

AN EXAMINATION OF THE RELATIONSHIP BETWEEN CAVE TOURISTS' MOTIVATIONS AND SATISFACTION: THE CASE OF ALISADR CAVE, IRAN

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Abstract:

The purpose of this research was to examine empirically the motivation of tourists in a geotourism context and also the relationships among the intrinsic and extrinsic motivations and destination satisfaction for cave tourists in Alisadr Cave, Iran. The research conceptual framework was constructed, based on previous theoretical and empirical studies. A questionnaire survey was conducted with 400 respondents to collect the primary data. Descriptive statistics, Friedman test, Factor analysis, Pearson's Correlation Analysis and Multiple regression were conducted to answer the research questions. As a result, enjoyment, relaxation, novelty seeking and escape were the major intrinsic motivations. In addition, intrinsic and extrinsic motivations had directly positive influences on tourists' satisfaction in Hamadan.

Key words: Show cave, cave tourism, geotourism, satisfaction, motivations, self-determination theory, Iran

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INTRODUCTION

Caves are important for humans because they represent geomorphologic, geologic, biologic, historical, archaeological, and paleontological laboratories. Caves are sometimes the only source of information of past geological events. People visit caves due to aesthetical, recreational, educational, health, and religious purposes (Mulec & Kosi, 2009). Show caves are caves that are managed by a government or commercial organization and made accessible to the general public, usually for an entrance fee. Unlike wild caves, they typically possess such features as constructed trails, guided tours, lighting, and regular opening hours.

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Thanks to their facilities, show caves are a powerful tool for scientific research and environmental protection, which in turn may enhance the touristic appeal of the show cave itself. Cave is a significant component of geodiversity (Gray, 2004) and is one of the first documented geologic features that has become the object of tourism (Forti, 2011). Caves were the first and, for a long period, the single geologic item for tourism. In the last years, with the creation of “Geo-Parks”, new geomorphological items started to become touristic targets. Anyway show caves are still now by far the most important geologic tourist attraction from the economic point of view and, in the last 20 years, their interest grew very rapidly and actually shows caves and karst tourism supply, directly or indirectly, the income for over 100 million people, many of them living in the developing countries (Cigna & Forti, 2013). Cave tourism is a type of geotourism. In fact, some authors consider that visiting show caves is the oldest form of geotourism (Bourne et al., 2008). Geotourism is defined by Newsome; Dowling (2010) as “a form of natural area tourism that specifically focuses on geology and landscape. It promotes tourism to geosites and the conservation of geodiversity and understanding of earth sciences through appreciation and learning” (Rachmawati & Sunkar, 2013).

Cave tourism resources are based on the intrinsic values of scientific, aesthetic, recreational and cultural values (Tongkul, 2005). The scientific value indicates important geological records, history of the cave formation or earth, and mineralogy, i.e. an interest in fossils, rocks and minerals. Aesthetic values are related to the mystery and formidable wonder of geological landforms or unusual geomorphologic features in a cave, and surrounding landscapes. Recreational value is related to those who enjoy exploring inner caves, boating in caves, hiking and camping around caves that are generally located in valleys, mountain terrain, waterfalls, beaches, or limestone areas.

Cultural value is linked to superstitious rituals, residents’ beliefs and wishes, traditional meaning, and historical and archeological records (Kim et al., 2008). Iran has a rich culture and civilization as well as an outstanding natural environment. Its natural and cultural diversity specifications have caused it to be listed as one of the top ten tourist countries in the world (Francesco Frangialli, Secretary General of the World Tourism Organization, 2004), and its archaeological, cultural and natural attractions form an excellent basis for developing geotourism.

There is a wide variety of caves in Iran, including calcareous (karst), salt, ancient and human-made caves (Dowling & Newsome, 2006). Alisadr cave belongs to the precious natural heritage of Iran. It is Iran’s largest lake cave and one of the most visited show caves in the world. It has 700,000 visitors per year. The objective of this study was to understand travel motivation of tourists in Alisadr cave by using self-determination theory, their demographic characteristics and examine how intrinsic and extrinsic travel motivations explain and predict destination satisfaction.

