






## An empirical study of visitors' motivations and actual behavior in dark tourism sites using structural equation modeling: Bangladesh perspective

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### ABSTRACT

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This study applies the Theory of Planned Behavior (TPB) to explore visitors' motivations and their actual behavior at dark tourism sites (DTS) in Bangladesh. It integrates four key motivational dimensions—national identity, educational-historical exploration, empathy, and recognition—to assess how these motivations influence visitors' attitudes (AT), behavioral intention (BI), and actual behaviors (AB). A total of 402 valid questionnaires were collected and examined using confirmatory factor analysis to assess the fit of the measurement model. This research utilized structural equation modeling (SEM) to assess the seven hypotheses. Empirical results show that visitors' motivation has a positive impact on their attitude (AT) and behavioral intention (BI). Subjective norms (SN) and perceived behavioral control (PBC) are linked to the visitors' intentions, and BI is linked to their AB. But AT to AB and AT to BI were not statistically significant. The study collected the information during the COVID-19 pandemic, without controlling for its potential effects, using a self-reported questionnaire from a single source. The research contributes to the current knowledge by examining visitors' motivations and exploring their intentions and actual behavior toward DTS in the tourism field.

**Contribution/Originality:** This study looks at dark tourism in a new way by combining important driving forces with subjective norms (SN) and perceived behavioral control (PBC) in the Theory of Planned Behavior (TPB). It uniquely examines how these elements influence both behavioral intentions (BI) and actual behavior (AB) in a Bangladeshi context.

## 1. INTRODUCTION

Dark tourism is the phenomenon of visiting places associated with death, tragedy, or disaster, which creates a fascinating intersection between history, memory, and human curiosity (Lennon & Foley, 2000; Seaton, 1996), provoking deeply emotional responses from millions of visitors around the world (The Growing Trend of Dark Tourism, 2022). Dark tourism has increasingly gained prominence in the travel industry worldwide, where statistics show that in the 2022 it's about a \$30 billion and estimated value reaching US\$ 36.5 billion by 2032 (Future Market Insights, 2022; Hohenhaus, 2022). People are increasingly drawn to these places not just for the

history but also for the attractions but also to gain insights into their cultural and moral values (Stone, 2012). This growing tourist interest highlights the changing motivations behind dark tourism. This makes it an important topic for further academic research (Rivera, 2008; Wilson, 2008).

Ample studies have been carried out to look at the different insides of the rapidly growing dark tourism sector (e.g., (Abraham, Pizam, & Medeiros, 2022; Allman, 2017; Juan, Kang, Lee, Choi, & Reisinger, 2020; Lewis, Schrier, & Xu, 2021; Sarkar, Chakraborty, & Valeri, 2022; Schneider, Anghel-Vlad, Negrut, Goje, & Para, 2021)). Particularly, research has focused on the explanations of dark tourism (Stone, 2016) exploring tourists' motivations (Ivanova & Light, 2018; Kang, Lee, & Han, 2018; Kim, Lee, & Kim, 2021; Zheng et al., 2018) and identifying different types of DTS (Bird, 2013; Casella & Fennelly, 2016; Murphy, 2015; Yankovska & Hannam, 2014). Despite this wealth of research, Lewis et al. (2021) stated that there is still a lack of in-depth knowledge about the motivations and intentions of visiting dark tourist sites and yet lacking to explore the general pattern of the association between motivations and visit intentions. This calls for a more comprehensive analysis needed to investigate the relationship between visitors' motivation, dark tourism intentions, and individual's actual behavior after visiting the DTS (Juan et al., 2020).

Previous research highlights that complex mixes of social and psychological variables influence motivation for visiting dark historic sites (Sharpley & Stone, 2009). Light (2017) highlighted "motivation," "visitors' experiences," and "sense of identity" as major research interests of dark tourism researchers and recommended that further research be conducted to explore visitors motivations. While much study has examined visitor motivations (e.g., (Ivanova & Light, 2018; Kang et al., 2018; Lewis et al., 2021; Zheng et al., 2018) and BIs to visit DTS, there remains a lack of insights into how these factors influence actual visitor behaviors. This examination aspires to address this gap by looking into the underlying motivations for visiting dark tourism sites, specifically focusing on those connected to Bangladesh's War of Independence.

After a brutal nine-month liberation war characterized by genocide, mass displacement, and atrocities, Bangladesh gained independence from Pakistan in 1971 (Rahman, 2000). Historical sites related to this war, such as the Liberation War Museum and various genocide memorials, have become important destinations for visitors (Sultana, 2024). These places serve not only as reminders of the war but also as symbols of patriotism and national identity of the country. However, despite their importance, there is very insignificant information on visitor numbers or motivations for visiting these DTS in Bangladesh (Molla, Lima, & Tareq, 2022). Understanding the motivations of visitors to these sites is crucial for both academic research and heritage management.

This study aims to analyze the collective motivation of visitors employing four well-defined motivational sub-dimensions: 'National Identity' taken from dark tourism literature (Wang, Shen, Zheng, Wu, & Cao, 2021); 'Educational-historical exploration,' taken from Wang et al. (2021). 'Empathy,' taken from Zheng et al. (2018); and 'Recognition' taken from Lee (2016); Yan, Zhang, Zhang, Lu, and Guo (2016); Prayag, Suntikul, and Agyeiwaah (2018), and Wang et al. (2021) in the context of Bangladesh. So, in this study aggregate motivation to visit DTS in conjunction with TPB components to achieve the following research objectives (RO):

(RO1) examine the dark visitors' intents to visit DTS.

(RO2) looks into the link between visitors' intentions and their actual behavior towards DTS.

Since TPB has been used in numerous research studies in the past and also in the dark tourism research area, this study used it to focus attention on why visitors are attracted to visiting DTS in particular.

The paper is structured as follows: Section 2 explains the theoretical background, discussing the importance of dark tourism, tourist motivations, and the proposed theoretical framework based on the TPB theory. Sections 3 and 4 describe the sample and methods, including an explanation of SEM. Finally, Section 5 presents the main conclusions, implications, and considerations for future research.

