The Role of Tour Guide Performance in Creating Responsible Tourist Behavior: An Empirical Study: Archaeological Sites in Alexandria.

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Abstract

In spite of, Alexandria has many tourist attractions, but its archaeological sites are seen as most attracting many tourists. In consideration of the growth of mass tourism at archaeological sites, tourists' behavior and their numbers may have many possible harmful effects such as noise, overcrowding and pollution. Although, there are many factors that can affect tourists' behavior in the destination, but this research has interested to study the relationship between tour guide performance and responsible tourist behavior at archaeological sites by analyzing the impact of intermediate factors like tourist satisfaction and experience. This research has been based on a descriptive survey method through distributing a set of questionnaires from 21 November 2019 until mid-December 2019 at certain archaeological sites in Alexandria. The structural model was tested on a sample of 334 tourists who have visited these sites. This study was based on confirmatory factor analysis (CFA) to evaluate and check the reliability and validity of the current conceptual model and path analysis to test the mediation effects of tourism experience and satisfaction. Finally, the Structural equation modeling (SEM) has shown the effective role of tour guide performance, tourism experience and tourism satisfaction in directing tourists' behavior towards responsible behavior.
Keywords: Tour guide performance, Responsible tourist behavior, Tourist Satisfaction, Tourism Experience, Alexandria.

Introduction

Archaeological and historical tourism is still the most attractive pattern of tourists all over the world since the 1990s (Garrod & Fyall, 2000; Chowdhury & Ahmed, 2015) The main motivation lies behind attracting huge numbers of international tourists annually to some archaeological and historical sites (Comer & Willems, 2011; Carbone et al., 2012), is their passion to learn about different cultures (Carbone, 2016a), ancient customs and traditions which were prevalent at those sites (Carbone, 2016b; Alazaizeh et al., 2019). Archaeological and historical tourism allows tourists to experience the past and feeling the excitement when they visit exotic locations that many archaeological sites are included. Indeed, Archeological sites were not limited to attract only tourists, but it has widened to include students and scholars who have scientific curiosity regarding historical sites (Os et al., 2016; Alazaizeh et al., 2019).

The value of historical site lies in the benefits that can be gained from its use (Chowdhury & Ahmed, 2015). In most Historical destinations, the economies depend on the tourism industry to create an economic boom for Example Increase foreign exchange, improving the balance of payments, an expansion of commercial activities, job creation and develop remote areas (Garrod & Fyall, 2000; Chowdhury & Ahmed, 2015). Hence, most of the destinations often are interested to increase the tourism flows without looking at the negative impacts caused by it (Chowdhury & Ahmed, 2015).

Given the increasing visits to archaeological and historical sites (Kirch & Kirch, 1987; Baram, 2008), the number of visitors and their behavior may have many of the potential adverse effects on the archaeological and historical sites such as the cracking of stone structures (Pacifico & Vogel, 2012; Coben, 2014), pollution, vandalism, graffiti and littering (Baram, 2008; Coben, 2014). Nevertheless, most of heritage and tourism studies have shown that the relationship

between the tourism industry and archaeological site management is very complicated and controversial, that both have its contradictory goals (Pacifico & Vogel, 2012; Alazaizeh et al., 2019). Actually, many researchers see tourism industry as a significant tool to conserve cultural and natural heritage (Carbone, 2016a), while others assume that tourism industry is a very detrimental tool for historical resources (Carbone, 2016b; Alazaizeh et al., 2019).

In this matter, many researchers have indicated that there are five main factors may contribute into a strained relationship between the tourism industry and archaeological site management such as the independent development of each sector, dissension across stakeholder, Consumption patterns and the ruling political powers (Pacifico & Vogel, 2012; Carbone et al., 2012). Even today, there is no totally agreement whether or not tourism industry protecting archaeological and historical sites (Pacifico & Vogel, 2012; Os et al., 2016).

There's no doubt that archaeological sites receive different negative impacts as a result of the increasing of tourism flows (Coben, 2014; Alazaizeh et al., 2019). Thus, encouraging positive behavior of tourists could significantly decrease of these impacts. Given the significance of archaeological sites, many approaches have emerged to mitigate the impact of spread mass tourism in these sites (Akis, 2011; Makhadmeh et al., 2018). For instance, Tourism Optimization Management Model (TOMM) (Jovicic & Dragin, 2008), Tourism carrying capacity (TCC), Limits of Acceptable Change (LAC), Management Process for Visitor Activities (VAMP), Visitor Impact Management (VIM) and Visitor Experience Resource Protection (VERP) (Mustafa & Balaawi, 2013; Ababneh et al., 2014). These approaches are generally interested to determine the number of visitors that could enter the site and guiding them towards responsible tourist behavior in to conserve on historical structure of the site (Mustafa & Balaawi, 2013). The direct management approach attempts to regulate visitor behavior through a set of rules and instructions that limit their activities within the site at the same time leave to them little freedom of choice (Ababneh, 2017), while the indirect management approach seeks to modify visitor behavior through educating and reminding visitors about allowable behavior at the site (Poudel & Nyaupane, 2013).

Previous studies show that the indirect management approach is a more efficient, less expensive and better approach for both visitors and managers (Ababneh, 2017). Interpretation is one of the successful indirect management tools that help managers to activate the principles of sustainable tourism at the archaeological sites (McDonnell, 2001; Poudel & Nyaupane, 2013).