LITERATURE REVIEW

Motivation

A considerable amount of literature has been published on tourist motivation in recent decades and it is ubiquitous in tourism studies (Singh, 2008). Therefore, the concept of tourists’ motivation has attracted the attention of numerous leading researchers such as Graham Dann, John Crompton, Seppo Iso-Ahola, Philip Pearce, Chris Ryan, and is one of the most crucial topics in tourism and leisure literature. In tourism fields, tourism motivation is “a dynamic process of internal psychological factors (needs and wants) that generate a state of tension or disequilibrium within individuals” (Crompton & Mckay, 1997, p. 427). So motivation is one of the key factors behind

behavior models (Hemmi & Vuoristo, 1993, p. 137). However, it is apparent that previous tourism studies pay scant attention to the issue of why people travel to certain geosites. Reviewing the current literature, another significant theory in explaining individual differences in motivation and behavior is Deci and Ryan's self-determination theory. As White and Thomason (2009) pointed out, self-determination theory provides an interesting insight and overcomes the limitations of the current scholarship on tourists' motivation, namely the lack of a coherent theoretical and operational theory. Many studies use self-determination theory related topic to the leisure and have found and suggested that it can be a useful approach that provides a framework for understanding people's motivation to participate in leisure activities.

SDT is an organismic meta-theory of motivation that assumes human beings are active organisms who are driven by three psychological needs such as competence, autonomy and relatedness (Deci & Ryan, 1985). It focuses on the development and functioning of personalities within social contexts. It posits that innate psychological needs can explain variances in human behaviour (Deci & Ryan, 1985; Ryan & Deci, 2000a, 2000b), and if all three needs are being fulfilled, optimal functioning and personal growth will occur. The more self-determined a person is, the more he or she endorses his or her actions at the highest level of reflection and engages in these actions with a full sense of choice. SDT views motivation as a multidimensional construct, ranging from intrinsic to extrinsic. Intrinsic motivation is the drive to pursue an activity as an end in itself. Extrinsic motivation is the impetus to pursue an activity as a means to an end, and could vary according to its degree of self-determination.

Behavior	Nonself-determined					Self-determined
Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Type of Regulation	Non-regulation	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Locus of Causality	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal

Figure 1. Schematic illustration of the self-determination continuum (Source: Deci & Ryan, 2000)

Figure 1, shows a schematic illustration of the self-determination continuum. Ryan and Connell (1989) suggest that along the self-determination continuum or perceived locus of causality, the most non-self-determined form of motivation is external regulation, which refers to behaviour that is controlled by external means such as rewards or external authority. A somewhat less external, but still a controlled form of regulation, is introjected regulation. This refers to behaviour that is internally controlling or self-imposed, such as acting out feelings of guilt avoidance, and is characterised by the feeling that one "ought to". At the more self-determined end of the continuum, a person can be motivated by identification; that is, behavior is self-determined according to one's choices or values. It is characterised by feelings of "want to" rather than "ought to". Geotourism clearly can provide opportunities for behaviors with high levels of self-determination. There have been few studies on cave tourist's motivations. The major research which is related to the

concept of motivation in a geotourism context leads to the research of Mamoon Allan (2012). He has done a survey on geotourists' motivations in four geosites located in Australia and Jordan by using self-determination theory. Also he made a comparison between the geotourist's motivations and their intentions to return. He has concluded that the escape from routines, relaxation, and enjoyment are the major intrinsic motivations and identified regulation is the most important extrinsic motivations among potential geotourists. Other research was done by Samuel Kim and et al in 2008 by the name of "Cave Tourism: Tourists' Characteristics, Motivations to Visit, and the Segmentation of Their Behavior". The study's objectives were cave tourists' characteristics, segmenting them according to motivation factors, and finally identifying who they are. In this article tourists' motivations have divided to four groups including Escape-seeking, Knowledge and Noveltyseeking, Noveltyseeking, Socializationseeking.

Satisfaction

Tourist satisfaction has been one of the key areas of tourism research for more than four decades. It is considered one of the prime variables to sustain competitive business in the tourism industry because it affects the choice of destination, consumption of products and services. In this sense, Kozak and Rimmington (2000) argued that satisfaction plays an important role in planning marketable tourism products and services (Egresi & Polta, 2016). Tourist satisfaction is a function between expectation and experience (Chan, 2016). It is the mental evaluation and comparison between what customers expected to receive and what they actually receive (Kim et al, 2003). In specific, tourists' destination satisfaction is based on the comparison of their pre-travel expectations and images about the destination and their post-travel experiences at this destination (Chen & Chen, 2010). While destination expectations are formed by visitors' past experience, recommendation of friends and family, tourist information and promises of destination marketers (Kotler et al., 2006), tourists' real experiences are based on what they see, feel, and achieve at this destination (Yoon & Uysal, 2005). Based on the expectation disconfirmation theory (Oliver, 1980), if the actual performance is better than customers' expectation, this leads to positive disconfirmation and high satisfaction; on the other hand, if the actual performance is worse than their expectations, this leads to negative disconfirmation and dissatisfaction.