## 2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### 2.1. Dark Tourism

Dark tourism refers to "visitations to places where tragedies or historically noteworthy deaths have occurred and that continue to impact our lives" (Tarlow, 2005). Dann and Seaton (2001) observed that dark tourism pertains to events associated with death, disasters, violence, tragedy, or crimes against humanity. Light (2017) reviewed dark tourism and then a tourism-related articles published between 1999 and 2016, discovering numerous works on different types of DTS. These include locations associated with war and conflict, such as battlefields and war cemeteries, Holocaust-related sites like concentration camps and memorials, as well as prisons and detention centers. Sharma and Nayak (2019) explored the direct and indirect effects of visitors' value on satisfaction and loyalty intentions in the context of Indian dark tourism. In another study, Sharma and Nayak (2020) confirmed consistent direct and indirect impacts of experience quality on loyalty intentions in dark tourism, mediated by perceived value and satisfaction. Sarkar et al. (2022) examined Indian citizens' perceptions of dark tourism within the Indian context. Motivations for visiting DTS significantly influence visitors' experiences and post-visit intentions in Nepal, often linked to demographic factors such as nationality and travel patterns (Min, Yang, & Thapa-Magar, 2021). Research on the subject of dark tourism in Bangladesh is limited. However, we discussed national identity and dark tourism, particularly placing Ekushey February in a broader context.

### 2.2. Visitors' Motivation Towards Visiting DTS

When surrounded by both internal and external stimuli, tourists gain motivation based on their psychological needs and desires, and they then attempt to make decisions based on these motivations (Kim et al., 2021). Beh and Bruyere (2007) mentioned that the visitors' motivation to visit locations focuses on the internal factors that drive the BIs. Many researchers have shown that travel motivating variables are multidimensional because people try to meet a lot of different needs and wants at the same time (Kim et al., 2021; Pike, 2008). Visitors visit these dark tourism locations for educational reasons, entertainment, and to strengthen national pride (Cohen, 2011). According to several other researchers, the primary motivations for visiting DTS are education, memory, the development of national identity, and interest and curiosity about history (Farmaki, 2013; Ivanova & Light, 2018; Kang et al., 2018; Zheng et al., 2018).

The reason for the visit determines motivation, and the dark experience is subjective since each visitor sees it differently. In literature, the multifunctional character of places showing death, arising from the numerous symbolic meanings of the dead on display, is recognized. Scholars document death-related locations as sites of remembering, grieving, spiritual experiences, national identity demonstrations, educational experiences, or just a random stop (Logan & Reeves, 2009). Moreover, factors like "memory," "gaining information and awareness," and "exclusiveness" drive individuals to visit Holocaust concentration camp memorial sites (Isaac, Nawijn, van Liempt, & Gridnevskiy, 2019). A review of the available literature demonstrates a diverse variety of reasons for visiting dark-tourism destinations (Wang et al., 2021; Zheng et al., 2018). The history of various places in the context of dark tourism may lead to a variety of motivations. Explicitly, this study mainly focuses on visitors' four motivations regarding 'national identity,' 'educational-historical exploration,' 'empathy,' and 'recognition,' which are some of the most common motivating factors for visiting DTS, according to the literature (Isaac & Çakmak, 2014; Lee, 2016; Wang et al., 2021; Zheng et al., 2018).

#### 2.2.1. Motivation-National Identity

People in a lot of different academic fields have been looking into how collective memory works and how it affects national identity in recent years (Light, 2017; Tinson, Saren, & Roth, 2015). National identity is the collective identity most strongly tied to locations of death, sorrow, or pain (Ashworth & Hartmann, 2005; Seaton, 2009). The desire to enhance one's national identity influences visitor visits to dark tourism areas/sites (Farmaki,

2013). The study on dark tourism established national identity as an essential topic of visitors' experiences (Çakar, 2020; Tinson et al., 2015). Anderson (1991) shows that visitors' experiences of visiting DTS (and occasionally return trips) are supported by national pride, the duties of citizenship, and adhering to an "imagined community." Within the realm of dark tourism, the study found the more real the visitors' experience, the greater their national identity and desire to return (Wang et al., 2021).

### 2.2.2. Motivation-Educational - Historical Exploration

Many dark tourism destinations try to educate visitors about the past, such as the causes of tragic events and how victims dealt with them (Bhati et al., 2021; Jang, Sakamoto, & Funck, 2021; Kang et al., 2018; Wang et al., 2021; Zheng et al., 2018). Visiting memorial places in China is analogous to "red tourism," which is state-sponsored educational tourism aimed at enhancing national identity and preserving shared memory (Zhao & Timothy, 2015). A study by Stone (2012) highlighted the significance of dark tourism for fostering learning at Ground Zero in New York City while also emphasizing its potential to enhance public interest. Similarly, in Japan, tourism places a strong emphasis on educational components, as school trips, which are officially organized by secondary schools for educational purposes, are common. This educational focus is also evident in Taiwan and Korea (Jang et al., 2021). Drawing from this understanding of dark tourism and its educational legacy, Japan has developed a blend of both, with Hiroshima and Fukushima serving as prime examples (Jang et al., 2021). Furthermore, a study by Grinfelde and Veliverronena (2021) aimed to assess the significance of students' educational experiences in DTS. The findings revealed that students recognize the educational value of DTS, and those sites that are better designed tend to have a greater post-visit impact.

### 2.2.3. Motivation - Empathy

Empathy is important in the background of dark tourism because it allows tourists to emotionally identify with the historical tragedies and suffering of humanity linked with these places. In the tourist sector, empathy is important, especially when it comes to locations where tragedies have occurred (Tucker, 2016). Schneider et al. (2021) findings demonstrate that empathy for the victims serves as a compelling incentive to visit museums and locations associated with the dead, suffering and revolution. Tarlow (2005) asserts that individuals visiting dark sites, especially those linked to the Holocaust, are driven by curiosity, suggesting that visiting such places has become a social norm. According to the findings of Deutsch (2014), visitors chose to visit dark-tourist sites (apartheid memorials in Africa) for educational, interest, empathy, and curiosity reasons. Empathy in dark tourism helps visitors have a more complete understanding of the feelings of suffering and loss experienced by victims and survivors of sad occurrences (Stone, 2012). It promotes a sense of compassion and connection by inviting users to consider and interact with the human narratives present on these websites (Tarlow, 2005). Yan et al. (2016) found that people who are curious about the tragedy or other related topics, as well as how visitors feel when they visit "dark" places, are more likely to interact intellectually. According to Isaac and Çakmak (2014) research, one of the motivations for visiting the Westerbork dark site is curiosity.

