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# Place Attachment and Tourist Experience in the Context of Desert Tourism – the Case of Wadi Rum

**Mamoon Allan**

E-mail: mamoon1073@yahoo.com

**Tourism Management Department, Faculty of Archaeology and Tourism, University of Jordan,  
Amman, Jordan**

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## Abstract

This paper aims to explore the relationship between tourist experience and place attachment in a desert tourism experience. The current study was carried out with a sample of international and domestic visitors in Wadi Rum, Southern Jordan. The results show that there is a significant positive correlation between the nearby constructs of the study units such as the four tourist experience dimensions (education, esthetics, entertainment, and escapism), and the two dimensional place attachments measures (place identity and place dependence). Moreover, the findings also indicate that education factor had a significantly positive relationship with place identity, and there was a significantly positive relationship between escapism factor and place dependence. The findings can be used to develop the tourist experience and place attachment in the context of desert tourism experience. They further help tourism destinations managers, planners and marketers to provide appropriate marketing strategies and enrich their offers to desert tourism participants.

## Keywords

Place identity, place dependence, tourist experience, geotourism, desert tourism, Wadi Rum

**JEL classification:** Y80, L83

## Introduction

Tourism attractions are numerous, varied, and fragmented (Cooper et al. 2005). Deserts represent 34% of the world's land area (United Nations Environment Programme, 2006). According to Weaver (2001), desert tourism involves seven attributes: outstanding geological features and climatic circumstances, wildflower and other sporadic flowered displays, ancient, enormous or rare vegetation, caravans or other desert trekking, indigenous citizens, oases, and protected areas. The major notion of frontier desert tourism is commonly discrete from designed attractions. It is usually associated with concepts such as nature, 'eco', sustainable and adventure tourism (Reichel, Uriely & Shani, 2008).

To date, much uncertainty still exists about the issue of desert tourism in the pertinent tourism literature. According to Tremblay (2006, p. 1), "The academic literature has very little to say about 'desert tourism' although cases of tourism in desert areas feature in the discourse on sustainable tourism and eco-tourism more generally". In the same vein, it seems that researchers have not treated tourist experience and the place attachment in the context of desert tourism experiences in much detail. Furthermore, the pertinent tourist experience literature lacks discussions of the relationship between tourist experience and place attachment (Wu, Tsai, Hsu, & Chen, 2010). Correspondingly, Guzel (2014) postulates that for further validation of measurement of four experience dimensions, a model related with emotional arousal in other tourism experiences and contexts (balloon experience, agro tourism experience etc.) should be done. Thus, this study examines the relationship between tourist experiences dimensions (education, esthetics, entertainment, and escapism) and the two-dimensional place attachment measures (place identity and place dependence) at Wadi Rum in southern Jordan which is considered to be a distinctive geotourism site.

## Literature review

### Geotourism

In recent years, more attention has been paid to the emotional sensations associated with the observation of abiotic attributes and geological processes (Kicinska-Swiderska & Slomka, 2004). Thus, geotourism (tourism with a geological purpose) has flourished rapidly in the last decades and geotourism products and services have been launched in many countries. However, geological tourism (geotourism) is an international activity and its research began to flourish about a decade ago. It still seems to be an undeveloped area of study (Ruban, 2015). Recently, there has been a rapid growth of tourism interest in geological features and landscapes, both within existing protected areas, and thanks to the recognition and identification of geosites via geo-conservation activities, governmental recognition of geoheritage and the emergence of a complex tourism demography that is more demanding of new, distinctive and educative experiences.

Collectively, geotourism is a comparably new conceptual area in the existing tourism literature. Its conceptual frameworks are not yet fully matured. By reviewing the lite-

rature on geotourism, there is no agreement on the concept definition. The pertinent tourism literature has two main approaches to the concept of geotourism. On the one hand, some studies (Hose, 1995; Dowling & Newsome, 2006; Dowling, 2011; Allan, 2012; Hose & Vasiljevic, 2012) argue that geotourism is a reflection of the real value of the geological and geomorphic features. On the other hand, others contend that geotourism is a purely geographic theme (The Travel Industry of America and National Geographic Traveler Magazine, 2002). This approach is common in the United States of America. Thus, the literature on geotourism requires development from the exact background research, for both the theoretical and practical levels.