In the tourism destination management, tourists' destination satisfaction is the most essential element for the sustainable development of business and the importance of understanding and managing tourist satisfaction stems from the fact that tourists behave differently according to their level of satisfaction (Correia et al., 2008).

Based on the literature provided, the motivation of tourists is a main factor to predict the tourists' satisfaction. Previous studies have found relevant relationships between tourists' motivation and their satisfaction of destination.

Ross and Iso-Ahola (1991) found the correlation between motivation and satisfaction of sightseeing tourists. This correlation indicated the similarity of motivation and satisfaction dimensions which brings tourist overall satisfaction. Yoon and Uysal (2005) studied the relationship among the push and pull motivation, satisfaction, and destination. The results showed that tourists are more likely to choose destinations which are believed to fulfill their internal needs or push factors. The model also revealed structural relationship between motivation and satisfaction. Uysal and Williams (2004) tested a model looking at tourist satisfaction with destination attributes and tourist type based on travel motivation which moderates the relationship between satisfaction and attribute factors. It was indicated that motivation in the model influences relative importance of the two kinds of attributes to tourist satisfaction. Given the literature on

tourists' motivation, it is predicted that tourists' motivation will add significant variance of tourists' satisfaction on destination (Seubsamarn, 2009, p.22).

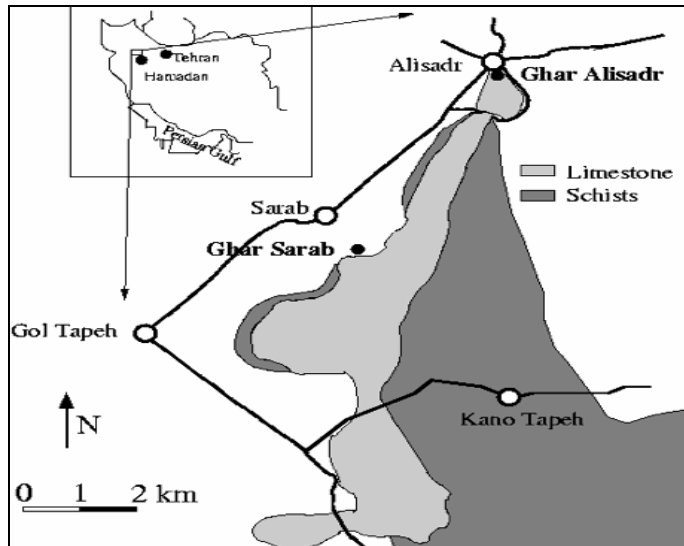


Figure 2. Location of Alisadr Cave at Hamadan Province, Iran



Figure 3. Boating in Alisadr Cave at Hamadan Province, Iran

Study area

The Ali Sadr Cave originally called Ali Saad (meaning dam) or Ali Saard (meaning cold) is a cave located about 100 kilometers north of Hamadan, western Iran (more accurately at $48^{\circ}18'E$ $35^{\circ}18'N$) (Figure 2). It is one of the biggest and most unique water caves in the world. The cave walls can extend up to 40 meters high, and it contains several large, deep lakes. The cave has a river flowing through it and most travel through the cave system is done with a boat. Ali Sadr cave is situated between the large cities Hamadan, Tehran, and Qom making it a popular destination for Iranians (Mokarrami & Parvaneh, 2009). The cave is 2.5 km long, with the depth of water reaching 8 m in some parts. The lake water is pellucid and fresh, and the cave contains many caveroneous phenomena including a range of colourful

stalactites. It has excellent reception facilities, and tourists explore the cave by pedal boat and on foot. The presence of nearby accommodation adds to this established geotourism product, which is a major natural attraction (Dowling & Newsome, 2006).

The research model

According to the research model, intrinsic motivations have six components including knowledge, relaxation, enjoyment, novelty seeking, escape and socialization and extrinsic motivations include three components such as identified, introjected and external regulation which are shown in the figure 4. The next factor of this model is satisfaction and we try to determine whether there is a relationship between tourist motivations and their satisfaction.