### 2.2.4. Motivation - Recognition

Recognizing and remembering the victims, survivors, or historical events related to these locations acts as a primary motivator for travelers participating in dark tourism. Tourists come to pay their respects, remember, and show sympathy with those impacted by the tragic events (Sharpley & Stone, 2009). Previously, locations and events connected to war and atrocities were evaluated from the perspective of heritage tourism, but researchers later added "dark" to recognize historical sites intimately tied to death and suffering (Dimitrovski, Senić, Marić, & Marinković, 2017). Previous studies according to Thurnell-Read (2009), indicated that visitors' increased connection to the dark place, higher grasp of historical facts, and affirmation of humanist principles were all significant as motivating

factors. Kidron (2013) shows how the visitors made descendants recognize the presence of their ancestors in the dark places. Visitors gain a stronger connection to the historical and cultural value of DTS by acting in acts of recognition, developing empathy, and a feeling of shared remembering.

### 2.3. TPB, Theoretical Framework and Hypothesis Development

The TPB theory is an extension of the Theory of Reasoned Action (TRA) (Ajzen, 1985; Hill, Fishbein, & Ajzen, 1977), and both theories suggest that individuals make rational decisions about engaging in specific actions by evaluating the information available to them. This is what Stewart, May, and Ledgerwood (2015) say: the three main things that make up TPB are PBC, SN, and AT toward the conduct. Previous tourism research (Chen & Tung, 2014; Dwivedi, Pandey, Vashisht, Pandey, & Kumar, 2022; Han, 2015; Han, Hsu, & Sheu, 2010; Wang, Wang, Wang, Li, & Zhao, 2018) has frequently applied the TPB, demonstrating its effectiveness in this field. Researchers studying dark tourism are also utilizing TPB is also now being used in dark tourism research (Abraham et al., 2022; Allman, 2017; Juan et al., 2020; Lewis et al., 2021; Schneider et al., 2021).

Hsu and Huang (2012) presented an enhanced TPB model to study relationships between model components, including motivation and empirical visitor behavior. The study's findings revealed that the expanded TPB model incorporating visitor motives suited the data quite well. In Hsu and Huang (2012) extended model, researchers added visitors' motivations for extending the model, and here in this study, that model is used, and here visitors' motivations towards DTS are considered, where national identity, educational-historical exploration, empathy, and curiosity, as well as affirmation and recognition, are underlying dimensions of motivations.

In the study of Lewis et al. (2021), where they merged TPB, the study examines four dark tourism constructs—dark experience, engaging entertainment, unique learning experience, and casual interest—to explore visitors' motivations, intentions, and the relationship between these motivations and visit intentions on the DTS (p. 1). The findings suggest a connection between the TPB and these four dark tourism constructs.

Abraham et al. (2022) looked into how visitors' attitudes, motivations, and emotions affect the image of a holocaust tourism site. They employed Hsu and Huang (2012) extension of the TPB model as the theoretical framework for their study. According to the findings, strong emotions play a big role in people's plans to visit DTS. Juan et al. (2020) examined the expanded TPB in conjunction with visitors war views to uncover the underlying features of these views. The expanded TPB was examined in combination with visitors' views on war to derive the underlying features of their views on war. The research showed that views on war and TPB behavioral components had positive and substantial connections. The findings also showed that TPB behavioral components played an important role in the link between views on war and BIs.

To analyze the motives and intents of visitors visiting dark tourism places, Allman (2017) combined the Push-Pull Factor Theory, the TPB, and dark tourism components "(i.e., dark experience, engaging entertainment, unique learning experience, and casual interest)" to produce a new theoretical framework (p. 1). And the study concluded that the theoretical model incorporating visitors motivations accurately reflected the facts. In the Romanians dark tourism site context, Schneider et al. (2021) used TPB to determine the diversified motivations to visit and behavioral manifestations of Romanian visitors. The study of Hsu and Huang (2012) showed that motivation for visiting a destination is positively associated with visitors' attitudes and behavioral intentions toward visiting the destination. According to the research of Baloglu (2000); Yoon and Uysal (2005), and Çelik and Dedeoğlu (2019), motivations have a favorable influence on behavioral intention or influence intention to visit. As per Lepp (2007) research, citizens' good sentiments about tourism translate into genuine pro-tourist behavior. In the short run, the results of Pike's longitudinal study revealed a basic congruence between attitude and behavior (Steven Pike, 2006). As a result, following hypotheses have been proposed:

*H<sub>1</sub>: Visitors' motivations to visit DTS have a positive impact on their attitude.*

*H<sub>2</sub>: Visitors' motivations to visit DTS have a positive impact on their behavioral intention.*

*H<sub>2</sub>: Attitudes towards visiting DTS have a positive effect on visitors' actual behavior*

Ajzen (1991) defined AT as the extent to which an individual views a behavior as positive or negative, and Subjective Norm (SN) as "the perceived social pressure to perform or not to perform a particular behavior" (p. 188). PBC refers to the degree of an individual's perceived control over a specific behavior or their capacity and confidence to carry out the action. Juan et al. (2020) and Lewis et al. (2021) have studied dark tourism destinations. In both of these studies, they found that visitors' behavioral intentions are positively influenced by their attitudes about dark tourism, SN, and PBC over visiting a DTS. PBC is a crucial factor in determining people's intentions (Bhutto, Liu, Soomro, Ertz, & Baeshen, 2020), although SN has a noteworthy persuade on people's intentions to act (Huang, Law, Geng, Niu, & Kettunen, 2022). As a result, following hypotheses have been proposed:

*H<sub>1</sub>: Visitors' BI is positively influenced by their attitudes.*

*H<sub>2</sub>: Visitors' BI is positively influenced by their SN.*

*H<sub>3</sub>: Visitors' BI is positively influenced by their PBC.*

When there is a chance to act, the TPB postulated that intention leads to behavior (Ajzen, 1985). Intention is characterized as a sign that a person is primed to lug out a specific action, and it is also seen as the primary cause of behavior (Ruangkanjanases et al., 2020). Actual behavior, according to Norman and Smith (1995), is the consequence of an activity that was initiated by a behavioral intention. Furthermore, Tommasetti, Singer, Troisi, and Maione (2018) demonstrated that behavioral intention influences restaurant consumers' actual behavior. Also, the findings of Javed, Tučková, and Jibril (2020) indicate that behavioral intention has a significant effect on the actual behavior of visitors. As a result, following hypothesis has been proposed:

*H<sub>4</sub>: BI has a positive effect on actual behavior.*

Figure 1 presents the proposed framework, highlighting the relationships between key variables within the study.