In this regard, Interpretation can be divided into two groups: guided and non-guided interpretation (Ababneh, 2017; Alani et al., 2017; Alazaizeh et al., 2019). Guided interpretation is providing the information to the visitors through face-to-face interaction and direct personal communication with a tour guide (McDonnell, 2001; Reisinger & Steiner, 2006), while non-guided interpretation is depending on transfer the information by publications and signs without intervention the tour guide (Rabotic, 2008; Poudel & Nyaupane, 2013). Despite the multiplicity of approaches, Skilled tour guides are still seen as an effective and powerful tool that contribute to mitigating harmful impacts resulting of visitors' activities at historical sites by directing them towards the responsible tourist behavior (McDonnell, 2001; Sandaruwani & Gnanapala, 2016; Çetinkaya & Öter, 2016).

Literature review
Tour guide performance
In the academic field, the tour guides are seen as guards for the archaeological site, heritage protectors, cultural mediators, sustainability promoters, site interpreters and behavior modifiers (Black & Ham, 2005; Huang et al., 2009; Mossberg et al., 2014; Kabii, 2017). In addition, the

significant role of tour guides cannot be ignored in providing visitors with satisfying and memorable experiences that will direct visitors towards responsible tourist behavior (Öter & Sonuç, 2014; Khornjamnong, 2017). Therefore, this study endeavors to understand the significant role of tour guide performance in directing tourist's behavior towards responsible behavior to mitigate the negative impacts at archaeological sites. In order to measure tour guide performance, this study based on two sub-factors namely "Interpersonal servability and organization" and "Intrapersonal servability and professional competence" (Hansen & Mossberg, 2016).

1. **Interpersonal Servability and Organization**: Interpersonal servability measure the ability of the tour guide on communicating effectively with tourists, Interpersonal skills, Tour guides' self-presentation (Huang et al., 2009), How to handle unexpected accidents and Situations (Nguyen & Tran, 2019), the ability to cooperate with others, time management, and organization skills (Huang et al., 2009), maintain the security and safety of the tourists (Kassawnh et al., 2019), understanding different cultures (Khornjamnog, 2017) and attitudes that enhance the destination (Nguyen & Tran, 2019; Kassawnh et al., 2019).
2. **Intrapersonal servability and professional competence**: Intrapersonal servability measure the tour guide's knowledge (Huang et al., 2009), level of education, professional qualification (Kabii, 2017), empathy for tourists, passion to work, and even health conditions. While the Professional competence factor referred to tour guides' knowledge skills of the destination culture and local people's lifestyle (Huang et al., 2009).

In many previous studies, the tour guide performance has been evaluated through three principal perspectives that are; Tour Management, Experience Management and Resource Management as shown in the following table.

Table (1): The Role of Tour Guide

Tour Management (Focus on Group)		Tour Management (Focus on Group)		Resource Management (Focus on Environnent)	
Geographical	**Social**	**International**	**Communicative**	**Motivate**	**Environmental interpreter**
Organizer or manager	Entertainer	Leader, Cultural broker	Educator, Information giver	Motivator or mento	Interpreter or mediator

Source: (Chilembwe & Mweiwa, 2014).

This study has been shown that tour guide plays a critical role in satisfying the market of cultural tourism because they are not only a message converter, but a representative of the destination culture and lifestyle of the local community (Öter & Sonuç, 2014). Therefore, the capabilities and skills of the tourist guide must be used in preserving archaeological sites through directing tourist's behavior towards responsible behavior (Alazaizeh et al., 2019).

H1: Tour guide performance positively influences responsible tourist behavior at archaeological sites.

H2: Tour guide performance has positive effects on tourism experience.

H3: Tour guide performance has positive effects on tourism satisfaction.

Responsible Tourist Behavior

Historical destinations seek opportunities to make a boost in their local economy by utilizing their historical resources in order to attract more visitors, but harmful impacts may occur if mass tourism spreads out and visitors behave in inappropriate ways while visiting (Lee et al., 2013; Zgolli & Zaiem, 2018). Therefore, it is challenging in the historical destinations to balance economic viability and social responsibility towards archaeological sites. In order to achieve this

balance, managers and marketers should induce tourists to responsible tourist behavior at the archaeological sites (Lee et al., 2013; Han et al., 2016; Asbollah et al., 2017). Under the pressure of increasing tourism flows and harmful impacts resulting from tourists' activities at archaeological sites, there has been increasing interest to study tourists' experiences and their behavior at archaeological sites (Kang & Moscardo, 2006; Han et al., 2016).

Understanding tourists' behavior while visiting the archaeological site is critical to historical destinations especially when researchers expect economic growth occurs in parallel with sustainability (Peric & Djurkin, 2014). Many researchers claimed that tourists are likely to behave as Responsible tourists without any external factors that can influence their behavior (Diallo et al., 2015; Han et al., 2016).

Specifically, researchers clarified that whenever tourist has many tourism experiences at the archaeological sites and with a high level of education (Peric & Djurkin, 2014; Asbollah et al., 2017). Hence, it is logical to expect that this tourist behaves in a responsible way at the site (Lee et al., 2013; Zgolli & Zaiem, 2018). While others see that education and previous tourism experiences are insufficient to make the tourist more responsible at archaeological sites (Kang & Moscardo, 2006; Asbollah et al., 2017).

François-Lecompte and Prim-Allaz (2009) have emphasized that tourists are behaving responsibly when they are willing to sacrifice their comfort, have the intention to conserve local resources, prefer travelling with a responsible tour-operator, accept not to travel too far and have the desire to protect the cultural heritage of the visited sites. Based on the above, François-Lecompte and Prim-Allaz (2009) have mentioned that there are two types of responsible tourists: those "the sustainable adventure" and the "neo-sustainable". These tourists are interested to monitor the ethical travelers who respect the cultural and natural sides of the visited sites (Diallo et al., 2015; Han et al., 2016; Zgolli & Zaiem, 2018). Additionally, they are usually careful to follow all instructions and guidance that belong to the archaeological site (Han et al., 2016).