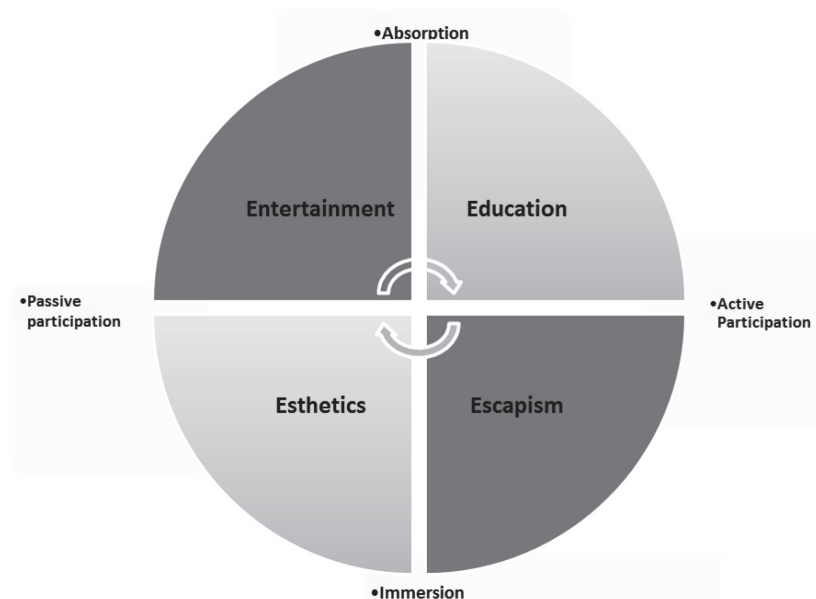
According to Koh et al. (2014, p. 107), “geosites possess geologically important information of solid earth science, ore deposits, geological engineering, geomorphology, glacial geology, ground water, mineralogy, paleontology, petrology, sedimentology, speleology, stratigraphy, structural geology and volcanology”.

In the context of geotourism in the Middle East, Allan (2016) postulates that despite the richness of geological and geomorphic resources in the Middle East, there is much less information about different dimensions of geotourism in such area.

## Tourist experience

Tourism is essentially experience-based and there is a consensus in the tourism literature on the need to produce experience for different types of tourists (Laing, Wheeler, Reeves, & Frost, 2014). According to Chhetri, Arrowsmith, and Jackson (2004), to date there is no agreement on a common and single theory that defines the concept of tourist experience, albeit many attempts to conceptualize such a concept by different researchers and scholars. Accordingly, experience with different types of tourism and of different typologies of tourists have been widely studied (Volo, 2009). In 1972, Cohen started the tourist experience research by introducing a typology of tourist experiences. He identified five modes of phenomenological tourist experiences, including the recreational mode, the diversionary mode, the experiential mode, the experimental mode and the existential mode. Similarly, Unger and Kernan (1983) suggest five main subjective constituents of satisfaction in leisure: perceived freedom, involvement, arousal, mastery, and spontaneity. Whereas Hirschman (1984) proposes three stages of tourism experience, specifically: cognitive; sensation; and novelty stage.

Pine and Gilmore (1999) conceptualized four realms or dimensions of tourism experiences (entertainment, esthetics, education, and escapism). Entertainment and esthetics reflects the passive participation of consumers in business or destination, whilst education and escapism represent the active participation. Following the absorption-immersion axis, the consumers “absorb” entertaining and educational dimensions related to a destination and “immerse” in the destination resulting in esthetic or escapist experiences (Figure 1).

**Figure 1** The four realms of an experience

Source: adapted from Pine and Gilmore (1999)

Pine and Gilmore (1998, p. 99) further define experiences as “inherently personal, existing only in the mind of an individual who has been engaged on an emotional, physical, intellectual, or even spiritual level. Thus, no two people can have the same experience”. However, Andersson (2007) argues that tourist experience is a time when the tourism production and consumption meet. Whereas Larsen (2007) indicates that tourist experience could be defined as a past personal travel which could enter long term memory.

Another tourist experience model was introduced by Walls et al. (2011). Their framework shows that a consumer experience could be plotted on two main axes involving four components: ordinary, extraordinary, cognitive and emotive. More specifically, potential four elements would affect the tourist experience: perceived physical experience; perceived human interaction; personal characteristics of the tourist; and situational factors.