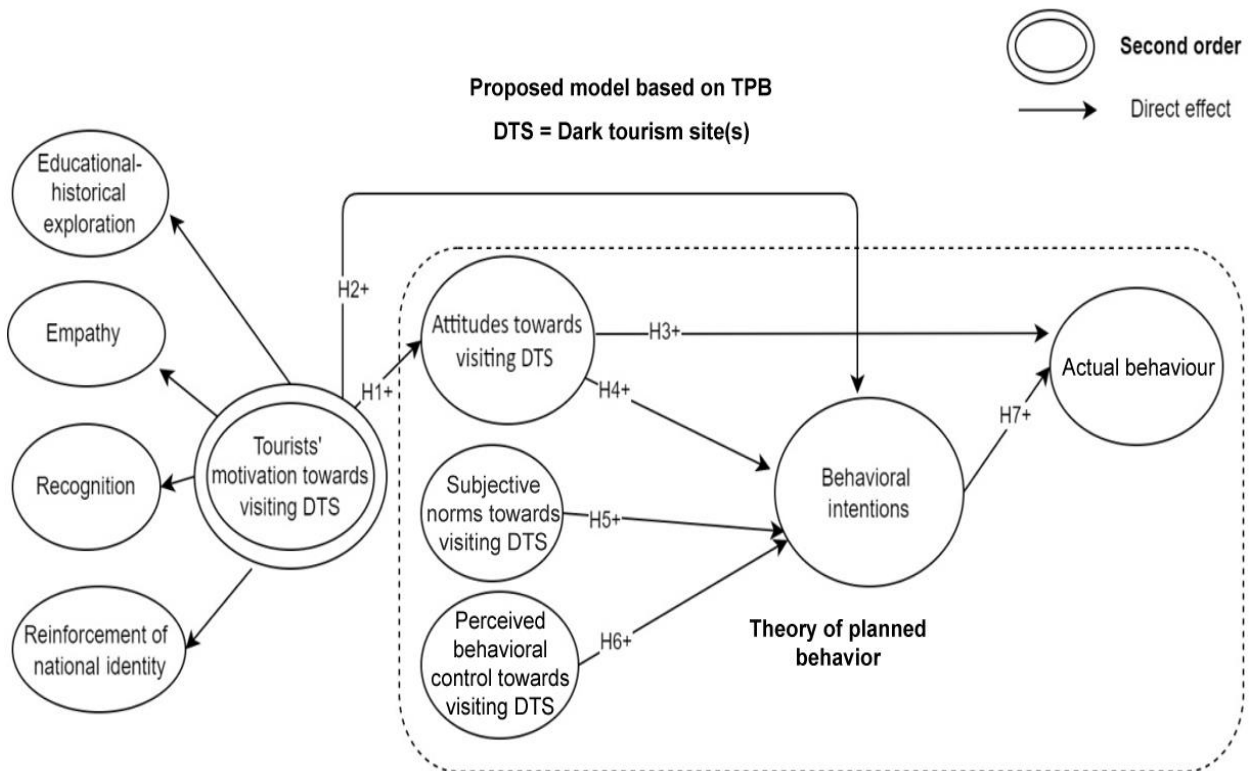


Figure 1. Proposed framework.

### 3. RESEARCH METHODOLOGY

#### 3.1. Research Design

In order to investigate the association between several elements and tourists' attitudes and behaviors towards DTS associated with Bangladesh's 1971 liberation war, the research team used a cross-sectional study technique for

this investigation (Wu & Cheng, 2018). The study utilized SEM, a widely recognized and sophisticated method for testing relationships between latent variables, to estimate the model's connections (Hair, Samuol, Page, & Money, 2010).

The study team created an extensive questionnaire to clarify the association between various factors. A rigorous three-step procedure was used to create the survey questionnaire, which drew on the body of research on the reasons visitors visit DTS (Hossain et al., 2023). Potential questionnaire items were adopted by a thorough assessment of relevant academic literature. The questions were divided into different categories (see Appendix 1) to obtain information on topics like: reinforcement of national identity (Wang et al., 2021; Yan et al., 2016; Zheng et al., 2018), educational-historical exploration (Wang et al., 2021; Zheng et al., 2018), curiosity towards visiting DTS (Isaac & Çakmak, 2014; Zheng et al., 2018), affirmation and recognition of DTS (Lee, 2016; Prayag et al., 2018; Wang et al., 2021; Yan et al., 2016). The attitudes towards visiting DTS have been studied by (Han, 2015; Lewis et al., 2021). The attitudes of SN towards visiting DTS were studied by (Lewis et al., 2021). PBC towards visiting DTS (Lewis et al., 2021) BI to visit DTS (Lewis et al., 2021) and actual behavior of visiting the DTS (Isaac & Çakmak, 2014). Subsequently, in this stage, a focus group discussion was apprehended to further refine the identified questions with a panel of four reputable tourism researchers from Bangladesh. This phase guaranteed the questionnaire's completeness, clarity, and lack of duplication. A pilot study was carried out with twenty-five visitors selected at random to evaluate the appropriateness and applicability of the instrument. The reliability of the constructs, data normalcy, and multicollinearity were assessed using a Cronbach's Alpha cutoff value of 0.70 ( $\alpha > 0.70$ ) in the pilot test. Based on the results of the pilot test, we made a few small adjustments to improve the instrument's readability and clarity.

### 3.2. Data Collection

In this study, a questionnaire-based survey used a seven-point Likert scale to collect data from domestic tourists who had visited DTS related to Bangladesh's 1971 liberation war. Figure 2 showcases several dark-tourism destinations in Bangladesh, providing visual examples of locations that attract visitors due to their historical or tragic significance. The research team conducted an online survey that was disseminated using Google Forms on social media sites and by email to people who had visited DTS in Bangladesh. These were the methods used to recruit participants, and the responses were analyzed using SEM. Unlike traditional methods, SEM enabled the research team to simultaneously analyze multiple constructs and assess both direct and indirect effects between variables, making it more suitable for complex tourism behavior studies.

Data was gathered over the course of four weeks, spanning from mid-August to mid-September 2021, during the ongoing COVID-19 pandemic. The convenience sampling technique was applied to collect responses from individuals who volunteered to participate in the survey (Wu & Cheng, 2018). This sampling method was used due to its convenience and accessibility and enabled the survey to be circulated to as many varied respondents as possible in the specified time period. After the data collection process was complete, an initial screening of the research data was conducted to ensure data quality. Missing or incomplete data sets found during the screening process were identified and removed from the data pool. After the initial screening, 402 valid responses were deemed sufficiently reliable for further use in the research data collection as well as for detailed statistical analyses and subsequent interpretation.