On the other hand, Lee et al. (2013) have determined six main dimensions to make tourists are behaving responsibly: Educational, Legal, Physical, Civic, Financial or Persuasive actions. While Dolnicar (2010) and Dwyer et al. (2010) have referred to the importance of social, financial and physical actions only, ignoring other dimensions. These actions can mitigate the negative impact of increasing tourism flows at the natural sites (Diallo et al., 2015; Han et al., 2016; Asbollah et al., 2017), but tour guide performance is still the main dimension in persuading tourists and influencing their behavior at the archaeological sites (Zgolli & Zaiem, 2018). According to the study of Gonzalez et al. (2009), Responsible tourist behavior has defined as "*when the tourist acting in a way that accounts for social and environmental concerns through one's choices in relation to tourism*" (p.26).

Previous studies have demonstrated the role of tour guides in directing tourists' behavior towards sustainable tourist behavior in natural sites. Thus, it is easy that tour guide contributes in enhancing the responsible behavior and obliges it at archaeological sites. Consequently, the following hypothesis has formulated:

Tourism Experience

The concept of experience has emerged for the first time academically at the beginning of the 1980s, based on the concept of economic experience that has proposed by Pine and Gilmore in 1998. In the past years, Experience studies have been carried out in different fields, especially in the tourism field (Cohen, 1979; Quan & Wang, 2004; Cetin & Bilgihan, 2016; Kempiak et al., 2017). The main idea behind the emergence of tourism experience concept is the desire of tourists to live and discover the authentic environments, particularly in destinations that have

authentic nature, history, and culture (Aho, 2001; Morgan et al., 2009; Chen & Chen, 2010). Many tourist destinations have begun in provide memorable tourism experiences as a main pillar in tourism marketing to attract more potential tourists and keep the current tourists (Akkuş & Caglar, 2016). Several researchers have tried to determine a clear definition of the term "Tourism Experience" (Quan & Wang, 2004; Akkuş & Caglar, 2016). But, it is rather difficult to achieve a complete and clear definition of tourism experience that is including a variety of complex variables (Akkuş & Caglar, 2016). Therefore, the perspectives and definitions of researchers to this matter have differed from each other. Hence, the definitions of tourism experience varied as shown in the following examples:

Cohen (1979) has established a typology of tourism experience based on five patterns, starting from 'superficial experience' that aims to pleasure right up to 'profound experience' that aims to search for meaning. Li (2000) has claimed that tourism experience is *"an artificial experience has created by the consumer in order to solve the problems of ordinary life and find the authenticity and vary the entertainment"* (p.866). As for Stamboulis and Skayannis (2003) described the tourism experience as *"an experience arising from the interaction between destinations as a theatre where the experience takes place and the visitors as an actresses/ actors who are playing their role in this experience"* (p.36). O'dell (2007) has confirmed that "*the tourism experience could be more than a continuity of a simple daily life that actually affects people and leaves the perception of having participated in extraordinary things in their mind*" (p.38). Generally, the tourism experience is considered as *"a subjective mental state that could include feelings of relaxation and fun, escape from work routine, spending fun time with family or friends, or learning new thing"* (Akkuş & Caglar, 2016, p.66).

The cultural experience occurs when visitors engage in the archaeological and heritage sites in a way that creates memorable situations and events (Cetin & Bilgihan, 2016; Kempiak et al., 2017). Therefore, cultural experience derives from the interaction of the visitors' emotions, feelings and thoughts with the local environment of archaeological sites (Alazaizeh et al., 2019). According to McIntosh (1999), there are three primary thought mechanisms in cultural experience: the affective process that promotes pleasure and familiarity, the reflective process that offers perspectives, observations and comparisons between past and present lifestyles, and the cognitive process that includes assessment, enhancing awareness and providing new perspectives or additional information. Several previous researches have suggested that there is an important positive relationship between tourism experience, tourist satisfaction and tourist behavior (Kals et al., 1999; Pooley & O'Connor, 2000; Lee, 2011; Ballantyne et al., 2011; Ramkissoon et al., 2013; Ramkissoon, 2016; Ramkissoon et al., 2018).

H4: Tourism experience positively influences tourism satisfaction

H5: Tourism experience positively mediates the relationship between tour guide performance and responsible tourist behavior at archaeological sites.

Tourism satisfaction

Tourism satisfaction has been regarded as one of the most significant pillars of the competitiveness for the tourist destination (Akbar & Parvez, 2009; Kung, 2018), thus the main objective of tourist providers has become to evaluate both the efficiency and effectiveness of tourism products to provide the memorable tourist experience (Al-Ababneh, 2013; Bagri & Kala, 2015; Kung, 2018). Many scholars assumed that tourism satisfaction is one of the important elements that needed for creating a competitive advantage and unique image that helps the destination in attracting more tourists (Yeh, 2000; Chi & Qu, 2008), as it affects the preferences of tourists for destinations, the consumption of tourism products and services, the decision to

return, the preservation of long-term relationships with tourist providers and the enhancement of the tourist destination position (Al-Ababneh, 2013; Gaki et al., 2016; Kung, 2018).

Tourist satisfaction ultimately refers the result of interaction between tourists' aspirations about the destination based on their previous information and the perceptive image of a tourist destination and their evaluation of the outcome of their tourism experience at the tourist destination that visited (Davis et al., 2011; Al-Ababneh, 2013).

