

Measuring the Attributes to Visit Beach and Willingness to Pay to Conserve Beaches in Batticaloa District, Sri Lanka

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Abstract

Beaches are natural resources that offers economic and environmental benefits to the allied societies. Local tourism in Sri Lanka largely involves the activities in the beach area. Selecting a beach as a tourist destination is affected by many factors and attitude towards tourist destination is one of them. This study was designed to examine the local visitors' perceptions to select a beach for a recreational visit, problems associated to visit on site and their willingness to pay towards conservation and improvement of natural ecosystem. Selected study area in the eastern coast of Sri Lanka was *Pasikudah* beach and a sample of 80 was selected randomly. In study design attitude variables were recorded using Likert scale and data related to willingness to pay was taken. Descriptive statistics, frequency analysis and Mann-Whitney test were performed. The scenic beauty and popularity of beach were drawing attention to *Pasikudah* but the poor washroom availability and waste disposal found to be major problems to gain good experience at beach visit. Mann-Whitney U Test find out accessibility to services in local visitors was statistically significantly higher when compare to local visitors ($U = 476$, $p = 0.032$) while other variables had no significant differences between two groups. The willingness to pay ticket to conserve the beach was Rs. 49.61/- and willingness to pay as a donation to conserve the beach was Rs. 117.85/-

Key words: Willingness to pay, Mann-Whitney Test, Attitudes, Likert scale

Introduction

The important component of the tourism sector is the destination and its resources. It is therefore vital to empirically examine tourist motivation to identify the relationship between recreational tourist destinations, and the attitude of visit (Kozak, 2002). Many studies have explored similarities and differences in travel patterns and attitudes towards specific destinations among groups of people. Studies have shown differences between visitors from different groups visiting the same destination. It confirms that variables such as socio demographic profiles of tourists, perceptions of a destination and their satisfaction levels significantly affects the tour decisions. Tourist activities may vary according to origin of visitors as well as tourist destinations (Armstrong *et al*, 1997; Danaher & Arweiler, 1996; Huang *et al*, 1996; Richardson & Crompton, 1988).

The importance of the destination is drawn by its overall impression (Oxenfeldt, 1974) and the impression plays an important role in the decision-making process of a possible visitor. (Alhemoud & Armstrong, 1996; Echtner & Ritchie, 1991). Many visitors visit Pasikudah beach compare to other beaches in eastern coast of Sri Lanka. Very few studies has been conducted to measure the attributes to visit beaches in eastern coast of Sri Lanka. Therefore, this study was

conducted to study how consumers' attitudes and behavior affect their choice to visit a beach and their willingness to pay to towards improvement of beach.

Methodology

Selected study area for this study was *Pasikudah* beach. Population for this study was visitors who visited *Pasikudah* beach for recreational purposes. Sample size was 80. Samples were selected to represent the study population. Sampling method used to select the respondents was two-stage random sampling. Primary data required for this study was collected from the sample of visitors at *Pasikudah* beach through interviews using structured questionnaire.

Questionnaire was designed to know contingent behavior which includes questions to grade the existing services provided in the site, to know the quality of beach, to find willingness to pay on quality of beach as well as facilities available. The survey was complemented directly.

Data Analysis

The completed questionnaires were checked for completeness and the collected data was subjected to analysis using the SPSS version 22.0 for precise and easy interpretation of results of this study.

Measuring attributes to travel towards *Pasikudah* Beach

In questionnaire design, 8 attitude variables were taken to measure the attitude towards travel to *Pasikudah*. Likert scale was used to measure individual attitude to travel towards *Pasikudah* which was qualitative data. The personal evaluation of beach after visiting was measured using 8 attitude variables namely,

- Cleanliness & maintenance
- The view
- Popularity among visitors
- Waste disposal
- Bathing water availability
- Service provided
- Restroom availability
- Accessibility to services

In this regard, mean, median and ranges were calculated to analyze the data.

Table 1: Scale and score to measure Attitude variable

No	Scale	Score
01	Highly Unsatisfied	1
02	Unsatisfied	2
03	Average	3
04	Satisfied	4
05	Fully Satisfied	5

(Source: Field Survey Data, 2016)

According to Table 1 the scores were given to measure the attitude variables. Lowest value was 1 and highest value was 5. Respondents satisfaction mean was taken as $\bar{X}$ the range would be shown as follows:

Range	Decision
$01 \leq \bar{X} < 2.5$	Not satisfied
$2.5 < \bar{X} \leq 3.5$	Average satisfaction
$3.5 < \bar{X} \leq 5$	Fully Satisfied

Results and Discussion

Table 2: Attitude to travel towards *Pasikudah* (N=80)

Variables	Mean	Std. Deviation	Satisfaction
Cleanliness	3.2125	1.13287	Average
The view	4.1000	1.09775	Fully satisfied
Popularity	4.3875	0.87863	Fully satisfied
Waste disposal	2.0375	1.00593	Not Satisfied
bathing water availability after beach visit	2.8500	1.26391	Average
Services available on site	2.8000	1.10694	Average
Washroom availability	2.2375	1.00937	Not Satisfied
Accessibility to needs	3.0125	1.03720	Average

(Source: Field Survey Data, 2016)

Data revealed that cleanliness of beach, bathing water availability after beach visit; services available on site and accessibility of needs were at averagely satisfied range. It was noted that waste disposal at beach and washroom availability was not in a satisfied condition to *Pasikudah* beach visitors and which was a major problem found at beach.