Figure 2. Some dark-tourism destinations in Bangladesh.

Subsequently, normality testing and outlier detection were conducted. The structural equation modeling (SEM) analysis was performed utilizing SPSS 24.0 and AMOS 24.0 software. Initially, we carried out several descriptive analyses, including frequency counts and assessments of the characteristics of the respondents. In the next phase of data analysis, we employed confirmatory factor analysis (CFA) to assess the measurement model's reliability, as well as its discriminant and convergent validity. Finally, the hypotheses were evaluated using the structural model.

The demographic profile of the participants is presented in Table 1. Among the 402 participants, 58% were male and 42% were female. Age between 16-25 years, 54%, 26-35 years, 21%, 36- 45 years, 15%, and only 10% are over 45 years old. The studied population is composed of their education level at the secondary school certificate (SSC) level (4%), higher secondary certificate (HSC) (52%), undergraduate (36.5%), and postgraduate (7.5%). The study found that 62% of the participants were single. In Bangladesh, the majority of the population is young-aged; where, in 2019, among the country's 164.7 million people, 36.2% were under the age of 20, 54.3% were under the age of 30, and 70.4% were under the age of 40 (Zaman & Sarker, 2021).

Table 1. Demographic characteristics (n = 402).

Variable	Items	Percentage (%)
Gender	Male	58
	Female	42
Age	16-25	54
	26-35	21
	36-45	15
	+46	10
Educational qualification	SSC	4
	HSC	52
	Under-graduate	36.5
	Post-graduate	7.5
Marital status	Single	62
	Married	38

Source: Survey results.



### 3.3. Common Method Variance Test

The single factor test developed by Harman was used in this study's common method variance (CMV) test. If all items fall under the same component or if one factor accounts for more than 50% of the variation, CMV problems exists (Hossain et al., 2023; Podsakoff, MacKenzie, & Podsakoff, 2012). The test's findings show that the first component accounts for 29.35% of the overall variance, and only a few numbers of factors have eigenvalues greater than 1, indicating that CMV issues are not affecting the data (Podsakoff et al., 2012).

## 4. EMPIRICAL RESULTS

### 4.1. Measurement Model Analysis

According to Fornell and Larcker (1981), a composite reliability of 0.70 or higher is considered satisfactory. In this analysis (see Table 2), all constructs have a Cronbach's alpha value exceeding 0.8. Additionally, first-order and higher-order construct validity (see Tables 3 and 4) for all dimensions is greater than 0.8, except for one component (motivation), which is validated at 0.598 (Hair et al., 2010). Construct validity can be measured through convergence and discriminant validity. According to Hair et al. (2010), factor loadings, composite reliability, and average variance extracted are necessary for assessing convergent validity. Tables 3 and 4 show that composite reliability values for all constructs range from 0.87 to 0.93, which exceeds the 0.70 threshold (Hair et al., 2010). The average variance extracted (AVE), which quantifies the variance captured by the indicators relative to measurement error, should be above 0.50. In this study, AVE values ranged from 0.50 to 0.67. Motivation, however, has an AVE below 0.5 in higher-order constructs (Table 4). Compeau, Higgins, and Huff (1999) suggest that motivation items should load more strongly on their respective constructs and that the average variance should be balanced across each construct.

Table 2. Standardized regression weights.

Construct	Code	Estimate	S.E.	t-value	Cronbach's alpha
Educational historical exploration	EHE5	0.804	-	-	0.878
	EHE2	0.738	0.053	170.343	
	EHE1	0.734	0.064	140.996	
	EHE4	0.761	0.063	150.605	
	EHE3	0.782	0.064	160.081	
Curiosity	C1	0.797	-	-	0.876
	C5	0.815	0.060	170.006	
	C4	0.719	0.060	140.574	
	C2	0.714	0.063	140.453	
	C3	0.767	0.058	150.896	
Affirmation recognition	AR1	0.796	-	-	0.904
	AR3	0.765	0.060	150.082	
	AR6	0.723	0.061	140.460	
	AR2	0.785	0.060	150.969	
	AR4	0.733	0.054	160.025	
	AR5	0.774	0.061	150.523	
National identity	NI3	0.693	-	-	0.880
	NI2	0.856	0.068	140.335	
	NI6	0.787	0.071	150.839	
	NI4	0.780	0.078	130.603	
	NI5	0.660	0.070	130.252	
Attitudes	ATT5	0.867	-	-	0.904
	ATT1	0.838	0.053	180.568	
	ATT3	0.763	0.044	180.522	

Construct	Code	Estimate	S.E.	t-value	Cronbach's alpha
	ATT4	0.715	0.054	140.713	
	ATT2	0.782	0.051	170.348	
Subjective norms	SNT5	0.766	-	-	0.882
	SNT1	0.838	0.065	170.082	
	SNT4	0.821	0.062	160.725	
	SNT2	0.775	0.062	150.719	
	SNT3	0.669	0.065	130.350	
Perceived behavioral control	PBC4	0.776	-	-	0.830
	PBC1	0.712	0.070	130.355	
	PBC3	0.776	0.068	140.387	
	PBC2	0.705	0.068	130.241	
Behavioral intentions	BIT4	0.855	-	-	0.859
	BIT1	0.754	0.058	150.659	
	BIT2	0.805	0.052	160.967	
	BIT3	0.657	0.057	130.171	
Actual behavior	AB1	0.745	-	-	0.843
	AB4	0.804	0.077	130.723	
	AB3	0.645	0.062	130.950	
	AB2	0.772	0.071	130.519	

Table 3. First-order constructs validity statistics.

