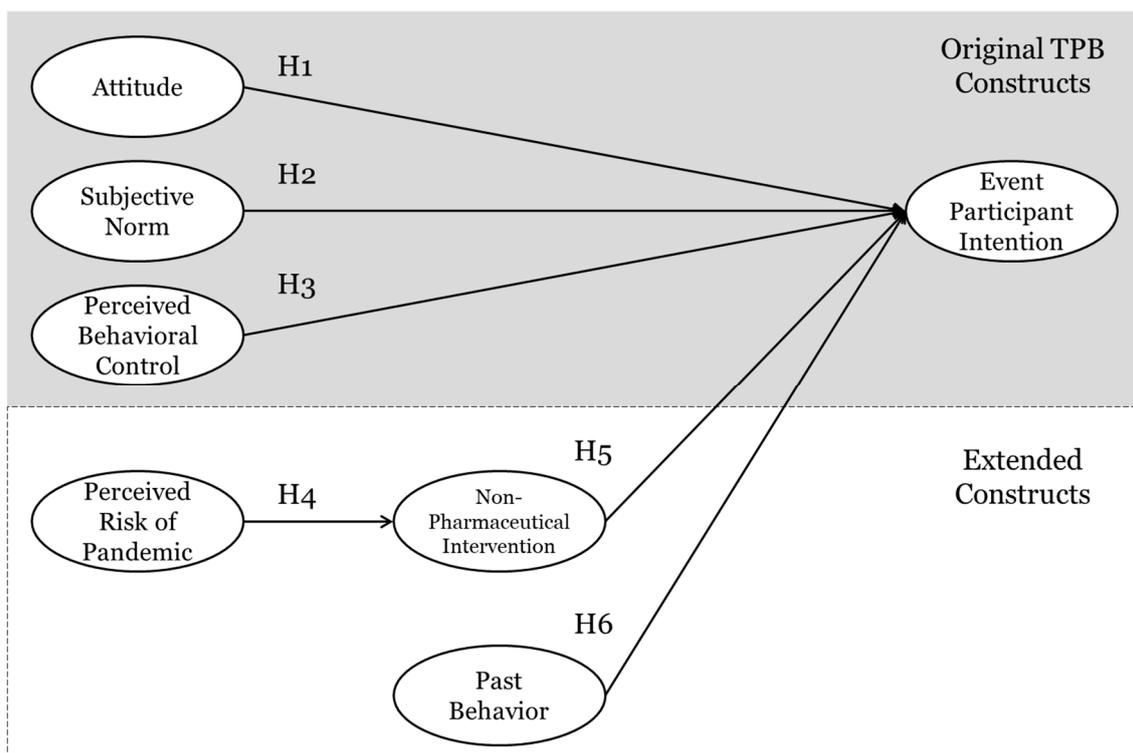


Figure 1. Research framework and proposed hypotheses.

3. Methodology

3.1. Measurements

The questionnaire used in this research was developed through an extensive literature review, containing attitude [7,97,98], subjective norms [7,37], perceived behavioral control [7,37,97], perceived risk for contracting COVID-19 [7], non-pharmaceutical interventions [7], past behavior [47,98], and event participation intention [97,99], as well as de-

demographic questions. All research questions were measured with a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree), except for the one item of past behavior, which was measured using a 4-point scale (0 = never, 1 = sometimes, 2 = most of the time, 3 = always).

The questionnaire also contained screening questions regarding the degree to which a respondent (1) is aware of the *League of Legends* World Championship and (2) plays the *League of Legends* game. An attention check question was also added, which asked the respondents to mark a particular answer. The respondents were informed of anonymity and confidentiality at the beginning of the survey.

3.2. Data Collection and Analysis

As the survey was conducted mainly with Chinese visitors, a back translation was performed to ensure that the original meaning of the survey items was retained. In this regard, a pilot test was conducted with 107 graduate students majoring in tourism. In this process, slight wording revisions were made to enhance the readability of the questionnaire.