Due to the significance of tourist satisfaction, many authors confirmed that tourist satisfaction could be measured through a set of attributes that belongs to the tourist destination and how well it fit with tourists' expectations (Akbar & Parvez, 2009; Gaki et al., 2016; Kung, 2018). These attributes differ from study to another (Bagri & Kala, 2015).

Huang (1998) also determined five factors that used to assess tourist's satisfaction: product, the overall performance of staff, service, price, and closeness to expectation. While Kuo (1999) mentioned seven factors that impact on tourist's satisfaction: service content, corporate image, staff, price, convenience, procedure, and equipment. Furthermore, Sukiman et al. (2013) also emphasized that these attributes are represented in seven factors: accessibility, safety, natural and cultural attractions, accommodation, local community, comfort facilities, infrastructure and activities.

Given the increasing importance of term tourism satisfaction in most tourism literature, many researchers have interested to define tourism satisfaction. Pizam et al. (1978) have claimed tourism satisfaction is "*the results of the comparison between a tourist's experience at the destination visited and the expectations about the destination"* (p.315). While Anderson et al. (1994) asserted that tourism satisfaction is "*the overall experience tourists have when purchasing and consuming products and services"* (p.55). Moreover, Oliver (1997) also defined tourist satisfaction as *"the evaluation of post-consumption concerning a specific product or service"* (p.156). Tribe and Snaith (1998) clarified "*Tourism satisfaction with a destination as the degree to which a tourist's assessment of the attributes of that destination exceeds his or her expectations for those attributes"* (p.27). Previous studies have provided empirical evidence that tourists' satisfaction is a major factor that contributes to directing their tourist behavior towards sustainable behavior (Alazaizeh et al., 2019). For example, Davis et al. (2011) have claimed that tourists who are more satisfaction about tourism experience are more inclined to sacrifice for the environment and become more responsible towards the environment. According to the above review, the following relation is hypothesized:

H6: Tourist satisfaction positively mediates the relationship between tour guide performance and responsible tourist behavior.

Figure 1: The conceptual model of the research
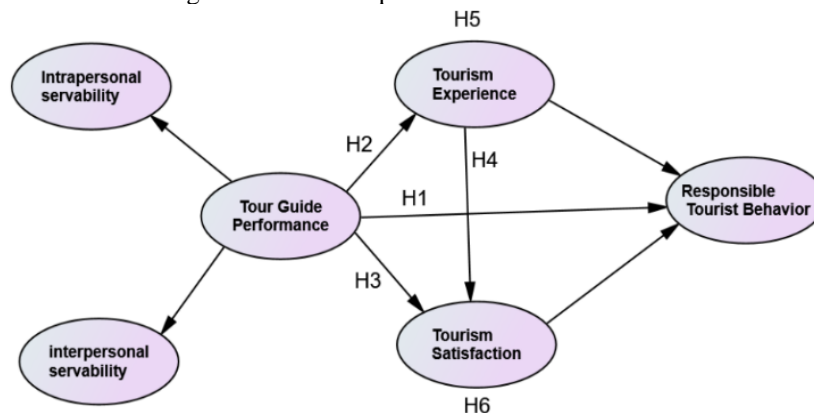
Archaeological Sites in Alexandria
Alexandria was founded by Alexander the Great in 331 BC, since then it became the capital of the Egypt until the early Islamic period (Ragheb, 2014; Lasaponara et al., 2017; Kamel, 2019). There is no doubt that Alexandria was a cosmopolitan city par excellence in the Hellenistic and Roman Periods (Savvopoulos, 2011; McKenzie, 2011; Ragheb, 2014; Abdel-Kader et al., 2017). And for that matter it was the gateway to Egypt and the point of contact with other civilizations, especially those of the Mediterranean. The city's fortunes changed again under the Mamluk Sultanate and the Ottoman Period (Harris & Ruffini, 2004; Hemeda et al., 2007; Dessandier et al., 2008; Khalil, 2009).

Therefore, Alexandria was famous for having a large collection of Greco-Roman monuments such as the Roman Amphitheatre, the Catacomb of Kom EL-Shoqafa, Pompey's pillar, Anfushi Tombs, EL-Shatby tombs, Mostafa Kamel tombs as well as submerged monuments. This besides many important Islamic monuments like the Citadel of Qaitbay as well as several museums such as the National Museum of Alexandria and the Royal Jewelry Museum. But this paper has focused on the most important archaeological sites according to the number of visitors as shown in the following table.

Table. 2 The number of visitors at archaeological sites during the period September and October 2019

Archaeological sites	Foreign Ticket	Egyptian Tickets	Total
The Citadel of Qaitbay	17426	101271	118697
The Catacomb of Kom EL-Shoqafa	17224	1698	18922
Pompey's pillar	15065	1241	16306
The Roman Amphitheatre	6011	2843	8854
The National Museum of Alexandria	2181	2640	4821
The Royal Jewelry Museum	766	11839	12605
Mostafa Kamel Tombs	41	27	68
Submerged monuments	19	16	35
Anfushi Tombs	22	32	54
EL-Shatby Tombs	19	46	65
Total	**180427**	**121653**	**58774**

Source: (Regional Organization for Tourism Development [AL] 2019).