Variable	CR	AVE	1	2	3	4	5	6	7	8	9
Actual behavior	0.831	0.553	<b>0.744</b>								
Affirmation recognition	0.893	0.582	0.109	<b>0.763</b>							
Attitudes	0.895	0.632	0.102	0.162	<b>0.795</b>						
Subjective norms	0.883	0.602	0.138	0.137	0.123	<b>0.776</b>					
Curiosity	0.874	0.583	0.244	0.190	0.194	0.168	<b>0.763</b>				
National identity	0.870	0.575	0.299	0.291	0.314	0.278	0.373	<b>0.758</b>			
Educational historical exploration	0.875	0.584	0.224	0.343	0.285	0.232	0.363	0.468	<b>0.764</b>		
Behavioral intentions	0.853	0.595	0.218	0.162	0.129	0.166	0.226	0.322	0.271	<b>0.771</b>	
Perceived behavioral control	0.831	0.552	0.198	0.135	0.119	0.117	0.201	0.288	0.253	0.173	<b>0.743</b>
Model fit indices: $\chi^2/d=1.347$ , GFI=0.890, AGFI=0.872, CFI=0.969, TLI=0.966, IFI=0.970, NFI=0.892, RMSEA=0.029, P close= 1.00											

Note: Bold diagonal values are the square root of AVE value. Goodness of fit index (GFI), Adjusted goodness of fit index (AGFI), Comparative fit index (CFI), Tucker-Lewis index (TLI), Incremental fit index (IFI), Normed fit index (NFI), Root mean square error of approximation (RMSEA).

The research proceeded to verify the fitness of the usual measurement model. Specifically, Table 3 presents the model fit statistics based on the constructs' validity and reliability. Using AMOS-24, complete standardized solutions were created for all elements, which were loaded with remarkable accuracy into their corresponding constructs. To estimate the overall fit of the measurement model, several analyses were included, such as the ratio of chi-square to degrees of freedom (CMIN/df = 1.347), the CFI = 0.969, the GFI = 0.890, the AGFI = 0.872, the TLI = 0.966, the IFI = 0.970, the NFI = 0.892, the RMSEA = 0.051, and the Pclose = 1.00. Together, all of these assessments confirmed their respective values, introducing an appropriate fit for the model as a whole (Hair et al., 2010).

Table 4. Higher-order constructs validity statistics.

Construct	CR	AVE	1	2	3	4	5	6
1. Attitudes	0.895	0.632	<b>0.795</b>					
2. Subjective norms	0.878	0.593	0.129	<b>0.770</b>				
3. Behavioral intentions	0.842	0.576	0.130	0.184	<b>0.759</b>			
4. Actual behavior	0.832	0.554	0.102	0.134	0.224	<b>0.744</b>		
5. Motivation	0.680	0.357	0.413	0.367	0.433	0.381	<b>0.598</b>	
6. Perceived behavioral control	0.831	0.552	0.119	0.116	0.157	0.198	0.375	<b>0.743</b>

Model fit indices:  $\chi^2/d=1.261$ , GFI=0.895, AGFI=0.880, CFI=0.977, TLI=0.974, IFI=0.977, NFI=0.897, RMSEA=0.025, P close= 1.00

Note: Bold diagonal values are the square root of AVE value.

4.2. Structural Model Analysis

Maximum likelihood analysis was utilized to assess the structural model. After estimating the quality of the measurement model, the next step in the SEM analysis involved examining the inner model of the structural model. This study provided an adequate measurement model by evaluating both the first-order and higher-order constructs. Subsequently, the hypotheses were tested by probing the structural model (see Figure 3). Our structural model explained 32% of the variance in attitudes toward visiting DTS, 19% in BI, and 21% in actual behavior. Furthermore, the common model fit indices ( $\chi^2/df = 1.372$ , AGFI = 0.871, GFI = 0.886, CFI = 0.966, TLI = 0.963, IFI = 0.967, RMSEA = 0.030, and Pclose = 1.000) also indicated a good model fit, as shown in Table 5, which presents adequate fit statistics.

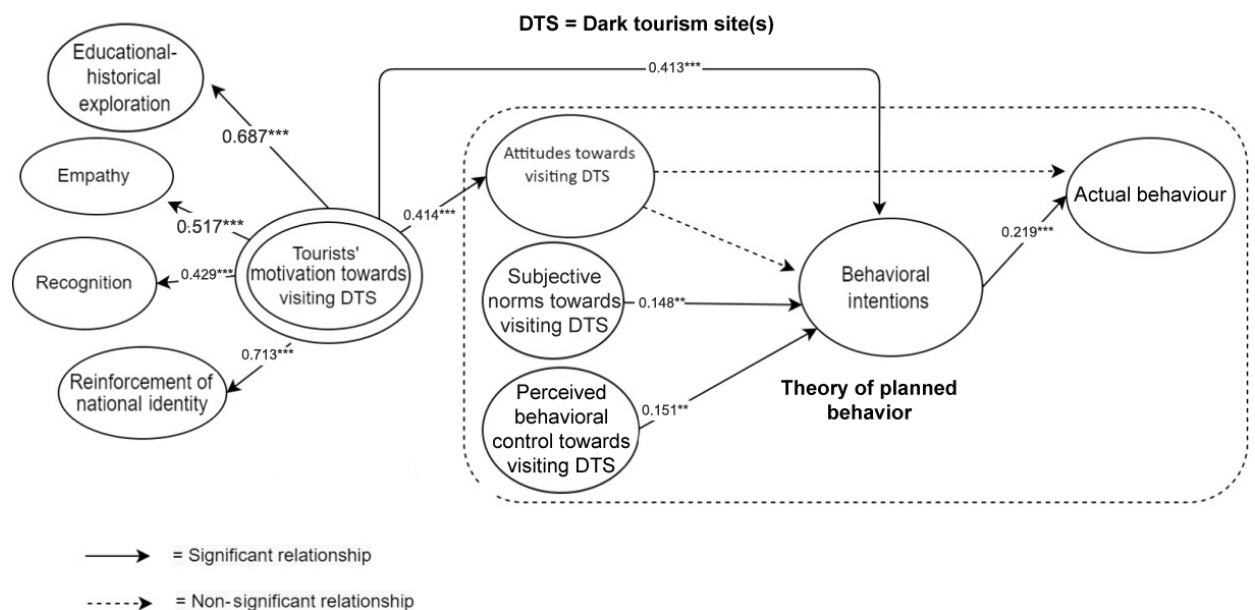


Figure 3. SEM results.

Note: \*\*\* p<0.001; \*\*p<0.01.

Table 5 also summarizes the hypothesized results. Five of seven hypotheses are found to be significant. In particular, motivation was found to have significant positive impacts on attitudes towards visiting DTS ( $\beta=0.414$ ,  $p<0.001$ ) and BI ( $\beta=0.413$ ,  $p<0.001$ ), thereby accepting H1 and H2. However, attitude towards visiting DTS found insignificant impacts on actual behavior ( $\beta=0.084$ ,  $p=0.145$ ) and BI ( $\beta=-0.057$ ,  $p=0.085$ ) that rejecting H3 and H4. Behavioral intention is significantly predicted by SN ( $\beta=0.148$ ,  $p<0.01$ ) and PBC ( $\beta=0.151$ ,  $p<0.01$ ), thus accepting H5 and H6. In addition, behavioral control was found to have a significantly positive influence on actual behavior ( $\beta=0.219$ ,  $p<0.001$ ), which accepted H7.