This study used Wenjuanxing (wjx.cn), a professional Chinese platform for online surveys. Snowball sampling was used to collect the data. A survey invitation QR code was created and released from 14 October to 17 October 2020 in various game groups on Weibo, QQ, and WeChat, which are the three most popular social media platforms in China. These game groups are chat rooms, where fans of different games gather to discuss and share information. When people in one game group completed the questionnaire, they were asked to send it to other game groups. At the time of the survey, the numbers of active users in the QQ, WeChat, and Weibo chat groups were 834, 235, and 2217.

This study implemented several strategies to ensure the quality of the data collection. First, screening questions (awareness of the LOL championship and experience of playing LOL) were used to sample only relevant respondents. In doing so, 492 respondents did not answer the screening questions correctly. Second, the survey questionnaire included the attention check question. Those who failed to respond correctly were also excluded in the subsequent analysis. In total, 1199 respondents failed to answer correctly on the attention check question. Third, careful examination identified problematic responses. In our study, 72 responses were excluded due to their inconsistent responses to demographic questions (e.g., a minor with a higher education degree). Out of the 2178 initial responses, these thorough data quality management practice resulted in 415 valid responses for further analysis (utilizable response rate of 19.05%).

To test hypotheses using the collected data, structural equation modeling (SEM) was applied using SPSS 25 and AMOS 26. According to the two-step approach [100], the measurement model was first evaluated to determine whether the manifest measurement items adequately reflect the latent constructs before examining the structure model. The maximum likelihood estimation method was used to for confirmatory factor analysis (CFA) and structural equation modeling (SEM).

4. Results

4.1. Demographic Characteristics

Among the 415 samples, 339 respondents were male (81.7%) (see Table 1). The average age was 25 years old, and the mode was 22 years old, ranging from 16 to 43 years. While our sampling method—snowballing sampling—may cause potential bias, we compared our sample characteristics and the *League of Legends* fandom demographics. According to the *League of Legends* official survey that ran in January 2020, 3282 (87%) players were male out of a total of 3784 players who participated in the survey, implying that the gender ratio of the current study is close enough to that of the official survey data. The *League of Legends*

official survey shows that 75% of players were under the age of 25, which is similar to the results of the current study.

Table 1. Demographic characteristics of respondents.

Variables	n	%	Variables	n	%
Gender			Education		
Male	339	81.7	Elementary school	1	0.2
Female	73	17.6	(Junior) High school	14	3.4
Others	3	0.7	2-year vocational/technical school	90	21.7
Marital status			4-year university	289	69.6
Single	281	67.7	Postgraduate or above	21	5.1
Married	131	31.6	Personal monthly income (RMB)		
Divorced/separated	2	0.5	2499 or below	51	12.3
Widowed	1	0.2	2500–4999	47	11.3
Occupation			5000–9999	128	30.8
Self-employed	29	7	10,000–14,999	100	24.1
Employed for wages	235	56.6	15,000–19,999	48	11.6
Public official	49	11.8	20,000–24,999	22	5.3
Student	83	20	25,000–29,999	7	1.7
Homemaker	4	1	30,000 or above	12	2.9
Out of work and looking for work	8	1.9	Place of residence		
Out of work but not currently looking for work	2	0.5	Shanghai and neighboring areas (Anhui Province, Jiangsu Province, and Zhejiang Province)	80	19.3
Other	5	1.2	Places far from Shanghai	335	80.7

Regarding educational level, 289 respondents were 4-year university graduates (69.6%); 90 respondents were 2-year vocational or technical school graduates (21.7%); and 21 respondents were postgraduates or above (5.1%). In total, 281 respondents were single (67.7%). Additionally, 235 respondents were employed for wages (56.6%) and 83 respondents were students (20%). In regard to place of residence, 80 respondents were from Shanghai—the venue of the 2020 *League of Legends* World Championship—and neighboring provinces (19.3%); 335 respondents were from more distant places (80.7%). The great majority of respondents reported CNY 5000–CNY 9999 in personal monthly income, accounting for 30.8% of the respondents, followed by 100 respondents (24.1%) who reported an annual household income of CNY 10,000–CNY 14,999.