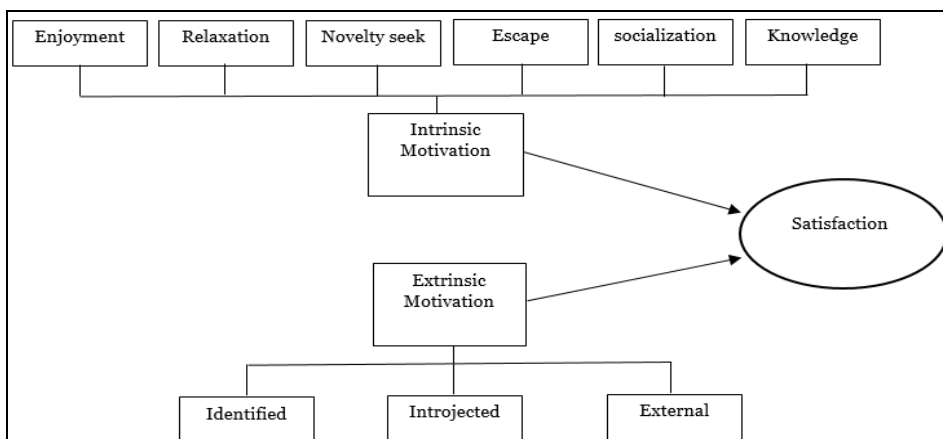


Figure 4. Conceptual model

METHODOLOGY

Questionnaire design and data collection

In this study, quantitative data collection method was applied to analyze the empirical data which were collected from the responses through using questionnaire survey. The design of the questionnaires was based on the main constructs of the self-determination theory and was adapted from the literature and previous researches.

The survey consisted of 6 questions relating to socio-demographic characteristics, 12 questions regarding intrinsic motivations, and 9 questions asking about extrinsic motivations of cave tourists. The measure was based on a five-point Likert scale with anchors ranging from "1 - Strongly Disagree" to "5 - Strongly Agree".

In the second part, questionnaire consisted of 15 questions relating to tourists satisfaction. Each question has five options- very dissatisfied, dissatisfied, neutral, satisfied, and very satisfied. The target population of this study is those tourists visiting the Alisadr cave on weekdays during the period surveyed, on April, 2016. The Pilot Test with N=30 was conducted to clarify the meanings of the survey's questions and ensure the understanding for respondents. After modification, there were totally 400 cases in good quality collected within two weeks and analyzed for further research results.

Data analysis

The study used SPSS (Statistical Package for the Social Sciences) statistical software version 17.0 to analyze the data. First, Exploratory Factor Analysis (EFA) and Reliability Test were conducted to identify the interrelationships among a set of research variables and to ensure the reliability and validity of them. Subsequently, Friedman Test

were applied in order to find out Tourists' motivations Priorities and Durbin–Watson Test, Pearson's Correlation Analysis and Multiple regression were employed to explore the relationships between the tourists motivations and their satisfaction.

Factor analysis and reliability

For this study, two exploratory factor analyses (EFA) were conducted with Kaiser-Meyer-Olkin and Bartlett's test of sphericity, and Varimax Rotation of 21 items of independent variables and 15 items of dependent variables. As the results, the KMO measure of sampling adequacy for both groups of independent (KMO=.791) and dependent variables (KMO=.740) were greater than the minimum value for a good factor analysis .60. In addition, Bartlett's test of sphericity was significant (Sig= .000), indicating the sufficient correlation between the variables.

Table 1. Factor analysis and reliability coefficients of independent variables

	Independent Variables	Motivation Factors	Factor Loadings	Cronbach's Alpha
1	Enjoyment	Do something exciting and thrilling	.736	.802
		Enjoy different scenery	.761	
	Relaxation	To refresh my mental and physical state	.826	
		To relax and reset in this place	.834	
	Novelty seeking	To seek the beauty of nature	.800	
		To explore new places	.816	
	Escape	To escape from the daily routine	.905	
		To escape from the pressures of the work and life	.821	
	Socialization	To travel with my friends, family or someone special	.781	
		To meet people with similar interests and hobbies	.877	
Knowledge	To learn new things and enhance my knowledge	.749		
	To experience new things	.835		
2	Identified	Because I have carefully thought about it and believe it is very important for many aspects of my life	.834	.768
		Because it is consistent with my life goals	.793	
		Because I wanted to take a look what the attraction is	.844	
	Introjected	Because I wanted the others to have good impression about me	.759	
		Because I would feel guilty or ashamed of myself if I did not	.808	
		Because I wanted the others to think I am a part of their group	.766	
	External regulation	Because others would be upset with me if I did not	.623	
		Because others gave me no choice	.836	
		Because I want others to approve of me	.837	