1. **The Catacombs of Kom EL-Shoqafa:** In particular, numerous catacombs and cemeteries were erected in Greek Roman times have been found in Alexandria (Hemeda, 2012; Abdallah & El-Tawab, 2015; Abdel-Kader et al., 2017). Not only, Kom EL-Shoqafa catacombs return to the second century AD but also it extended to a longer period starting from the end of the first century and up to the fourth century AD (Abdallah & El-Tawab, 2015; Shipley, 2018). On the other hand, the tomb of Tigran a few meters away from the main entrance of the Catacombs of Kom El Shoqafa that dated back to the 1st century AD (Eltayeb, 2016).
2. **The Roman Amphitheatre:** In 1965, a semicircular Roman Amphitheatre was discovered under what was known as Kom al-Dikka (Mound of Rubble). The 13 tiered rows of marble seats, excavated by Polish archaeologists, date from the 2nd century AD. Originally a small theatre, the building was altered over time and served as an assembly hall (Atherton et al., 2001).
3. **Pompey's Pillar:** The Serapeum (or Serapeion) was a great temple dedicated to the Greek Egyptian god Serapis, in ancient Alexandria. It was founded by Ptolemy I around 300 BC, in an effort to unite the religious and cultures of the Egyptians and the Greeks (Eltayeb, 2016). The rocky plateau on which stands the high column popularly known as the commemorative column of Diocletian "Pompey's pillar" (Hemeda & Pitilakis, 2010). It was erected in honor

of the Roman Emperor Diocletian in 292 AD. This pillar is the tallest ancient monument in Alexandria. It is about 27 meters long and made from Aswan granite (Eltayeb, 2016).

4. **The Citadel of Qaitbay:** The Qaitbay fortress in Alexandria was known as one of the most important Islamic monuments in Alexandria (Kamel, 2019; Ragheb, 2014). The constructions work lasted two years, from 882-1477 to 884-1479 (Pradines, 2016) by the Sultan Al Ashraf Qaitbay Mamlouke in the place of the famous ancient Alexandria lighthouse on the eastern point of Pharos Island (Kamel, 2019) to protect the city and to ensure the safe passage of the ships in the harbors (Pradines, 2016). Thus, it has an important location on the entrance to Alexandria's eastern harbor (Darwish, 2018; Kamel, 2019).

Research methodology
Sampling and Data Collection
The sample of the current study comprised of international tourists who are visited archaeological sites in Alexandria during peak seasons: fall (September and October) of 2019. Surveys were conducted at a variety of times in a week in order to access a larger group of respondents and further improve the representativeness of the sample. This research depended on purposive sampling method to select the research target sample (avoid mass tourism, focus on individual international tourists which consist of 2 to 4 tourists who depend on tour guide in their archaeological tour in order to assess a large number of tour guides and exclude tours were not guided). Of the 395 questionnaires have distributed, 334 were regarded as valid responses, of which 61 were excluded because too many items were not completed in a questionnaire. Therefore, 10 questionnaires were also excluded because their tours were not guided. Hence, only 324 questionnaires were included in the final analysis to measure and evaluate the role of tour guide performance in creating responsible tourist behavior at archaeological sites in Alexandria.

Questionnaire design and Measurement Items
In this research, a Survey has based on the data collection method, A self-administered questionnaire was designed to measure a set of variables (e.g., tour guide performance, responsible tourist behavior, tourism experience, and tourism satisfaction) each variable include multiple items to measure and achieve the objectives of the research. The questionnaire consisted of five sections; Section 1 comprises 6 questions to determine the demographic characteristics of respondents as shown in the following table.3. While the other sections were based on a 5-point Likert Scale (where 1 = "strongly disagree" and 5 = "strongly agree").The measurements for the current research are quoted from past researches and adjusted it to the context of the present research, such as eleven items on tour guide performance (Chan et al., 2015; Khornjamnog, 2017; Alazaizeh et al., 2019; Kassawnh et al., 2019), five items on tourism experience (Quan & Wang, 2004; Pinto et al., 2016; Alazaizeh et al., 2019), six items on tourism satisfaction (Pinto et al., 2016; Alazaizeh et al., 2019), six items on responsible tourist behavior (Bob, 2016; Alazaizeh et al., 2019). Demographic characteristics of the respondents such as gender, age, Nationality, Marital status, education level, as well as Monthly income were also included in this research. After creating a list of items, professional experts were asked to assess and add or delete items in tour guide performance factor and other factors used in this research.

Data analysis and results
This research seeks to measure the interrelationship between latent constructs of tour guide performance with responsible tourist behavior at archaeological sites. Also, examining the mediating effects of tourism experience and satisfaction that mediate the relationship between tour guide performance and responsible tourist behavior as shown in the previous hypotheses. To

check the proposed model, First, A confirmatory factor analysis (CFA) was performed to investigate the interrelationship and covariance among all latent variables to make sure the possibility that observed indicators could be deleted according to the results of factor loadings and the modification indices as shown in the following figure (Schreiber et al., 2006). Second, ensure that there is no missing data or significant outliers are found in the data. Then, make sure the normal distribution of the observed variables according to the results of skewness and kurtosis as clarified in table.4. Subsequently, use structural equation modelling (SEM) among latent variables to make sure the hypothesized relationships.