4.2. Confirmatory Factor Analysis

A CFA with a maximum likelihood estimation was conducted to evaluate the adequacy of construct measures. The results revealed that the measurement model fits with the data well (see Table 2). The validity and reliability of the research constructs were confirmed by assessing the average variance extracted (AVE), factor loading, and composite reliability (CR) [101]. The AVE values of latent variables range from 0.508 to 0.759. All factor loadings were significant at the 0.01 alpha level and greater than 0.5, except for one item, which was the perceived risk of COVID-19. Despite its lowest factor loading of 0.479, the item was retained due to its representative value for the construct. The lowest CR value of latent variables was 0.747.

Table 2. Measurement model.

Variables	Std. Coefficient **	Mean
Attitude (AVE = 0.721; CR = 0.928)		
I think that attending the Worlds 2020 final is wise.	0.797	4.25
I think that attending the Worlds 2020 final is pleasant.	0.861	4.25
I think that attending the Worlds 2020 final is exciting.	0.865	4.35
I think that attending the Worlds 2020 final is attractive.	0.862	4.29
I think that attending the Worlds 2020 final is valuable.	0.858	4.30
Subjective Norm (AVE = 0.744; CR = 0.936)		
Most people who are important to me support my decision to attend the Worlds 2020 final.	0.855	4.05
Most people who are important to me understand that I visit Worlds 2020 final.	0.845	4.05
Most people who are important to me agree with me about attending the Worlds 2020 final.	0.878	4.00
Most people who are important to me recommend my attending the Worlds 2020 final.	0.879	3.94
Perceived Behavioral Control (AVE = 0.658; CR = 0.905)		
Whether or not I attend the Worlds 2020 final is completely up to me.	0.698	4.10
I am confident that if I want to, I can attend the Worlds 2020 final.	0.806	3.82
I have enough money to attend the Worlds 2020 final.	0.871	3.71
I have enough time to attend the Worlds 2020 final.	0.821	3.83
I have an opportunity to attend the Worlds 2020 final.	0.850	3.65
Perceived Risk of COVID-19 (AVE = 0.508; CR = 0.747)		
It is dangerous to attend the Worlds 2020 final because of COVID-19.	0.479	3.47
COVID-19 is a very frightening disease.	0.845	4.04
I am afraid of COVID-19.	0.762	3.84
Non-Pharmaceutical Intervention for COVID-19 (AVE = 0.694; CR = 0.919)		
I will check the information about the situation for Shanghai's COVID-19 infection on the internet before attending the Worlds 2020 final.	0.801	4.33
I will read and check precautions about COVID-19 before attending the Worlds 2020 final.	0.857	4.24
I will disinfect my hands with alcohol frequently while visiting Worlds 2020 final.	0.800	4.27
I will wear a mask while visiting Worlds 2020 final.	0.861	4.32
I will carefully keep an eye on my health condition after returning from Worlds 2020 final trip.	0.844	4.36
Past Behavior (AVE = 0.759; CR = 0.863)		
I have frequently attended the League of Legends World Championship in the past three years.	0.919	3.80
How often have you visited the League of Legends World Championship during the past three years? *	0.821	2.79
Event Participation Intention (AVE = 0.712; CR = 0.925)		
I am willing to attend the Worlds 2020 final.	0.814	4.42
I plan to attend the Worlds 2020 final.	0.866	4.26
I will make an effort to attend Worlds 2020 final.	0.883	4.08
I intend to go to the Worlds 2020 final.	0.856	4.28
I will certainly invest time and money to attend the Worlds 2020 final.	0.795	4.35

Maximum Likelihood (ML) $\chi^2_{(384)} = 1201.263$ ($p < 0.001$), CFI = 0.920, TLI = 0.909, RMSEA = 0.072. * Four-point scale was used (0 = never, 1 = sometimes, 2 = most of the time, 3 = always). ** All measures are statistically significant at 0.001 level.

The discriminant validity was examined by comparing the square root of the AVE of each latent construct and its inter-construct correlation. All square roots of the AVE displayed on the diagonal exceeds the inter-construct correlation, indicating that the discriminant validity of measurement model was confirmed [101] (Table 3).

Table 3. Square root of AVE and correlation.