Table 5. Hypothesis results.

Hypothesized paths		Estimates	S.E	t-value	P-value	Decision
H1	Motivation --> Attitudes towards visiting DTS	0.414	0.127	5.672	***	Accept
H2	Motivation--> Behavioral intentions	0.413	0.138	4.969	***	Accept
H3	Attitudes towards visiting DTS ---> Actual behavior	0.084	0.051	1.457	0.145	Reject
H4	Attitudes towards visiting DTS ---> Behavioral intentions	-0.057	0.054	1.724	0.085	Reject
H5	Subjective norms ---> Behavioral intentions	0.148	0.065	2.621	**	Accept
H6	Perceived behavioral control ---> Behavioral intentions	0.151	0.065	2.591	**	Accept
H7	Behavioral intentions ---> Actual behavior	0.219	0.055	3.666	***	Accept
X <sup>2</sup> /df. = 1.372, AGFI = 0.871, GFI = .886, CFI = 0.966, TLI = 0.963, IFI = 0.967, RMSEA = 0.030, P close = 1.000.						

Note: \*\*\* p<0.001; \*\*p<0.01.

## 5. DISCUSSION

Our study, based on the full model of TPB, aimed to investigate the potential driving factors that motivate visitors to visit DTS, as well as their actual behavior within the context of Bangladesh's DTS. According to the research model, our study results revealed that motivation is the most influential factor that shapes their intentions to visit a dark tourism site, followed by their PBC and SN, respectively. These findings support many previous studies in this field, which noted that motivational factors are the most critical to predict visitors' BI to visit a dark tourism site (e.g., (Dimitrovski, Luković, & Senić, 2019; Lewis et al., 2021)).

Interestingly, unlike some previous studies in this domain (e.g., (Allman, 2017; Lewis et al., 2021)) our study results demonstrated that the attitudinal construct cannot predict visitors' BI to visit a dark site. Although contradictory to the research hypothesis, however, this finding is not surprising under the TPB framework in behavioral research (e.g., (Barić, Havârneanu, & Măirean, 2020; Mullan, Wong, & Kothe, 2013)). One of the compelling reasons for this finding might be due to the collectivistic personalities of the respondents, as past research demonstrated Bangladesh as a collectivist country. Another reason might be the time when we collected the study, as people are less likely to go on outings during the COVID-19 pandemic, which thereby influences their attitudes towards visiting a dark site.

Our study results also showed that visitors' intentions to visit a dark site significantly result in their AB, corresponding to the conceptual notion of the TPB. That is, individuals' BI significantly predicts their AB when taking an action. In addition, this finding corroborates past research findings in other fields of studies, such as career-related literature (e.g., (Yizhong et al., 2017)). However, this finding contradicts the argument that people always do not do the things they intend to do (Sheeran & Webb, 2016), indicating the importance of further research on the predicted relationship in dark tourism literature.

### 5.1. Theoretical Contribution

Our study offers several notable theoretical contributions as well as practical implications for policymakers. In terms of theoretical contributions, the paper makes its case in the following ways: First, some earlier studies argued

that an external variable to the TPB can only predict intentions indirectly through its influence on the TPB core variables, namely, attitudes, SN, and PBC (Conner & Armitage, 1998; Fishbein & Cappella, 2006). However, the results of this study demonstrated that visitors' motivation, as an external variable, can directly predict intentions. This finding suggests that the TPB core variables alone are not sufficient to fully predict visitors' intentions to visit a dark site, particularly in the context of Bangladesh. Second, to the best of our knowledge, none of the prior research in this domain demonstrated the full model of the TPB, indicating an important gap in the existing literature. Our study demonstrated the full model of the TPB. More specifically, while past studies considered behavioral intention as the ultimate dependent variable, we further extended the literature by demonstrating the relationship between BI and AB, indicating another contribution to our study in the related field. In fact, the rationality of our research was also based on the understanding of whether people always do the thing they intend to do (Sheeran & Webb, 2016).

Third, despite reported inconsistent findings in the field of dark tourism literature and the fact that extant research has mainly focused on the western context to address such research gaps, empirical research grounded on the TPB to examine the potential effects of motivational factors in the context of Bangladesh is still sparse in this field. Beyond instrumental motives, our study underscores the significance of visitors' motivations in comprehending the dynamic nature of tourism behaviors, as viewed through the lens of the TPB. Demonstrating this phenomenon in the domain of dark tourism research is salient in providing an important step forward in examining the generalizability of our research model.

### 5.2. Practical Implications

The results of this study also provide some practical implications for policymakers. First, our findings revealed that attitudes could not predict BI and AB among the visitors in Bangladesh. Despite being uncommon in Western societies, however, the study findings suggest that tourists' attitudes toward visiting DTS are not of significant concern in the country's context. Thus, policymakers should prioritize visitor instrumental motivations. In the DTS, a proper visualization of history should be set up, and educational institutions' trips can be arranged (Grinfelde & Veliveronena, 2021; Jang et al., 2021). In other words, policymakers should prioritize the use of social media-based platforms, in addition to traditional marketing channels. It is because the visitors' are very much prone to the social media, as reported by the past research findings (Parsons, 2017).

Second, the study's findings exhibited that SN substantially influences visitors' intentions to visit a dark site, which, in turn, leads to their AB. Policymakers need to understand the notion that people will not engage in a behavior until they intend to engage in the behavior (Ajzen, 1991). Therefore, policymakers and all the relevant bodies should work together to develop such programs that influence visitors' BI. More specifically, they can contact influential bodies who appear to be important to the visitors and ask them to make them aware of the importance of dark sites in the country's context, as suggested by the study findings (i.e., SN—BI link).

Third, consistent with many previous studies in this arena, we demonstrated that PBC significantly influences visitors' intentions to visit a dark site, suggesting that policymakers and managers can unite efforts to strengthen potential visitors' self-assurance in their skills and competencies for visiting a dark site. To be more specific, it would be wise to provide potential visitors with more applicable information to enable them to evaluate compatibility between what they expect from the tour and what the dark site can actually offer. In addition, upgrading the existing facility conditions and ensuring safety and security issues are keys to influencing visitors' BI to visit a dark site, as suggested by the study findings.