Figure .2 CFA for the effect of tour guide performance
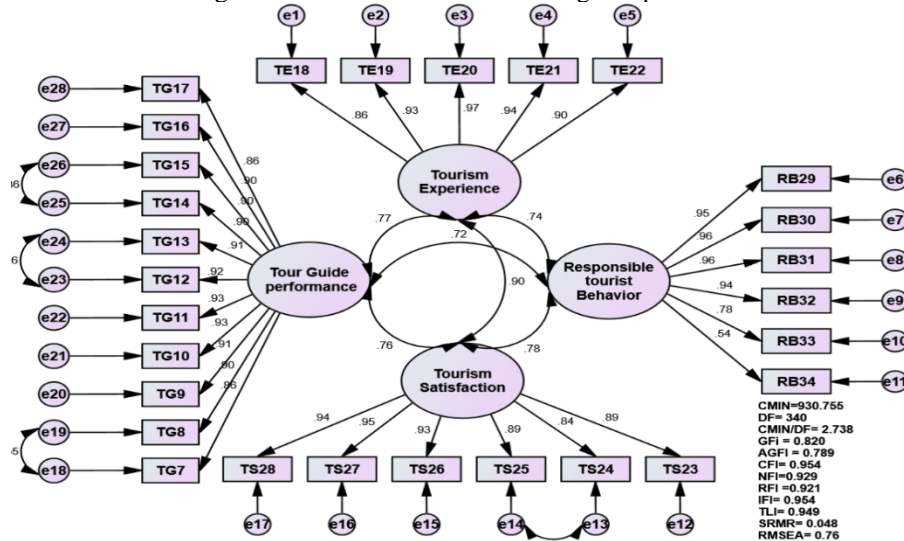
Goodness-of-fit indices have used to show the compliance degree of the data to the measurement model: Chi-square/freedom degree (X^2/df), the goodness of fit index (GFI), root mean square residual (RMR), normed fit index (NFI), root mean square error of approximation (RMSEA), adjusted goodness of fit index (AGFI), comparative fit index (CFI), relative fit index (RFI), incremental fit index (IFI) and Tucker-Lewis index (TLI). The model fit indices have suggested acceptable values between the model and the data (X^2/df = 2.738; RMSEA = .076; SRMR = .048; GFI = .82; AGFI= 0.789 NFI = .92; RFI= 0.921; IFI= 0.954; TLI= 0.949; CFI = .99).

Table.3 Demographic profile

No	Item	N	Percentage
Q1	**Age**		
	18-25	42	14%
	26-35	47	15%
	36-45	56	18%
	Over 46	160	53%
Q2	**Gender**		
	Male	129	42%
	Female	176	58%
Q3	**Nationality**		
	Middle East	30	10%
	Africa	23	8%
	Asia and the pacific	93	30%
	Americas	126	41%
	Europe	33	11%
Q4	**Marital status**		
	Single	93	30%

	Married	125	41%
	Married with children	76	25%
	Other	11	4%
Q5	**Education**		
	High school	91	30%
	University student / Graduate	164	54%
	Postgraduate	50	16%
Q6	**Monthly income**		
	Less than $1000	34	11%
	$1000–$1999	35	12%
	$2000–$2999	81	26%
	$3000–$3999	46	15%
	More than $4000	109	36%
	Total	**305**	**100%**

Results

Characteristics of Respondents

As shown in the previous table (the demographic characteristics of the respondents), More than half of the sample were senior (53% were over 46 years), 58% were female, 41% of the respondents were from The Americas, 41% of the respondents were married, More than half of the respondents (around 54%) had a college degree and One-third of the respondents have monthly income more than $4000 (36%).

Validating the measuring instruments

Confirmatory factor analysis (CFA) was used to evaluate and check the reliability and validity of the structure model by estimating for each dimension separately depending on the AMOS program output. Cronbach's alpha (α), Respective Composite Reliability (CR), Average Variance Extracted (AVE) and the construct indicator loadings. As clarified in table.3, all of the items have fulfilled the discriminant validity requirements, since all of the indicator loading factors have exceeded 0.7 except the last item (I would like to donate money for preserving the site). The mean score of this item has recorded the lowest score (3.46) because most of the respondents have answered this question "Strongly disagree" lest they pay money when they finish the questionnaire.

In this study, the Composite Reliability and Cronbach alpha value for all dimensions have exceeded 0.7 which refers to a good internal coherence for each measuring factors. Similarly, Average Variance Extracted values for all dimensions have exceeded 0.5 which means the validity of all variables is confirmed.

Table.4 Mean Scores and the reliability statistics of the measurement mode.l

No	Questions	M	SD	SK	KR	α	CR	AVE	SL (UNSL)	literature
TG	Tour Guide Performance	4.18	0.89	-1.55	2.58	0.98	0.97	0.90		
TG7	Provides several services that enhancing the tourist's experience.	4.11	0.89	-1.31	2.32				0.857 (1.000)	(Huang et al., 2009; Khornjamnong, 2017; Alazaizeh et al., 2019; Kassawnh et al., 2019)
TG8	Provides a better understanding of the historical value of the archaeological sites.	4.21	0.92	-1.35	1.92				0.901 (1.085)	
TG9	Discusses with us the	4.11	1.01	-1.15	0.89				0.910	