	ATT	SN	PBC	RISK	INT	PB	EPI
ATT	0.849						
SN	0.665	0.863					
PBC	0.495	0.670	0.811				
Risk	0.380	0.307	0.229	0.713			
INT	0.673	0.463	0.389	0.546	0.833		
PB	0.380	0.609	0.580	0.279	0.367	0.871	
EPI	0.575	0.634	0.638	0.353	0.644	0.695	0.844
AVE	0.721	0.744	0.658	0.508	0.694	0.759	0.712

ATT = attitude, SN = subjective norm, PBC = perceived behavioral control, RISK = perceived risk of pandemic, INT = non-pharmaceutical intervention, PB = past behavior, EPI = event participation intention.

4.3. Hypothesis Testing

The results of the SEM indicated that the proposed model has a good fit with the data (see Figure 2). The results showed that attitude ($\beta = 0.058$, $p = 0.263$) and subjective norms ($\beta = 0.070$, $p = 0.304$) are not significantly associated with event participation intention, thereby not validating hypotheses 1 and 2. On the other hand, perceived behavioral control ($\beta = 0.225$, $p < 0.001$), non-pharmaceutical interventions ($\beta = 0.368$, $p < 0.001$), and past behavior ($\beta = 0.404$, $p < 0.001$) are significantly associated with intention, accepting hypotheses 3, 5, and 6. Lastly, perceived risk of pandemic ($\beta = 0.619$, $p < 0.001$) was shown to be significantly associated with non-pharmaceutical interventions, validating hypothesis 4. Among all the antecedents of event participation intention, past behavior showed the greatest impact, followed by non-pharmaceutical intervention; perceived behavioral control showed the weakest influence. The results showed an adequate level of explanatory power for non-pharmaceutical intervention ($R^2 = 0.383$) and event participation intention ($R^2 = 0.668$). A series of effect size tests for each significant exogenous variable was also conducted. Three significant antecedents of event participation intention show the effect sizes (f^2) of 0.036, 0.334, and 0.229 for perceived behavioral control, non-pharmaceutical intervention, and past behavior, respectively. The effect size of the perceived risk of pandemic was 0.621. Additionally, an indirect effect of the perceived risk of pandemic on event participation intention via non-pharmaceutical interventions was tested. The standardized coefficient was shown to be significant ($\beta = 0.227$, $z = 6.022$, $p < 0.001$). This finding implies the partial mediating effect of non-pharmaceutical intervention between the perceived risk of pandemic and event participation intention.

Based on our findings, hypotheses testing results are provided in Table 4. Four null hypotheses were rejected.