Mossberg (2007) introduces a conceptual model of potential factors affecting the tourist experience and concludes that themes or story telling related to a tourist destination and attractions could enhance tourist experiences. It is axiomatic that there are many advantages for improving tourists’ positive experience with visited places such as enhancing tourist experience satisfaction, promoting their positive behaviour and attitude toward the targeted places (Moscardo, 1996).

Elsewhere, Webb (2002) explores the tourist experiences in the Little Sandy Desert in Western Australia and he further identifies six experience themes for participants on a facilitated nature-based science expedition: educational and social dimensions of the

expedition, the ‘nature of the landscape’ and how participants perceived their ‘relationship with the landscape’, and expressions of spirituality and affect.

## Place attachment

Recently, a considerable literature has grown up around the theme of place attachment in the tourism context. More specifically, attention to people-place relationships has been growing prominently (Lewicka 2010). It is believed that this tendency could be explained as a reaction to the globalization repercussions, more homogenization of different cultures, migration, rising mobility, encroaching environmental problems, growing tourism development, the richness of western societies and other relevant societal changes and environmental issues (Scannell & Gifford, 2010). Macbeth (2000) indicates that there is an underlying utopian ideal that motivates travellers to precisely get closer to nature and try to relink with some idealized view of the primitive.

However, Relph (1976) indicates that the place attachment can be greatly affected when a landscape is changed, due to the fact that people project their lives into a specific place. Steele (1981) postulates that places have formed human history and surroundings will influence the perception of one’s view of the world. Low and Altman (1992) assert that place pertains to space that has been linked with meaning through personal, group or cultural processes.

Giuliani (2003) suggests that people get involved in an interaction process with places and, during this process, they develop a variety of attachment strength levels towards these places. In many cases, they are not aware of the emotional bonds with places till the place attachment is threatened.

Despite viewing the place attachment as one dimension constructs in some studies in the existing literature (Lewicka, 2011); a plethora of studies have considered place attachment as two dimensions, including place identity and place dependence (Williams & Roggenbuck, 1989; Jorgensen & Stedman, 2001; Williams & Vaske 2003; Hwang, Lee, & Chen, 2005). According to Jorgensen and Stedman (2001) the place dependence pertains to the functional attachment to a place and how well a place functions support certain goals or desired activities. On the other hand, Lewicka (2011) indicates that the place identity is relevant for emotional attachment and affective bonds to a place. It has been demonstrated that attachment to a natural area represents both an individual’s internalized perceptions of the natural area (i.e. identity), along with the scope to which one feels that visiting the natural area will fulfil motivational goals (i.e. dependence) (Line & Costen, 2011). It is worth mentioning that regarding a cultural destination, a tourist from the same cultural background as the host community develops the place identity whilst one from a different cultural background inclines to express the place dependence (Hou et al., 2005).

Lin and Lockwood (2014) indicate that whilst different measures of the place attachment are applied across a variety of disciplines, many have in common a difference between an emotional dimension and a functional dimension.

In view of all that has been mentioned so far, one may suppose that data about different tourist experiences in desert and their place attachment to such a setting are very limited. Thus, the aim of this study is to examine the relationship between the tourist experience and the place attachment in a geological tourism setting.

## Methodology

The current study conducted an on-site questionnaire at Wadi Rum, southern Jordan. The questionnaire consisted of three sections, including respondents' demographic factors (age, gender, nationality and education), tourist experience and place attachment dimensions comprising a total of 31 items.

Items were adapted from other scales and frameworks that have been used to measure tourist experience (Oh, Fiore, & Jeoung, 2008), and place attachment scale (Williams & Vaske, 2003). Tourists experience scale includes four dimensions (education, esthetics, entertainment, and escapism) and 16 items measuring the 4e dimensions. The scale's Cronbach's scores ranged from 0.83 to 0.96 (Oh, Fiore, & Jeoung, 2008). The place attachment scale included 12 items; six items for the place identity construct, and six items for the place dependence construct and the scale's Cronbach's score was 0.83 (Williams & Vaske, 2003). According to Brown and Raymond (2007, p. 92), "Williams and Vaske's (2003) place attachment scale is one of the first validated scales to systematically identify and measure meanings (termed place bonds) over a variety of land use settings".