Mann-Whitney Test

Mann-Whitney test was performed to find out the significant differences between local and non-local visitors in the population. Attitude variables viz. cleanliness, view, popularity, waste disposal, bathing water availability, services available on site, washroom availability and accessibility to needs were tested in Mann-Whitney Test. Following hypotheses were developed to test the variables.

H_0 : There are no difference in variables between local and non-local visitors.

H_1 : There are differences in variables between local and non-local visitors.

Table 3: Mann-Whitney U Test Results

	Cleanliness	The view	Popularity	Waste disposal	Bathing water availability	Services available on site	Washroom availability	Accessibility to needs
Mann-Whitney U	580.000	549.000	598.000	585.000	576.000	599.000	664.500	476.000
Wilcoxon W	2176.000	849.000	2194.000	2181.000	876.000	2195.000	964.500	2072.000
Z	-.997	-1.387	-.886	-.940	-1.037	-.795	-.082	-2.150
Asymp. Sig. (2-tailed)	0.319	0.165	0.376	.347	0.300	0.426	0.935	0.032

a. Grouping Variable: Local and Non-local

(Source: Field Survey Data, 2016)

It can be concluded that accessibility to services in local group was statistically significantly higher than the local group ($U = 476$, $p = 0.032$) while other variables had no significant differences between groups.

Table 4: Problem Faced by Visitors in Pasikudah Beach

Problems	Frequency	Percentage
Poor washroom availability (toilet, restroom)	41	67.21
Bad odor came from pond near to beach	26	42.62
Hygiene of beach is low	22	36.06
Unavailability of food near beach (lunch packets)	18	29.50
No other experiences available except bathing	14	22.95
Unavailability of general access point/map of beach	12	19.67

(Source: Field Survey Data, 2016) (Multiple responses)

Around 76% of respondents stated that they did face at least a problem in beach site. About 24% stated that they did not face any problem on beach site.

The major problem in *Pasikudah* beach was poor washroom availability. Around 67% respondents stated that they were suffered due to poor washroom facilities in beach. Other most common problem stated by visitors was bad odor expulsion from nearby pond. Around 43% visitors stated they were subjected to this problem. Furthermore, around 36% of respondents were not satisfied about the hygiene of beach and surroundings. Around 30% respondents were suffered due to unavailability of food stalls near beach with control price. Except the small stall operated by Sri Lankan army, there were no hotels nearby to accommodate normal visitors. The food prices were very high in those tourist hotels and impossible to bear by an average Sri Lankan. Around 23% respondents stated that, there was no other experience such as sea surfing, water sports in main bay. Most visitors say that they can only be able to bathe and see the beauty of beach. Around 20% of respondents stated that they were suffered by lack of information available in

beach map. Since they came from far away locations and new to the beach they face many difficulties to find out the accessibility of resources available at beach.

There were limited number of banners and information boards available but those are not enough informative to guide the non-local visitors. A general access point with the aid of an officer might help the visitors to direct easily and to enhance beach experience of visitors.

Willingness to pay

Respondents were interviewed about their willingness to pay towards increasing infrastructural facilities and incur an access fee to visit *Pasikudah* beach. Currently there was no access fee to visit *Pasikudah*, payments were made for parking and use the toilets but. Respondents were asked, instead of incurring fee in different forms will they able to pay an access fee to experience all common facilities currently provided at beach.

Willingness to pay an Access fee

Around 64% of respondents were willing to pay an entrance fee to visit *Pasikudah* bay to conserve beach. If local authorities eliminate or reduce the problems faced by visitors in beach, they were willing to pay an entrance fee. Around 36% respondents were not willing to pay as entrance fee.

Willingness Pay a Donation instead of entrance fee

It was evident from survey data that about 19% of the visitors were not willing to contribute anything towards beach. Around 64% respondents were willing to pay an entrance fee to *Pasikudah* if local authorities provides good services to visitors, and around 17% respondents were willing to pay a donation at once.

Table 5 shows the willingness to pay as entrance fee ranges in study area was Rs. 10/- to Rs. 200/- and the average sum was around Rs. 50/-. The willingness to pay as Donation ranges in study area was Rs. 50/- to Rs. 300/- and the average sum was around Rs. 118/-

Table 5: Willingness to Pay towards *Pasikudah* (N=80)

	Number of people (%)	Minimum amount (Rs.)	Maximum amount (Rs.)	Mean	Std. Deviation
Not willing to pay	15 (18.75)	-	-	-	-
Willingness to pay as entrance fee	51 (63.75)	10.00	200.00	49.61	43.17
Willingness to pay as Donation	14 (17.5)	50.00	300.00	117.85	66.81

(Source: Field Survey Data, 2016)

Conclusion

The view of beach and popularity were fully satisfied among visitors. A general access point with the aid of an officer might help the visitors to direct easily and to enhance beach experience of visitors. The scenic beauty and popularity of beach were drawing attention to *Pasikudah* but the poor washroom availability found to be a major problem to gain good experience at beach visit.

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