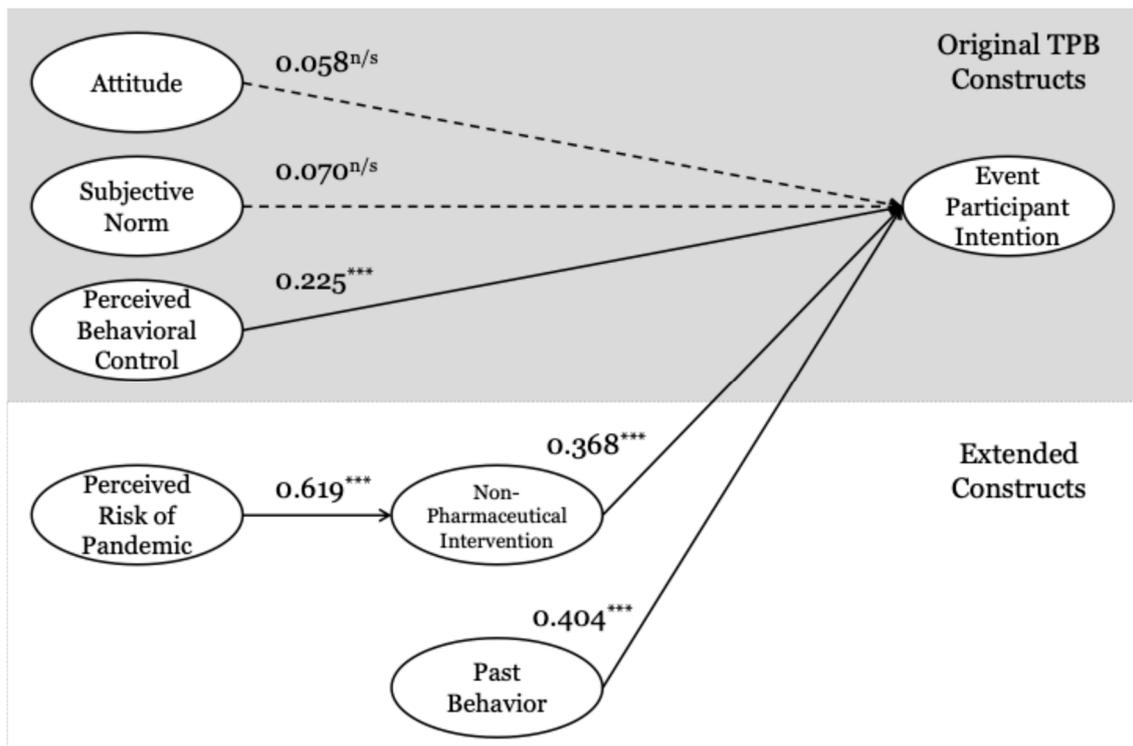


Figure 2. Results of structural equation modeling. ML $\chi^2_{(361)} = 1225.288$ ($p < 0.001$), CFI = 0.910, TLI = 0.899, RMSEA = 0.076. *** $p < 0.001$; n/s $p > 0.05$.

Table 4. Hypotheses testing results.

Hypotheses	Results
H1: Individuals' attitudes toward attending on-site e-sports events are positively associated with their intentions to participate.	Failed to reject
H2: Individuals' subjective norms toward attending e-sports events are positively associated with their intentions to attend.	Failed to reject
H3: Individuals' perceived behavioral control over attending e-sports events is positively associated with their intentions to attend.	Reject
H4: Perceived risk of COVID-19 is positively associated with adherence to non-pharmaceutical interventions during e-sports event attendance.	Reject
H5: Individuals' adherence to non-pharmaceutical interventions (NPIs) is positively associated with their intention to attend on-site e-sports events during COVID-19.	Reject
H6: Individuals' past attendance behaviors are positively associated with their intentions to attend e-sports events.	Reject

5. Conclusions

5.1. Conclusion

This research extended the TPB to evaluate determinants of intentions to attend e-sports events during the COVID-19 pandemic, integrating perceived risks, NPIs, and past attendance behaviors. While core TPB principles partially held, the pandemic context reshaped traditional motivational drivers. Perceived behavioral control emerged as the sole significant TPB predictor of intentions ($\beta = 0.225$), highlighting the critical influence of financial and logistical barriers—non-volitional constraints over motivational factors.

Notably, attitudes and subjective norms showed no predictive power, likely due to the homogeneous sample's enthusiasm skew, where participants held uniformly positive attitudes toward e-sports, while autonomous decision-making minimized normative influences. As shown in Table 2, survey participants in our study (i.e., Gen Z e-sports fans) already expressed uniformly very positive attitudes (over 4 out of 5 points on the scale) toward attending on-site events. Consequently, in this study, we identified the presence of a ceiling effect related to excessively positive attitudes across the sample as a possible reason why attitude in the original TPB was not a significant predictor. Meanwhile, subjective norm was not a significant predictor of event participant intention, consistent with earlier studies [102,103]. Those studies repeatedly confirmed that the younger generation and highly self-directed groups may not care too much about social approval, as young individuals are possibly less driven by peer pressure and more influenced by personal or health-related beliefs.

The pandemic introduced risk–benefit calculus into intention formation. High perceived COVID-19 risks elevated precautionary intentions, with attendees adopting NPIs (masking, sanitizing, health monitoring) to mitigate contagion fears. By integrating pandemic risks and precautionary measures into the TPB, this study clarifies how tourists negotiate risk–benefit trade-offs and evolving health constraints when evaluating e-sports event participation. These insights advance behavioral intention models for crisis contexts while offering actionable strategies for tourism recovery.