A seven-point Likert scale was used in the current study with values ranging from 1 (strongly disagree) to 7 (strongly agree). The participants in the current study were selected from visitors who visited Wadi Rum from September 2015 to April 2016. Approximately 300 visitors of the site were approached. Of the initial cohort of the respondents, 235 were willing to complete the questionnaire and more than 203 visitors provided answers to all items in the questionnaire of the current study.

A purposive sampling method has been applied in selecting the study units. Potential respondents were asked to complete the questionnaire after completing their tourism experience at Wadi Rum. The data were collected at the visitor centre in Wadi Rum. When asking the participants, the purpose of the study was clearly explained.

The data management and analysis *were performed* by using SPSS 20. The current study employed different types of statistical techniques as appropriate. Non-parametric methods were investigated to analyse the data such as frequencies and percentages, reliability analysis, and mean score; and parametric method such as Pearson's bivariate correlations and linear regression analysis to test if there is a relationship (or not) between the study variables.

## Study location

The Wadi Rum Protected Area is situated in the southern part of Jordan (Figure 2). It covers an area of 74,200 hectares and 73,300 hectares are being nominated for the world heritage status as mixed site for natural and cultural outstanding universal values. It is considered to be the largest protected area in Jordan and the Levant region (UNESCO, 2010). The height of Wadi Rum ranges from 800 to 1750 meters; they are considered to be the second highest mountains in Jordan (Evans, Amr, & AL-Oran, 2005). Wadi Rum includes 25,000 rock carvings with 20,000 inscriptions, which reflect the growth of human thinking and the initial evolution of the alphabet (UNESCO, 2011). Consequently, Wadi Rum represents one of the most significant and distinctive geotourism (tourism with a geological purpose) attractions in Jordan (Allan, 2012).

The major tourism activities in Wadi Rum are rock climbing, camel and horse trekking, hiking and camping (there are 28 desert campsites), guided four-wheel drive tours, ballooning, and camel rallies (UNESCO, 2011).

**Figure 2** Map of the location of Wadi Rum



Source: Reprinted from the Embassy of Jordan (2011)

Wadi Rum represents one of the most important natural tourism sites in Jordan and it received more than 92,000 visitors in 2014 and 65,000 in 2015 (MOTA, 2016) (Table 1).

**Table 1** Monthly number of visitors to Wadi Rum in 2014 - 2015

2014			2015			Month
Foreign	Jordanian	Total	Foreign	Jordanian	Total	
4,861	12	4,873	3,096	142	3,238	January
5,612	1,257	6,869	2,585	165	2,750	February
10,322	1,251	11,573	5,027	308	5,335	March
12,119	1,486	13,605	7,456	3,349	10,805	April
8,526	2,803	11,329	5,583	3,551	9,134	May
4,902	1,215	6,117	3,085	1,115	4,200	June
2,906	596	3,502	2,070	1,169	3,239	July
3,496	2,791	6,287	1,651	728	2,379	August
4,929	1,593	6,522	3,565	1,023	4,588	September
8,835	1,826	10,661	7,657	2,661	10,318	October
7,510	0	7,510	6,220	437	6,657	November
3,185	0	3,185	2,932	266	3,198	December
77,203	14,830	92,033	50,927	14,914	65,841	Total

Source: Adapted from MOTA (2016)

## Results

Table 2 summarizes the demographic background of the respondents. Regarding the gender of the respondents, 56.2% were males and 43.8% were females. Most of the respondents were between the ages of 18 to 35 (65.5%), with 44.8% of the respondents indicating that they attained an undergraduate education level and 34.5% achieved a postgraduate education level. The nationalities of the respondents were varied and a large portion of the respondents were from China (14.4%), Netherlands (11.4%) and USA (10.4%).