	possible impacts of visitors' behavior at archaeological sites.		1						(1.184)	
TG10	Points out to the most sensitive and fragile areas in the site in order to keep its.	4.18	1.03	-1.35	1.32				0.930 (1.239)	
TG11	Encourages us to act responsibly towards monuments.	4.19	1.02	-1.36	1.53				0.930 (1.224)	
TG12	Makes sure that we are committed to implementing instructions during the tour.	4.14	1.03	-1.31	1.40				0.919 (1.233)	
TG13	Makes sure that our behavior contributing to heritage preservation at archaeological site.	4.18	1.02	-1.39	1.63				0.907 (1.201)	
TG14	Explains how to respect cultural heritage.	4.22	0.94	-1.39	1.85				0.896 (1.104)	
TG15	Advises us how to act responsibly towards the culture environment.	4.22	0.95	-1.45	2.04				0.898 (1.114)	
TG16	Reports some instructions and guidelines to ensure no or minimum disturbance in the site.	4.23	0.97	-1.46	1.89				0.899 (1.137)	
TG17	Prevents the emergence of tension between visitors and local people or site staff.	4.16	1.00	-1.25	1.14				0.861 (1.111)	
TE Tourism Experience		4.21	0.90	-1.54	2.66	0.96	0.96	0.92		
TE18	I am interested to visit archaeological sites.	4.23	0.93	-1.50	2.47				0.860 (1.000)	(Quan & Wang, 2004; Pawaskar & Goel, 2017; Alazaizeh et al., 2019)
TE19	I have gained a lot of information about this site.	4.19	0.99	-1.42	1.82				0.933 (1.153)	
TE20	The tour guide has contributed to enriching my tourism experience.	4.18	0.96	-1.37	1.84				0.973 (1.167)	
TE21	The experience was exciting.	4.19	0.96	-1.40	1.96				0.945 (1.130)	
TE22	I will tell my family and friends about my memorable tourism experience.	4.25	0.92	-1.49	2.42				0.905 (1.042)	
TS Tourism Satisfaction		4.18	0.90	-1.56	2.69	0.96	0.96	0.91		
TS23	I really enjoyed visiting the archaeological sites in Alexandria.	4.26	0.94	-1.53	2.49				0.891 (1.000)	(Pawaskar & Goel, 2017; Alazaizeh et al., 2019)
TS24	This visit has surpassed all my expectations.	4.06	1.00	-1.10	0.972				0.840 (1.019)	
TS25	I think I was lucky when decided to visit this site.	4.19	0.95	-1.26	1.522				0.887 (1.014)	
TS26	I am satisfied with tour guide performance.	4.19	0.99	-1.40	1.77				0.930 (1.093)	
TS27	I am satisfied with cultural tourism experience at this	4.19	0.98	-1.38	1.76				0.952 (1.111)	

	site.									
TS28	Generally, I am satisfied with this visit.	4.21	0.98	-1.51	2.27				0.939 (1.089)	
RB	Responsible Tourist Behavior	4.11	0.92	-1.57	2.68	0.93	0.94	0.87		
RB29	I commit the rules and restrictions when visiting archaeological sites.	4.29	0.95	-1.57	2.47				0.953 (1.000)	(Diallo et al., 2015; Bob, 2016; Alazaizeh et al., 2019)
RB30	I support respecting the policies and regulations in archaeological sites.	4.31	0.97	-1.69	2.80				0.964 (1.037)	
RB31	I want to preserving the local environment quality.	4.30	0.99	-1.67	2.73				0.962 (1.047)	
RB32	I am willing to recommend responsible behavior in archaeological sites to others.	4.29	1.00	-1.65	2.53				0.945 (1.044)	
RB33	I notify the site administration any destruction or environmental pollution that maybe harm the site.	4.01	1.11	-1.06	0.52				0.781 (0.956)	
RB34	I would like to donate money for preserving the site.	3.46	1.30	-0.45	-0.75				0.542 (0.778)	

Structural Equation Modelling

In order to test the hypothesized relationships between the variables, a final structural model was established based on a set of main dimensions and its sub-items (Figure 5). As clarified on table 4 that presents standardized and non-standardized regression weights of all dimensions and items which have obtained from the final structural model. Although all the path coefficients in this structural model were positive, nevertheless the relation between tourism experience and responsible tourist behavior was negative and non-significant.

Figure .3 The final structural model with standardized parameter estimates

CMIN=927.688
DF= 340
CMIN/DF= 2.728
CFI= 0.954
NFI= 0.929
RFI = 0.922
IFI= 0.954
TLI= 0.949
SRMR= 0.047
RMSEA= 0.075
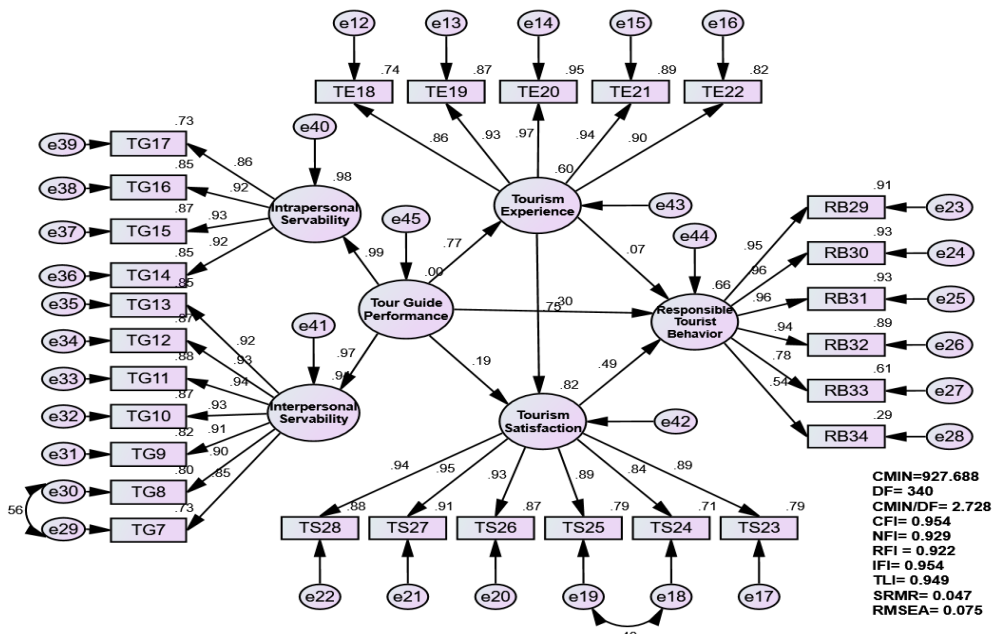
In this regard, the final Structural Equation Model (Figure 4) has adjusted with the data to improve Goodness-of-fit indices. These are indices that have obtained after modification: RMSEA=0.075; CFI=0.954; NFI=0.929; RFI=0.922; IFI=0.954; TLI=0.949; SRMR=0.047 and x^2/df =2.728.