Table 1 shows the result of independent variables, which was grouped into two components (Intrinsic and Extrinsic). All of the factor loadings of remaining items meet the minimum requirement (.50), ranging from .623 to .905. The Cronbach's alpha values used to estimate the internal consistency between items in each factor were .802 and .768. According to Pallant (2007), the Cronbach's coefficient alpha value above .60 is considered acceptable, while the more acceptable value should exceed .70.

Similarly, the factor loadings of remaining dependent items ranged from .630 to .850. The Cronbach's coefficient alpha values were .791, as shown in table 2.

TABLE 2. Factor analysis and reliability coefficients of dependent variable

Dependent Variable		Satisfaction Factors	Factor Loadings	Cronbach's Alpha
Satisfaction	tourism scale	ticket price	.843	.791
		tourist number in the cave	.673	
	environmental	beauty of the scenery	.741	
		cleanliness of the cave	.747	
	infrastructure	public toilets	.717	
		guiding marks	.718	
		safety facilities	.661	
		ticket-selling service	.630	
	management service	waiting for the boat	.680	
		knowledge of guides	.661	
		hospitality and friendliness of the staff	.753	
		possibility for shopping	.684	
	catering	convenience	.733	
		sanitation	.779	
price		.850		

Table 3. Demographic variables of the respondents

Gender	Male	%58
	Female	%42
Marital Status	Single	%37.5
	Married	%62.5
Education	High School	%3.75
	Diploma	%29.25
	Associate Degree	%5.6
	Bachelor degree	%26.8
	Master degree	%29.3
	PHD	%5.3
Age	Below 20	%5.8
	21- 31	%32.5
	31-40	%22.7
	41 -50	%26
	51-60	%8.75
	More than 60	%4.25
Travel companions	Family	% 73.2
	Friends	%16.4
	Alone	% 10.4
Types of traveling	Independent	%79.1
	Programmed	% 20.9

THE FINDING OF STUDY

The descriptive analysis is summarized in table 3. Of the 400 respondents (geotourists) surveyed, Most of the respondents were male (58%), married (62.5%), aged 21–31 (32.5%), have master degree (29.3%) and travel with their family (73.2%). 79.1% of respondents travel individually while 20.9% travel with tours. In order to find the priorities in the intrinsic motivations, the mean of factors and Friedman test are applied. Both have similar results which are available in table 4. The mean of the intrinsic motivations ranged from the lowest mean score (2.82) to the highest mean score (4.52) (Table 4). The main factors of the intrinsic motivations behind visiting Alisadr Cave are enjoyment (4.41),

relaxation (3.97) and novelty seeking (3.83). According to Friedman test's results - last column in table 4- the enjoyment with 4.83 is in the first place and then relaxation, novelty seeking, escape, socialization and knowledge get 3.92, 3.78, 3.51, 2.82 and 2.42.

Table 4. The results of intrinsic motivations

	Intrinsic motivation	Intrinsic Motivation Factors	Mean of Factors	Mean of Scores	Friedman test
1	Enjoyment	Do something exciting and thrilling	4.30	4.41	4.83
		Enjoy different scenery	4.52		
2	Relaxation	To refresh my mental and physical state	4.13	3.97	3.92
		To relax and reset in this place	3.81		
3	Novelty seeking	To seek the beauty of nature	3.95	3.83	3.78
		To explore new places	3.72		
4	Escape	To escape from the daily routine	3.68	3.61	3.51
		To escape from the pressures of the work and life	3.54		
5	Socialization	To travel with my friends, family or someone special	4.00	3.45	2.82
		To meet people with similar interests and hobbies	2.90		
6	Knowledge	To learn new things and enhance my knowledge	2.82	2.92	2.42
		To experience new things	3.02		