**Table 2** Demographic background of the respondents at Wadi Rum

Demographic Items	Value	Percent (%)
Gender	Male	56.2
	Female	43.8
Age	18-34	65.5
	35-39	3.4
	40-49	8.9
	50-59	18.7
	+60	3.4
Educational level	Primary	4.4
	Secondary/ high school	16.3
	Undergraduate	44.8
	Post-graduate	34.5
Nationality	Chinese	14.4
	Dutch	11.9
	American	10.4
	Jordanian	6.4
	English	5.9
	Russian	5.4
	Iraqi	4.5
	German	3.5
	Spanish	3.5
	Malaysian	3.0
	Italian	2.5
	Japanese	2.0
	Turkish	1.5
	Austrian	1.0
	Armenian	1.0
Ukrainian	0.5	
Peruvian	0.5	

Source: author's research

Table 3 records the results of the four dimensions of the tourist experience at Wadi Rum. The mean score of the four dimensions ranged from 3.49 to 5.27. Taken as a whole, esthetics ( $M = 4.65$ ,  $SD = 0.94$ ) was the main tourist experience factor, followed by educa-

tion factor ( $M = 4.32$ ,  $SD = 1.21$ ). The questionnaire item, ‘The setting was very attractive’ had the highest mean score for the items measuring tourist experience ( $M = 5.27$ ,  $SD = 1.74$ ), while the item, ‘I felt I played a different character here’ scored the lowest mean ( $M = 3.49$ ,  $SD = 1.57$ ). The Cronbach Alpha for the items measuring the tourist experience measures was 0.81.

**Table 3** Results of the tourist experience measures for the respondents

Measures	Mean	SD	Number of responses (n = 203)
<b>Education</b>	<b>4.32</b>	<b>1.21</b>	<b>199</b>
The desert tourism experience has made me more knowledgeable.	4.04	1.48	202
I learned a lot.	4.27	1.61	200
It stimulated my curiosity to learn new things.	4.67	1.92	200
It was a real learning experience.	4.31	1.82	200
<b>Esthetics</b>	<b>4.65</b>	<b>0.94</b>	<b>194</b>
I have a real sense of harmony by this experience.	4.31	1.56	202
Just being here was very pleasant.	5.26	1.87	201
The setting was pretty bland.	3.78	1.96	194
The setting was very attractive.	5.27	1.74	200
<b>Entertainment</b>	<b>3.82</b>	<b>1.09</b>	<b>196</b>
Activities of others were enjoyable to watch.	3.64	1.62	187
Watching others perform was charming.	3.68	1.53	199
I really enjoyed watching what others were doing.	3.99	1.41	200
Activities of others were fun to watch.	3.97	1.74	200
<b>Escapism</b>	<b>4.18</b>	<b>1.35</b>	<b>196</b>
I felt I played a different character here.	3.49	1.57	201
I felt like I was living in a different time or place.	4.60	1.68	196
The experience here let me imagine being someone else.	4.02	1.88	200
I completely escaped from reality.	4.63	2.02	200

Source: author’s research

Table 4 presents the two-dimensional place attachments measures (place identity and place dependence) for tourists engaging in desert tourism experience at Wadi Rum. The results indicate that the place identity measure ( $M = 3.83$ ,  $SD = 1.68$ ) had a higher mean score than the place dependence ( $M = 3.73$ ,  $SD = 1.30$ ).

Of the items, the two-dimensional place attachment, ‘I am very attached to Wadi Rum’ (place identity) had the highest mean score,  $M = 4.29$  and  $SD = 1.94$ ; whereas the item, ‘Being at Wadi Rum says a lot about who I am’ (place identity) received the lowest mean score,  $M = 3.18$  and  $SD = 1.48$ . The Cronbach Alpha for the items measuring place identity was 0.80, whilst it was .81 for items measuring the place dependence.

**Table 4** Results of the place attachment measures for the respondents

Measures	Mean	SD	Number of responses (n =203)
<b>Place Identity</b>	<b>3.83</b>	<b>1.68</b>	
I feel that Wadi Rum is a part of me.	3.58	1.61	200
Wadi Rum is very special to me.	4.11	1.86	200
I strongly identify with Wadi Rum.	3.61	1.39	199
I am very attached to Wadi Rum.	4.29	1.94	200
Being at Wadi Rum says a lot about who I am.	3.18	1.48	201
Wadi Rum means a lot to me.	4.22	1.85	201
<b>Place Dependence</b>	<b>3.73</b>	<b>1.30</b>	
Wadi Rum is the best place for what I like to do.	3.36	1.53	200
No other place can be compared to Wadi Rum.	4.11	1.86	200
I get more satisfaction out of being at Wadi Rum than at any other place.	3.88	1.63	197 k2
Doing what I do at Wadi Rum is more important to me than doing it in any other place.	3.79	1.50	201
I wouldn't substitute any other area for doing the types of things I do at Wadi Rum.	3.53	1.50	201