## 6. CONCLUSION

This study investigated visitor motivations for engaging with DTS from the perspective of Bangladesh, specifically those related to the 1971 Liberation War. We examined four sub-dimensions of motivation within the

TPB framework: educational-historical exploration, empathy, recognition, and reinforcement of national identity. Our research addressed two key objectives: (RO1) examine the dark visitors' intents to visit DTS and (RO2) look into the link between visitors' intentions and their actual behavior towards DTS.

The study findings reveal a significant influence of visitor motivations, particularly those related to educational exploration, empathy, recognition, and national identity reinforcement, on both attitudes toward visiting DTS and BI. Furthermore, SN and PBC emerged as important factors shaping BI.

These study results contribute meaningfully to the dark tourism literature by showcasing the complex nature of visitor motivations and their impact on behavior. By understanding these motivations, stakeholders like policymakers and memorial site managers can develop targeted strategies that will enhance DTS visits. For instance, emphasizing the educational aspects of DTS experiences can cater to visitors motivated by historical exploration. Similarly, we can say fostering a sense of empathy and recognition through storytelling and site design can resonate with visitors seeking emotional connection. Furthermore, addressing concerns about appropriate behavior through clear guidelines and signage can strengthen PBC, ultimately promoting respectful visitor conduct.

### 6.1. Limitations

Our study has several limitations that caution against overgeneralizing the results. First, the study did not account for the potential influence of the COVID-19 pandemic on tourist behavior. During this period, many individuals were less likely to visit tourist destinations. Second, the study utilized global measures for the core variables of the TPB, which might not capture the nuances of tourist attitudes and behaviors. Third, the study only examined four sub-dimensions of motivation; numerous other motivating factors exist, such as general or leisure purposes, pilgrimage or secular pilgrimage, moral obligation, emotions, and personal experiences. Finally, due to the pandemic, our data predominantly came from domestic tourists familiar with Bengali culture, which may limit the applicability of our findings to a broader audience.

### 6.2. Future Directions

Future research should consider the effects of the pandemic to enhance the robustness of findings. Additionally, we recommend further classification of the variables. For example, PBC could be subdivided into task-specific self-efficacy, and SN could encompass various dimensions, including social pressures from different groups. Future studies could explore the significance of these additional dimensions in dark tourism. Furthermore, future research should aim to collect data from a wider range of sources, including international tourists, at various points in time. This approach would enable a broader understanding of both BI and AB, ultimately resulting in more generalizable findings.

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**Transparency:** The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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## Appendix 1. Questionnaire.

Constructs	Code	Items
Tourists' motivation towards visiting DTS		
I visit DTS.....		
National identity (Wang et al., 2021; Yan et al., 2016; Zheng et al., 2018)	NI1	To learn more about the history and culture of the nation
	NI2	To remind myself that my fate and future are inextricably related to my own country
	NI3	To arouse my national consciousness strongly
	NI4	To have a strong sense of belonging to my own country
	NI5	To strengthen my patriotic thinking and feelings
	NI6	To remind myself of the contribution of those martyrs and freedom fighters to the continuity of national memory and identity
Educational - historical exploration (Wang et al., 2021; Zheng et al., 2018)	EHE1	To fulfill my responsibility towards the country's liberation war history
	EHE2	To enhance my knowledge of the contribution of those martyrs and freedom fighters to the continuity of national memory and identity
	EHE3	To increase my knowledge of the visited places and its related affairs
	EHE4	To learn about people, things, and sacrifices related to the liberation war history of Bangladesh

Constructs	Code	Items
	EHE5	To provide me with a thorough insight and increase my knowledge of the independence history of Bangladesh
	EHE6	To contribute to my personal development
Curiosity (Rami Khalil Isaac & Çakmak, 2014; Zheng et al., 2018)	C1	To see expositions/Evidence/Artifacts
	C2	To be curious about what happened here
	C3	To learn more about Bangladesh's liberation war and human sacrifices
	C4	To satisfy my curiosity about the massacre site and see the historical ruins
	C5	To know about oppression, torture, and massacres against humanity
Recognition (Rami Khalil Isaac & Çakmak, 2014; Lee, 2016; Prayag et al., 2018; Wang et al., 2018; Yan et al., 2016)	AR1	To show respect to the martyrs
	AR2	To show thankfulness out of empathy for the martyrs
	AR3	To feel a sense of belonging to these sites/Martyrs
	AR4	To feel emotionally involved with these sites/Martyrs
	AR5	To feel an obligation to understand the influence of the liberation war
	AR6	To immerse myself in the solemn and sad atmosphere of the sites
Attitudes towards visiting DTS (Han, 2015; Lewis et al., 2021)	ATT1	For me, visiting a dark tourism site is useful
	ATT2	For me, visiting a dark tourism site is a wise decision
	ATT3	For me, visiting a dark tourism site is favorable
	ATT4	For me, visiting a dark tourism site is positive
	ATT5	For me, visiting a dark tourism site is beneficial
SN towards visiting DTS (Lewis et al., 2021; Tommasetti et al., 2018; Wang et al., 2018)	SNT1	People who are important to me think I should choose a dark tourism site to visit
	SNT2	People close to me would accept of my visit to a dark tourist destination
	SNT3	The majority of individuals I know would select a dark tourism destination for a holiday
	SNT4	People whose judgments I admire would prefer that I choose to visit DTS in our country
	SNT5	In general, people support visiting DTS
Perceived behavioral control towards visiting DTS (Lewis et al., 2021)	PBC1	Whether or not I choose to visit a dark tourism site is completely up to me
	PBC2	There are dark tourism site within a reasonable distance from my staying place
	PBC3	If I wanted, I could easily afford to visit a dark tourism site
	PBC4	I think I have the knowledge, time and opportunities to visit DTS
Behavioral Intentions (Lewis et al., 2021; Wang et al., 2018)	BIT1	I intend to visit a dark tourism site in the near future
	BIT2	I would tell a friend or family member about the most recent dark tourism place I visited.
	BIT3	In the future, I would return to the most recent dark tourism location I visited.
	BIT4	I would recommend visiting any dark tourism site to a friend/family member
Actual behavior (De Cannière, De Pelsmacker, & Geuens, 2009; Kuo & Dai, 2012; Tommasetti et al., 2018)	AB1	I used to go to DTS
	AB2	I spend precious time on DTS
	AB3	The number of my visits to DTS is high
	AB4	I used to recommend visiting DTS to my friends/Family members

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