

Factors that affect Obtaining Travellers' Health Services in Kuwait

I Shady and M Gaafar

Background

It is estimated that 30-60% of travellers experience an illness while overseas. Preventative measures that can be provided through a Traveller's Health Clinic (THC) should help to reduce the risk of such health problems. The objective of this study is to examine the characteristics of travellers visiting a THC in Kuwait.

Subjects and Methods

An analytical comparative study between visitor group that constituted all the travellers visiting the THC during the study period (May 2009 - December 2010) with an age and gender matched group of the who did not attend the THC (800 persons) recruited at Kuwait International Airport. A modified pre-departure health questionnaire was completed by both groups.

Results

The bivariate indicated that those Kuwaitis (68.2%), travelling for the purpose of work (25.3%) or leisure (59.5%), living in camps (20.4%) or hotels (64.0%) and those with good knowledge about the THC from media (28.1%) or other sources (57.3%) are associated with high frequency of the visiting to the THC ($p < 0.001$). Also, travellers heading to Africa (47%) and South America (10%) visited the THC more frequently than the other group ($P < 0.05$). The multivariate analysis showed that nationality, followed by purpose of travel, then duration of stay and the choice of travel destinations are independent predictors for visiting the THC. The preventative services included quadrivalent meningococcal vaccine (90.7%), yellow fever vaccine (57.1%), tetanus toxoid (41.2%), typhoid vaccine (32.6%) influenza vaccine (16.2%) and malaria chemoprophylaxis (50.7%).

Conclusions

Nationality, purpose of travel, duration of stay and the choice of travel destinations are considered predictors for obtaining a pre-travel consultation from the THC.

Introduction

The progressive ease of mobility makes business connections between different parts of the world much easier, and has led to a large increase in tourism, which now involves all age groups and social classes in the Western world. As a result, it is estimated that every year as many as 50 million people from the industrialized world cross international borders to tropical or subtropical destinations, where they encounter different cultures, social habits and economic standards and a different microbiological environment.¹

The State of Kuwait is a country with a total population of about 3.6 million including approximately 1.2 million Kuwaiti citizens and 2.4 million non-Kuwaiti nationals.²

Approximately, 700 travellers (2-3 visits/10,000 Population) visit the travellers' health clinic (THC) annually. It's the only THC in Kuwait and can be easily approached by all transportation methods as it is located in the heart of Kuwait city.

The services provided include immunization, chemoprophylaxis for malaria, and health advice/ information about the prevalent diseases/ health hazards in the destination country. Most of the preventive services are provided freely to all travellers except yellow fever vaccination for non Kuwaitis which is still cheaper than that of the private sector.³

The travel volume in Kuwait varies during the year with remissions and exacerbations. Its first peak occurs in summer months (June, July and August), and declines during the winter months (October, November and December), then has another peak in mid-term vacation of schools and universities during January and February.³

Many studies had been conducted in Western societies on travel health seeking behaviors, but there are few studies in travel health practices in Asia among residents and their reasons for visiting travel clinic. There is no study in Kuwait and even in the Gulf Area that addresses the issue of travel health seeking behavior and its determinants. The objectives of this study are to explore the factors associated with seeking travel health care and contents of this care.⁴⁻⁸

Subjects and Methods

This study is an analytical comparative study that compares demographic and travel data for all travellers visiting the THC for pre-travel consultation (Visitor group), with data from a matched group of pre-departure travellers who had not received pre-travel consultation at the THC (Non Visitor group). The study was performed from 1st of May 2009 to 31st December 2010.

Participants from the Travel Clinic (Visitor Group)

The study cohort constituted all the travellers visiting the traveller's health clinic (THC) in Kuwait whether, nationals and/or residents.

- All travellers who visited the clinic during the study period were interviewed and asked to fill the pre-departure health questionnaire after explaining to them the importance and benefit of the data they will provide and all agreed to complete the questionnaire
- Each was interviewed for about 15-30 minutes.
Each questionnaire was reviewed for any missing data or questions that must be completed by the traveler.
- Travellers received the preventive measures identified according to the WHO rules and regulations set on the IHR (2005)⁹.

Participants from the airport study (Non Visitors Group)

Age and gender matched controls (800 persons) were selected from travellers in the Kuwait International airport after they finished their boarding process as they passed through a staircase to the transit hall. The numbers required was calculated from the monthly percentage of age and gender of the visitor group

We selected the control group (non visitor) every month using systematic random sample (Every 5th traveler) on the bases of 1:1 case/control ratio. If one of the selectees already visited the THC, we selected the next following passenger.