5.2. Theoretical Implications

This research demonstrates that the relative explanatory power of standard TPB predictors—attitudes, subjective norms, and perceived behavioral control—varies across behavioral contexts [18]. In contrast to studies identifying positive impacts of these factors on travel intentions [15,39,40,42,78], perceived control over resources and contextual constraints emerged as the sole significant predictor of e-sports event attendance intentions. Non-volitional factors thus superseded volitional motivational drivers for this population.

Our results align with earlier studies conducted at events, festivals, conventions, and broader tourism contexts with different geographical and cultural backgrounds [103–105]. For example, among festival goers with lifestyles centered on work and fashion in Asian culture, both attitude and subjective norms were not significant predictors of intention to visit [104]. In the context of mega-events during the Riyadh season, while subjective norms and PBC significantly predicted visit intention, attitude was found to have no meaningful effect [105]. Similarly, in a study on low-carbon travel conducted in Asia, subjective norm was not a significant predictor, and attitude showed only a weak influence among younger generations [103]. Collectively, these findings suggest that the predictive power of TPB constructs varies across different behavioral contexts and situational factors. Notably, the level of involvement and the strength of personal interest appear to play a critical role in shaping the relative importance of TPB constructs.

These results align with Madden et al. [106], who asserted that perceived capability outweighs attitudinal or normative orientations in contexts where behavioral feasibility hinges on objective resources. When external barriers (e.g., financial/logistical hurdles) limit participation, control beliefs override subjective preferences. Expanding the TPB to incorporate contextual determinants—ticket pricing fairness, pandemic risks, precautionary measures, and past behaviors—provides nuanced insights into decision-making architectures under disruption.

Furthermore, this study highlights the value of expending the TPB to incorporate crisis-related constructs, such as perceived risk and NPIs. In our study, risk perception regarding COVID-19 increased attendees' intention to adopt NPIs (masking, sanitizing,

health monitoring), indicating NPIs mitigate the fear of COVID-19. This aligns with health psychology frameworks where risk perceptions motivate protective behaviors [89]. NPIs enhanced perceived control, bridging the gap between residual anxieties and participation desires. Moreover, our approach, incorporating perceived risk and NPIs, has been successful in risk-related tourism studies [7,22,107]. Our result confirmed that perceived risk may act as both a barrier and a behavior-shaping mechanism [18,22].

Fourth, past attendance significantly influenced future intentions through familiarity-driven pathways. Repeated participation cultivated automated behavioral scripts, reducing uncertainty in pandemic conditions. This aligns with the habit theory, stating that environmental cues (e.g., event announcements) trigger reflexive engagement, bypassing deliberative TPB processes [48]. For devoted enthusiasts, accumulated experience fostered perceived safety and confidence, sustaining intentions despite external threats.

Lastly, our findings contribute to the growing body of the literature regarding tourists' decision-making processes when confronted with uncertainty and disruption. In our study, the implementation of NPIs by tourists as a response to perceived risk during the decision-making process of on-site visits can be seen as a manifestation of behavioral resilience and adaptive capacity, as discussed by Prayag [108] and Becken and Hughey [109]. This perspective expands upon the conventional understanding of intention formation and provides insight into how individuals adapt and continue their behaviors during crises. Our study contributes to theoretical knowledge by documenting the adaptive responses employed by tourists to navigate unfamiliar and dangerous environments and sustain interest in tourism activities despite external challenges.

5.3. Practical Implications

Practically, this study offers actionable insights to sustain tourism and event participation by elucidating strategies that address emerging barriers, not only during pandemics but also amid various forms of economic and social uncertainty or disruption. Findings highlight the importance of proactively monitoring and managing risk perceptions, educating audiences on preventive measures, and strategically calibrating event safeguards to balance safety with engagement. Indeed, Zhang et al. [110] reviewed the COVID-19 control strategies utilized by the Tokyo Summer Olympics and the Beijing Winter Olympics and suggested several effective NPI strategies, such as (1) the bubble and closed-loop system, (2) social distancing, (3) mask mandates during the events, and (4) operating more testing and medical centers. Their paper further emphasized the frequent reminders given to event attendees regarding preventive measures. To respond to their calls, real-time updates on NPIs via official event apps can keep attendees informed, thereby reinforcing their confidence and perceived control. Controlled, time-slot-based queuing systems—using either QR codes or virtual check-ins—can also ease logistical concerns, reduce crowdedness, and support a smoother flow of people within the venue.