Table 5. The results of the extrinsic motivation

	Extrinsic motivation	Extrinsic Motivation Factors	Mean of Factors	Mean of Scores	Friedman test
1	Identified	Because I have carefully thought about it and believe it is very important for many aspects of my life	3.12	3.61	2.38
		Because it is consistent with my life goals	3.73		
		Because I wanted to take a look what the attraction is	3.98		
2	Introjected	Because I wanted the others to have good impression about me	2.56	3.34	2.29
		Because I would feel guilty or ashamed of myself if I did not	3.67		
		Because I wanted the others to think I am a part of their group	3.79		
3	External regulation	Because others would be upset with me if I did not	2.00	2.27	1.33
		Because others gave me no choice	2.62		
		Because I want others to approve of me	2.19		

By using mean of factors and Friedman test (Table 5), we showed the top rankings of extrinsic motivations and both results are completely similar. The highest mean scores are (3.61) which represent the identified factor. Whereas the lowest mean score is (2.27) which relates to external regulation factor. So, the major factor of extrinsic motivation is the identified motivation. Pearson's Correlation Analysis and Liner Regression Analysis were applied in order to find out the relationship among variables. Table 6 illustrates that there were positive correlations between two independent variables (Intrinsic and Extrinsic), and the dependent variable (Satisfaction). It means that the stronger Intrinsic and Extrinsic motivations the travelers had the higher satisfaction they experienced.

The result of the data revealed that there were significant positive relationships between the dependent variable and the independent variables: intrinsic motivation ($r=.599^{**}$, $p<.01$) and extrinsic motivation ($r=.335^{**}$, $p<.01$). The regression coefficient of intrinsic and extrinsic motivations were $\beta=.550$, $p=.000$ and $\beta=.134$, $p=.000$ respectively. This implied that intrinsic and extrinsic motivations had positive effects on destination

satisfaction at the 99% confidence level. Furthermore, intrinsic and extrinsic motivations could explain 37.5% the variation of destination satisfaction ($R^2=.375$).

Table 6. The results of correlations between variables

	Intrinsic motivation	Extrinsic motivation
Satisfaction	.599**	.335**

** Correlation is significant at the .01 level (2-tailed)

Table 7. The results of regression analysis

Model	R	R Square	P-Value	Durbin-Watson
1	.612 ^a	.375	.000 ^a	2.072

a. Predictors: (Constant), extrinsic, intrinsic

b. Dependent Variable: satisfaction

Table 8. The results of Coefficients ^a between variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.660	.104		25.651	.000
	intrinsic	.190	.015	.550	12.904	.000
	extrinsic	.076	.024	.134	3.154	.000

a. Dependent Variable: satisfaction

DISCUSSION

Motivation is one of the key factors behind behavior models. According to Adair (1990), motivation covers all reasons which influences the way an individual acts. Consequently, without a tourist's motivation to travel there would be no travel industry.

The mission of tourist behaviour theories is to present the prosperous areas of tourist needs, as a source of data for researchers to use in their particular investigations of "satisfaction, decision making and marketing" (Pearce & Butler, 1994, p.116).

Therefore comprehending a tourist's motivation is an important factor especially in marketing in tourism studies. The findings of motivations in this study were summarized in figure 5. First the intrinsic motivations then extrinsic motivations have the most to least scores. Totally the results of this study are based on the more powerful impact in intrinsic motivations than extrinsic in visiting Alisadr cave. Since the identified with the first place among the extrinsic motivations, according to figure (1) is somewhat internal and external regulation which is the most extrinsic has the least average. Neulinger (1974) says the most studies in recreation activities shows that recreation is an intrinsic motivation and people do it for themselves not for a reward.

On the other hand, in geotourism "enjoying the beauty of geosite" and "knowledge" is the two sides of a coin as Dowling and Newsome (2006, p. 4) stressed that geotourism is "sense of wonder, appreciation and learning" (Allan, 2015). According to the table 4, the surveys show that "enjoyment" is the major intrinsic motivations whereas "knowledge" is in the last place. Meaning that tourists have the least attention to it. The matter is that if "knowledge" is not the tourist's favors, the geosite management should lead them to it. For instance the complex which has a high number of visitors needs to have information centers and to have knowledgeable tour guides so they can improve the educational level as well. Unfortunately Alisadr lacks these kinds of centers. Some of the guides are university students, whilst others leave the village for temporary work at other locations. The statistical findings showed that intrinsic and extrinsic motivations had positive

impacts on tourists' satisfaction. In addition, intrinsic motivation had more significant effect on tourists' destination satisfaction than extrinsic motivations. This means that when travelers have stronger intrinsic desires to go on a vacation and perception towards the features, attractions, or attributes of a specific destination, they may get higher satisfaction about this destination. Therefore, it was concluded that the internal and psychological forces of cave tourists attributes are more important than tourists' external forces in enhancing satisfaction. In another word, their satisfaction degrees to this destination are much depended on their own personal wants and needs.