- A researcher waited on the staircase and selected passengers after identifying gender and being asked the age and if they had visited the THC.
- Exclusion criteria included non-resident visitors to Kuwait and those travelling permanently to their home country.

Both groups were subjected to a pre departure self administered health questionnaire based on the questionnaire designed by the WHO in the book International Travel and Health 2012.⁹

- We designed two versions of the questionnaire (Arabic and English) and those below 6 years were helped by their parents or older brothers/sisters and those couldn't understand or fill the questionnaire were helped by our staff members (Indian, Philippine and Indonesian nurses).
- The questionnaire included socio - demo-graphic data (Gender, Age, Nationality and Occupation) , data regarding the travel trip (destination, purpose of travel, date of travel, duration of stay, location inside the country visited, activities intended to do during the visit, type of accommodation inside, history of past travel and source of knowledge about the THC).
- Occupation was classified into 4 types: Unemployed, Domestic Worker, White Collar Occupation (refers to a person who performs professional, managerial, or administrative work and was performed in an office or cubicle), Blue Collar Occupation (manual labor).
- Informed verbal consent was obtained from all participants of our study.

Data was collected and analyzed by Pearson's chi-square test and Fisher's exact test. Bivariate and multivariate analysis with logistic regression models were then performed on the outcome variable of visitors to THC with the input variables of significance or importance. Multivariate analysis was performed to determine the demographic groups and travel patterns that were more likely to result in visiting the THC. All analyses were performed using the statistical Package of Social Science (SPSS) version 16, with the level of significance set at $P < 0.05$.

Results

Figure 1 shows the monthly distribution of the groups (visitors and non visitors), and indicated that there are two peaks of visiting the THC during the summer months (July and August) and winter months (Jan, Feb and March).

Table 1 presents the bivariate analysis and shows that Kuwaiti nationality (68.2%) is significantly affecting visiting to the THC ($p < 0.001$) and ($OR = 1.79$). As for purpose of travel, those who travelled for work (25.3%) or leisure (59.5%)

were more likely to have received pre-travel consultation at THC ($p < 0.001$) (OR=3.83 and 3.43 respectively). Travellers to Africa and/ or South America tend to visit the THC for pre-travel consultation ($p < 0.05$) and (OR= 1.37 and 1.61 respectively). Travellers staying in hotels (64.0%) and/ or camps (20.4%) were more likely to consult the THC for pre-travel consultation ($P < 0.001$). Previous knowledge about the services provided by the THC either from media or other sources affected the tendency of the visitors to the THC to obtain their pre-travel consultation more than those without any information about the THC ($p < 0.001$) and (OR=2.69 and 4.19 respectively). Blue collar employees, those with previous history of visiting more than 4 times, visiting rural or urban areas and staying between 4-12 weeks were less likely to visit the THC ($P < 0.001$). Non significant factors included gender and age groups ($p > 0.05$).

From the multivariate analysis (table 2), all significant factors resulted from the analysis were used to determine the predictors for obtaining pre-travel consultation by THC. We found that nationality, followed by purpose of travel, then duration of stay and the choice of travel destinations are considered predictors for visiting THC arranged in a descending manner (OR = 8.7, 2.2, 1.4 and 1.33 respectively).

Table 3 demonstrates the preventive measures provided to the visitors of THC. All travellers to Africa and South America received yellow fever vaccination. Meningococcal vaccination was given to travellers to all destinations in a range between (60.3% - 98.4%). About one third to two thirds of the travellers to Asia, Africa and S. America had a typhoid and tetanus to-oid immunizations. Influenza vaccine was given to travelers to all destinations except Africa by about 20%-47.7%. As, for malaria chemoprophylaxis, Mefloquine is given to 50.7% of the travellers while Doxycycline (Vibramycine or Doxydar) is given to 26.6% for Asia, Africa and S. America destinations. In addition, for all destinations, general health education message was given to 95.7% of the visitors and locality specific health education message was given to 76.4%.

Discussion

There are two peaks during the year with more travellers visiting the THC (July-August) and (Jan-March). This is due to school and university vacation during the summer, midterm and spring periods.³

This study's finding of 56% male gender among those receiving pre-travel consultation at THC and its difference from the Singapore⁸ and German¹² studies should not be ascribed to differences in gender ratios.^{2,10,11,12}

Nationality tends to significantly affect the visiting to the THC to get pre-travel consultation ($P < 0.001$), this was a reflection of many factors including the higher per capita income for Kuwaitis and the fact that most of the health services provided freely to them in comparison to others.