Structurally enhancing control (e.g., equitable access) and familiarity (e.g., repeated positive experiences) can mitigate pandemic impacts. Although the current research was conducted in the context of the COVID-19 pandemic, integrating context-specific determinants helps increased understanding and its applicability to future disruptions caused by economic crises, geopolitical instability, environmental challenges, or other unpredictable situations.

Strategically, enhancing fans' perceived behavioral control through equitable ticket distribution systems can sustain event tourism longevity. Unlike inflated secondary markets that enable scalping and restrict access to affluent subsets, ID-verified lotteries or transparent allocation mechanisms mitigate barriers by ensuring reasonable pricing and availability. These systems bolster capability beliefs across diverse demographics, maxi-

mizing aggregate intentions beyond immediate revenue. Fair access cultivates grassroots enthusiasm and safety perceptions, fostering durable loyalty. Allowing attendees to opt in to designated comfort zones (e.g., mask-required sections or open seating) can further enhance autonomy and trust without imposing rigid mandates—an approach especially effective among Gen Z audiences.

Furthermore, frequent past attendance reinforced familiarity-driven safety perceptions, which bolstered reattendance intentions beyond reasoned TPB pathways. Habitual, emotional, and pragmatic factors collectively shaped decisions amidst turbulence. Event organizers should prioritize consistent, high-quality event experiences, which lead to an increase in attendees' trust and possibly intentions to participate during such challenging periods. To complement these efforts, pre-event communications echoing past positive experiences—such as reminders of previous attendance benefits or loyalty benefits—can activate habitual engagement. Of course, maintaining clear and assuring communication and policies (e.g., flexible refunds, adaptive scheduling, and event format adjustments) could enhance one's safety and stability in broader uncertainties.

Notably, heightened COVID-19 risk perceptions initially suppressed intentions by amplifying safety concerns, partly due to sensationalized media coverage. However, adopting non-pharmaceutical interventions (e.g., masking, sanitization) alleviated vulnerability anxieties, enabling individuals to reconcile health risks with participation desires. This additional measure should be incorporated into event planning procedures in challenging times, which requires holistic attention to various factors. In-venue behavioral nudges—such as visual cues for distancing or rewards for safe behavior—can subtly guide participants toward compliance. Additionally, leveraging social media to showcase peer engagement with safety behaviors (e.g., influences or attendee stories using hashtags) can shift perceived norms without direct pressure. Integrating both structural and psychological factors that connect with the external situation into strategic event planning enables event organizers to proactively overcome difficulties and strengthen attendees' loyalty, resulting in long-term event sustainability.

5.4. Limitations and Future Research

While this study examined multiple determinants of e-sports event attendance intentions, measuring actual attendance behavior would strengthen predictive validity given the uncertainty in intention–behavior translation over time [111,112]. Future research should incorporate post-intention behavioral tracking to validate findings, aligning with Fishbein and Ajzen's [20] specificity principle for intention measurement (e.g., discrete timeframes, contextual clarity).

The China-centric sample may limit generalizability due to regional disparities in e-sports infrastructure development and COVID-19 policy impacts. For instance, Tier-1 cities (e.g., Shanghai) have denser event networks and stricter pandemic protocols than emerging regions. Expanding diversity through multinational samples—particularly in markets with varied e-sports maturity (e.g., South Korea, Germany, Brazil)—could clarify how developmental stages and risk perceptions moderate motivational pathways [26,107].

Further model augmentation with supplementary determinants like electronic word-of-mouth (eWOM) influence or hedonic value may enhance explanatory power. Comparative studies contrasting the TPB with frameworks like the Model of Goal-Directed Behavior could reveal nuanced decision-making mechanisms [33]. For example, the MGDB's integration of desire and anticipated emotion might better capture impulsive attendance behaviors among avid fans.

Lastly, this study employed snowball sampling for the data collection. Despite its widespread use in qualitative research, snowball sampling has limitations related to the

generalizability of research findings. Future research should utilize more sound sampling procedures to enhance the representativeness of the data.

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