Source: author's research

Pearson's bivariate correlations between tourist experience constructs, education, esthetics, entertainment and escapism, and place attachment measures: the place identity and the place dependence, were conducted to check the inter-correlations between these constructs. The results showed that the patterns of correlations amongst the various tourist experience variables were the most significant at  $p < .01$ , ranging from very strong  $r = 0.74^{**}$  to weak and non-significant  $r = 0.08$ . Collectively, the results revealed that the strongest correlation was between education and esthetics  $r = 0.74^{**}$ , whilst the non-significant correlation was between esthetics and entertainment  $r = 0.08$ . Additionally, the results indicated that the pattern of correlations amongst the place attachment variables was significant  $r = 0.75^{**}$ .

The inter-correlations between the tourist experience and the place attachment measures showed that they ranged from strong  $r = 0.58^{**}$  to weak but significant  $r = 0.18^*$ . It is noted that most consistent and strongest correlations is between education and the place identity  $r = 0.58^{**}$ , whereas the weakest correlation was between esthetics and the place dependence  $r = 0.18^*$  (Table 5).

**Table 5** Correlations between the study variables

Variables	Education	Esthetics	Escape	Entertainment	Place identity	Place dependence
Education	-	.74**	.71**	.28**	.58**	.30**
Esthetics		-	.67**	.08	.38**	.18*
Escape			-	.31**	.53**	.36**
Place identity					-	.75**
Place dependence						-
Mean	22.9	17.9	17.3	18.9	15.4	17.6
S.D	7.2	5.2	4.8	3.7	4.3	5.4

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Source: author's research

Multiple regressions was conducted to examine the relationships between the study variables whereby the dimensions of the tourist experience (education, esthetics, entertainment, and escapism) served as the dependent variables and the two dimensional place attachment (place identity and place dependence) were the independent variables. An inspection of individual predictors revealed that education (Beta = .53,  $P < .001$ ) was a significant predictor of the place identity. The overall model explained 65% of variance in the place dependence, which was revealed to be statistically significant at  $F(4,16) = 32.12$ ,  $p < .001$ . Whereas escapism (Beta = .27,  $P < .001$ ) was found to be a significant predictor for the place dependence. This was revealed to be statistically significant,  $F(4,17) = 9.40$ ,  $p < .001$ . The overall model explained 43% of variance in the place dependence (Table 6).

**Table 6** Regression analysis results/ Wadi Rum

Independent Variables	Place identity			Place dependence		
	B <sub>u</sub>	S.E.	B $\alpha$	B <sub>u</sub>	S.E.	B $\alpha$
Intercept	3.81	2.59	-	8.60	2.34	-
Education	.53	.14	.80	.16	.12	.18
Esthetics	-.03	.18	-.07	-.10	.16	-.14
Entertainment	.08	.10	.14	.19	.09	.25
Escapism	.18	.11	.25	.27	.11	.28
F-statistic (df)	F(4.16)=32.12			F(4.17)=9.40		
p-value	.000			.000		
R	.65			.43		
Adj. R	.42			.16		
N	173			171		

Note: B<sub>u</sub> = unstandardized beta coefficient; S.E. = standard error of beta,  
 $\beta\alpha$  = standardized beta coefficient / \*p<.05; \*\*p<.01

Source: author’s research

## Discussion

The findings of the gender output show that males visited Wadi Rum attractions more than females. On the basis of age, it can be noted that the majority of tourists were between 18 and 34 years old. Moreover, the results revealed that the respondents visiting Wadi Rum were well-educated. Concerning the nationalities of the respondents, the majority were international visitors. Among all non-domestic visitors, the most frequently reported country of origin was China, followed by respondents from the Netherlands.

In terms of tourist experience, the current study found that esthetics was the main dimension of the tourist experience at Wadi Rum. These results are in agreement with Hosany and Witham’s (2010) and Guzel’s (2014) findings which showed that esthetics was a significant component and the main determinant of the tourist experience. The distinctive esthetics appeal and attractiveness of Wadi Rum has attracted tourists’ attention rather than any other factor. According to RSCN (2016), “Wadi Rum Protected Area is one of the world’s most outstanding desert landscapes”.