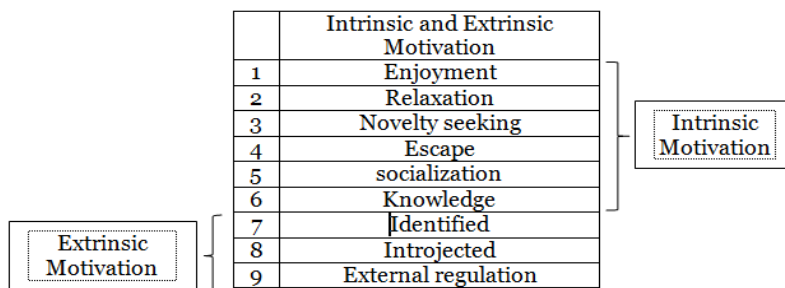


Figure 5. Priorities in intrinsic and extrinsic motivations

CONCLUSION

This study intended to identify travel motivation of tourists in Alisadr cave and investigate the relationships among the intrinsic and extrinsic motivations and tourists satisfaction. Based on previous theoretical and empirical studies, the research conceptual framework were constructed. According to research findings, it can be concluded that both intrinsic and extrinsic motivations have significant and positive influence on tourist's destination satisfaction. Intrinsic and extrinsic motivations are the effective tools to explain and predict destination satisfaction. By identifying the significant dimensions of tourist satisfaction, the tourism organizations and travel researcher can sensitively analyze the causes of general satisfaction/dissatisfaction and rectify them accordingly.

Therefore, the research's outcomes are expected to assist destination marketing practitioners who develop overall management of cave tourism resources. The findings of this research can be used as valuable and accurate information for destination marketers and managers to implement strategies and plans, to not only attract more potential visitors, but also enhance their destination satisfaction and encourage them to re-visit Alisadr cave in the near future.

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REFERENCES

- Adair, J., (1990), *Understanding motivation*, Guildford: Surrey Talbot Adair Press.
- Allan, M., (2012), *Geotourism: Toward a better understanding of motivations for a geotourism experience, a Self-Determination Theory perspective*, LAP Lambert Academic Publishing, Saarbrücken, Germany.
- Allan, M., Dowling, R., Sanders, D., (2015), *The motivations for visiting geosites: the case of Crystal cave*, Western Australia, *GeoJournal of Tourism and Geosites*, year VIII, no. 2, vol. 16, 142-153.
- Bourne, S., Spate, A., Hamilton-Smith, E., (2008), *Show caves: Australia's oldest form of geotourism*, Proceedings of the first global conference of geotourism, 97-102.
- Butler, R., Pearce, D., (1994), *Change in tourism: people, places and processes*, London: Routledge, xii, 254.