Table.5 Estimated regression weights (standardized and unstandardized parameters)

Criterion variable			
Standardized (unstandardized) coefficients			
Predictor variable	Tourism experience	Tourism satisfaction	Responsible tourism behavior
Tour guide performance	0.77 (0.85*)	0.19 (0.22*)	0.30 (0.38*)
Tourism experience		0.75 (0.78*)	0.07 (0.07)
Tourism satisfaction			0.49 (0.53*)
R^2	0.60	0.81	0.65

*p < .05

According to the previous table, Tour guide performance positively influences responsible tourist behavior at archaeological sites (β = 0.30, B = 0.38), tourism experience (β = 0.77, B = 0.85) and tourism satisfaction (β = 0.19, B = 0.22). Hence, Hypothesis 1, 2 and 3 were supported by the data. Furthermore, the results have confirmed tourism experience positively influences tourism satisfaction (β = 0.75, B = 0.78), Thus, Hypothesis 4 was supported by the data.

Mediation analysis

To test the mediation effects of tourism experience and satisfaction, three regression analyses were computed to estimate the direct, indirect, and total effects. Additionally, Sobel's test has used to measure the significance of the indirect effects. As clarified in the table .5, the results of the Sobel's test have confirmed that tourism experience and tourism satisfaction significantly mediate the relationship between tour guide performance and responsible tourist behavior. Therefore, Hypothesis 5 and 6 were supported of this study.

Table.6 Mediation effects of tourism experience and tourism satisfaction

Mediator	Path	Direct effect	Indirect effect	Total effect	Sobel's Test Z-score	Standard error	ρ
Tourism experience	Tour Guide Performance → Tourism experience	0.759	-	0.759	7.358	0.0434	0.000
	Tourism Experience → responsible tourist behavior	0.184	0.252	0.436			0.000
	Tour Guide Performance → Responsible tourist behavior	0.353	0.411	0.764			0.000
Tourism Satisfaction	Tour Guide Performance → Tourism satisfaction	0.227	0.541	0.767	8.321	0.043	0.000
	Tourism Satisfaction → responsible tourist behavior	0.354	-	0.354			0.000
	Tour Guide Performance → Responsible tourist behavior	0.353	0.411	0.764			0.000

At a significance level of 0.05 (p < 0.05)

Discussion and conclusions

This paper has sought to study the role of tour guide performance in directing tourists' behavior towards responsible behavior in Archaeological sites. This research is interested in studying the relationship between tour guide performance and responsible tourist behavior at archaeological sites by analyzing the impact of intermediate factors like tourism satisfaction and experience (Huang et al., 2009; Asbollah et al., 2017; Alazaizeh et al., 2019). In order to measure tour guide performance, this study based on two sub-factors namely "Interpersonal servability and organization" and "Intrapersonal servability and professional competence" (Hansen & Mossberg,

2016). The interpersonal servability and professional competence factor achieved the highest score (0.99) more than "Interpersonal servability and organization" factor this refers to tour guides' knowledge, skills about the destination culture and local people's lifestyle were played significant role in a tour guide performance at archaeological sites.

For the last ten years, many researchers have recognized the importance of activating the principles of sustainability in tourism, especially, under the pressure of increasing tourism flows and harmful impacts resulting from tourists' activities and their behavior at archaeological sites (Kang & Moscardo, 2006; Han et al., 2016). From reviewing the literature, There are many factors may influence on tourists' behavior at archaeological sites, but tour guide performance is still the main and important factor in convincing tourists and influencing their behavior. Tour guide performance becomes effective in convince when tourists get satisfying tourist experience.

In the context of this study, the Structural equation modeling (SEM) has shown the effective role of tour guide performance, tourism experience and tourism satisfaction in directing tourists' behavior towards responsible behavior. Therefore, this study was focused on testing the mediating effects of tourism experience and tourism satisfaction in the relation between tour guide performance and responsible tourist behavior through H5 and H6.

To test the Hypotheses, this study has endeavored to determine the significance of each path coefficient, estimate standardized and unstandardized regression weight, composite reliability, Cronbach's alpha and Average variance extracted. According to the results obtained, the Composite Reliability and Cronbach's alpha value for all dimensions have exceeded 0.7 which refers to a good internal coherence for each measuring factors. Similarly, Average variance extracted values for all dimensions have exceeded 0.5 which means the validity of all variables is confirmed and the results of survey are matching with the theoretical framework.

Recommendations

(1) Tourist Guide Syndicate should interest for all Tour guide issues that seek to improve his performance, such as knowledge, training, communication and experience.

(2) Policy makers should impose strict procedures and regulations that protect archeological sites from the negative impacts of mass tourism.

(3) Interpretation programs should show high-quality information to improve the tourist's understanding about the importance of archaeological and historical sites and the need for their protection.

(4) Tourism programs should increase tourists' awareness towards responsible behavior and encouraging them to behave appropriately at archaeological sites.

(5) Tourists should respect the sanctity of archaeological and historical sites, beside customs and traditions of the host community and reject to comply towards irresponsible behavior.

(6) Tour guide should provide a lot of information about the destination and its archaeological sites in order to enrich the tourism experience for visitors.

(7) The tour guide should make sure that the tourist is satisfied with his performance during the whole visit to ensure his loyalty and to behave in a responsible manner at archaeological sites.

(Schreiber et al., 2006). Second, ensure that there is no missing data or significant outliers are found in the data. Then, make sure the normal distribution of the observed variables according to the results of skewness and kurtosis as clarified in table.4. Subsequently, use structural equation modelling (SEM) among latent variables to make sure the hypothesized relationships.

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