In relation to the place attachment level, the findings reveal that the respondents showed a high level of place attachment, in which there is a higher tendency toward the place identity.

It is possible that the attachment to a natural area represents both an individual's internalized perceptions of the natural area (i.e. identity), along with the scope to which one feels that visiting the natural area will fulfil motivational goals (i.e. dependence) (Line & Costen, 2011). Spaces are broader with undefined meanings, whereas places are more precise and develop from people experiences and interactions (Tuan, 1977). Therefore, while individuals visit a particular setting, they attribute meaning to areas. For example, a wilderness area might be a place for people to escape and reset, whereas a park might be a place for different families to bond and exercise (Stedman, 2003).

However, the Pearson's bivariate correlations indicated that there was a significant positive correlation between the adjacent concepts such as the constructs of tourist experience realm and between the two-dimensional constructs of the place attachment (place identity and place dependence). These findings are consistent with those of Oh, Fiore, and Jeoung (2008) who found that the correlation between the four tour experience dimensions were statistically significant.

These findings confirm the findings of Williams et al. (1995) who suggested that although the place identity and the place dependence being statistically separate factors, previous studies revealed that the two dimensions were correlated. Correspondingly, this view is also supported by Smith *et al.* (2010) who asserted that the place identity and the place dependence had a high correlation. Qian et al. (2011) indicated that the place dependence significantly affected the place identity.

The results of the correlation between the tourist experience constructs and the place attachment dimensions revealed there were significant positive correlations between education, esthetics, entertainment, and escapism with the place identity and the place dependence. This finding further supports the idea of Wu, Tsai, Hsu, & Chen (2010) who found that there was a positive relationship between the tourist experience and the place attachment. They further stated that the tourist's experience measures had a significant positive bivariate correlation ( $\gamma = 0.766$ ,  $p < 0.001$ ) with the place attachment.

As it has been demonstrated by this study, there is a significantly positive relationship between the education factor of the tourist experience realm and the place identity. These findings are consistent with those of Fredrickson (2001) who found that tourists who considered knowledge gain important in their tourism experience had a stronger place attachment. Likewise, Measham (2004) postulates that the emotional attachment of place identity is intensely encouraged by better childhood education and experiences. Similarly, Blizard and Schuster (2004) state that enhancing environmental knowledge for the children has fostered their place identity and promoted a strong emotional attachment to the trees, plants and animals. Another finding was that there was a significantly positive relationship between the escapism factor and the place dependence. Kil et al. (2010) state that previous studies confirmed that higher place attachment to leisure areas were generally linked to beneficial experiences such as nature enjoyment, escape from noise, solitude, nostalgia, and knowledge gain.

## Conclusion

Based on the literature review, there has been a little discussion about tourist experience in the desert and their place attachment to such a setting. The authors of the geotourism studies did not pay sufficient attention to such issue. Therefore, this study aimed to explore the relationship between the tourist experience and the place attachment in the desert. Consequently, the results of this study indicate that the desert tourism participants in Wadi Rum were young and middle aged, well-educated, as well as international and local visitors. Moreover, esthetics is the major dimension of their tourist experience at Wadi Rum. This study has also shown that a significantly positive relationship between the education factor of the tourist experience and the place identity. There was also a significantly positive relationship between escapism and the place dependence. These findings will help tourism managers, planners and marketers to enhance their offers and allocate their resources and provide appropriate tourism products to their consumers. Ritchie and Crouch (2003) asserted that tourism destination stakeholders should share a general vision to create a “landscape of experience - experiencescapes”.

As it has been noted before, the findings clarified the relationship between the tourist experience and the place attachment dimensions in the desert context. This will guide the managers of the desert destinations in designing appropriate marketing strategies.

The generalisability of these results is subject to certain limitations. For instance, the researcher was restricted to conduct the study at one site (Wadi Rum). An issue that was not addressed in this study is whether other dimensions of the place attachment that have not been covered in empirical investigations yet exist or not. It could be also interesting to test additional dimensions in the context of place attachment. Moreover, further work should be done to investigate the relationship between the tourist experience and the place attachment in different setting, contexts and samples.

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