- Chan, S., (2016), *Evaluation of international tourist satisfaction in weh island Indonesia using HOLSAT model*, International Journal of Scientific and Technology Research, vol 5, 246-252.
- Chen, C., Chen, F., (2010), *Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists*, Tourism Management, 31(1), 29-35.
- Cigna, A., Forti, P., (2013), *Caves: the most important geotouristic feature in the world*, Tourism and Karst Areas, 6(1).
- Correia, A., Moital, M., Ferreira da Costa, C., Peres, R., (2008), *The determinants of gastronomic tourists' satisfaction: A second-order factor analysis*, J. Foodserv, 19, 164-176.
- Deci, E., L., Ryan, R.M., (1985), *Intrinsic motivation and self-determination in human behavior*, NewYork: Plenum Press.
- Deci, E., L., Ryan, R., M., (2000), *The "what" and "why" of goal pursuits: human needs and the self determination of behaviours*, Psychological Inquiry, 11, 227-268.
- Dowling, R., Newsome, D., (2006), *Geotourism*, Elsevier, Oxford, (eds.).
- Dowling, R., Newsome, D., (2010), *Geotourism a global activity*. in Dowling, R.K.; Newsome, D., (Eds.) Global Geotourism Perspectives, Oxford: Goodfellow Publishers Limited, 1-17.
- Egresi, I., Polat, D., (2016), *Assessing tourists' satisfaction with their shopping experience in Istanbul*, GeoJournal of Tourism and Geosites, Year X, no. 2, vol. 18, 172-186.
- Forti, P., (2011), *Caves: the most important geotouristic features in the world*, 3rd international conference on geotourism.
- Gray, M., (2004), *Geodiversity: Valuing and Conserving Abiotic Nature*, Chichester: John Wiley & Sons, 434.
- Hemmi, J., Vuoristo, K., (1993), *Matkailu*, Werner Söderström Osakeyhtiö
- Kim, S., Kim, M., Park, J., Guo, Y., (2008), *Cave Tourism: Tourists' Characteristics, Motivations to Visit, and the Segmentation of Their Behavior*, Asia Pacific Journal of Tourism Research, 13(3), 299-318.
- Kim, J., Suh, E., Hwang, H., (2003), *A model for evaluating the effectiveness of CRM using the balanced scorecard*, Journal of Interactive Marketing, 17(2), 27-28.
- Kotler, P., Bowen, J., T., Makens, J., C., (2006), *Marketing for Hospitality and Tourism*, 4th ed. Upper Saddle River, NJ: Pearson Prentice Hall, ch. 1.
- Kozak, M., Rimmington, M., (2000), *Tourist Satisfaction with Mallorca, Spain, as an Off-Season Holiday Destination*, Journal of Travel Research, 38(3), 260-269.
- Mokarrami, M., Parvaneh, Kh., (2009), *Ali Sadr, The Most Marvelous Cave*, http://www.iranreview.org/content/Documents/Ali_Sadr_The_Most_Marvelous_Cave.htm.
- Mulec, J., Kosi, G., (2009), *Lampenflora algae and methods of growth control*, Journal of Cave and Karst Studies, 71(2), 109-115.
- Neulinger, J., (1974), *The psychology of leisure: Research approaches to the study of leisure*, City University of New York (CUNY): Thomas (Springfield, Ill)
- Oliver, R., L., (1980), *"A cognitive model of the antecedents and consequences of satisfaction decisions*, Journal of Marketing Research, 17(4), 460-469.
- Pallant, J., (2007), *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows*, 3rd ed. Open University Press.
- Pearce, D., Butler, R., (1994), *Tourism Research: Critiques and Challenges*, London: Routledge.
- Rachmawati, E., Sunkar, A., (2013), *Consumer-based cave travel and tourism market Characteristics in west Java, Indonesia*, Tourism and Karst Areas, 6(1).
- Ross, E. L., Iso-Ahola, S. E., (1991), *"Sightseeing Tourists' Motivation and Satisfaction"*, Annals of Tourism Research, 18(2), 26-37.
- Ryan, R., M., Connell, J., P., (1989), *Perceived locus of causality and internalization: Examining reasons for acting in two domains*, Journal of Personality and Social Psychology, 57, 749-761.
- Ryan, R., M., Deci, E., L., (2000a), *Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being*. American Psychologist, 55, 68-78.
- Ryan, R., M., Deci, E., L., (2000b), *Intrinsic and extrinsic motivations: Classic definitions and new directions*, Contemporary Educational Psychology, 25, 54-67.
- Seusamarn, K., (2009), *Tourist motivation to use homestays in Thailand and their satisfaction based on the destination's cultural and heritage-based attribute*, Faculty of the Graduate School, University of Missouri.
- Singh, L., K., (2008), *Fundamental of tourism and travel*, New Delhi: Isha Books, 358.
- Tongkul, F., (2005), *Geotourism in Malaysia Borneo*, in Dowling, R.K.; Newsome, D., (Eds.), Geotourism, (26-41), Burlington, MA: Butterworth- Heineman.
- Uysal, M., Williams, J., Yoon, Y., (2004), *The role of expressive and instrumental factors in measuring satisfaction*, Tourism Analysis, 8(2-4), 217-221.
- White, J., Thompson, M., (2009), *Self Determination Theory and the wine club attribute formation process*, Annals of Tourism Research, 36(4), 561-586.
- Yoon, Y., Uysal, M., (2005), *An examination of the effects of motivation and satisfaction on destination loyalty*, Tourism Management, 26(1), 45-56.

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