The age of the travellers did not affect the tendency to visit THC for pre-travel consultation ($p > 0.05$), although most of the travelers were from the active physical and financial age groups¹⁴ (30-45 years and 45-60 years). This was in agreement with the results of studies held in Singapore⁸ and Germany.¹²

Our study like the Singapore study⁸ found that the white collar employees tended to visit the THC more than other occupations and this may be attributed to their higher educational level and higher per capita income than other occupations. However, the differences were not statistically significant.

The current study shows that those who were travelling for leisure and work, visited the THC more than the other group ($P < 0.001$) and this was comparable to that found by Vernon J Lee and colleague, 2006⁸ in Singapore and Susanna Flec and colleague 2005¹² in Germany. This could be due to the fact that some purposes of travel are associated with greater likelihood of exposure to travel health hazards.

Travel destinations could significantly affect the tendency for visiting the THC especially for African and South American destinations ($P < 0.05$) and this is in agreement with other studies.^{4,8,18} This could be attributed to the fact that visitors perceived the destination-specific risk of Africa and South America as higher and therefore sought pre-travel health consultation at THC, whereas travelling to Asia, Europe or North America was not perceived as high risk.^{15,18-21}

Travellers staying in hotels tend to visit the THC more frequently ($p < 0.001$), in agreement with the Singapore study⁸ 2006 and it could be attributed to the high social class and/or the travel agencies arrangement that requested from the travellers to visit the THC in order to obtain the International Travel Certificate and travel advice.⁹

Travellers with a duration of stay greater than 4 weeks were more likely to be frequent travellers and were less likely to visit the THC ($p < 0.001$) and as found by other studies.^{8,12,15-17} The explanation could be attributed to that those travelers with past history of frequent travels may become reluctant to seek preventive measures due to their previous travel experiences and also have already received travel health advice and immunization from previous visits.

Previous knowledge of the travellers about the services provided by the THC significantly affected the utilization of these as found by the Vernon J Lee in Singapore.⁸

Multivariate analysis identified the predictors for the travellers who visited the THC for pre-travel consultation which included; nationality, followed by purpose of travel, then accommodation as well as duration of stay and the choice of travel destinations. Similar results were found by the study in Singapore.⁸

The results of the preventive services provided could be attributed to travellers' perception of destinations specific risks and following the WHO recommendations on the IHR (2005) that put greater priorities on some diseases like meningococcal meningitis, yellow fever and malaria prophylaxis for specific destinations.^{9,22} These results are different than those of another study done in Singapore on 2006⁸ in which the travelers got Typhoid vaccine, Hepatitis A vaccine as well as D-T toxoid as the commonest vaccines given.

Strengths and Limitations

Being the only THC providing the pre-travel health consultation in Kuwait enabled us to interview all visitors of the THC and this helped us to exclude any selection bias.

One some limitation is that co-incidentally this study was conducted when A (H1N1) flu pandemic has first been detected in Mexico and America and its impact greatly affect traveling in general and impact-ed on visits to the THC.

Conclusion and recommendations

The present research examined the factors affecting or influencing travelers visiting THC as well as providing a clear prospective of the travel profile and services provided by the THC in Kuwait. We found that nationality, purpose of travel, duration of stay and the choice of travel destinations are considered predictors for getting the pre-travel consultation from the THC. More studies are needed on the travel habits of the populations in Gulf Countries, especially with the increasing affluence and diverse travel habits in the region.

1 - Ibrahim Shady, MD and 2 - Mohamad Gaafar, MD.

1 - Department of Public Health, Faculty of Medicine, Mansoura University

2 - Department of Public Health, Faculty of Medicine, Menoufia University

Table 2
Multivariate analysis of the factors influencing visiting THC

Variables	Exp (B)	95% CI	P
Nationality			
	8.7	(4.82, 13.68)	<0.001
Occupation			
	1.0	(0.93, 1.23)	>0.05
Purpose of Travel			
	2.2	(1.25, 4.00)	0.007
Travel Destinations			
	1.33	(1.18, 1.42)	<0.001
Place inside			
	0.7	(0.56, 0.79)	<0.001
Accommodation			
	1.4	(0.88, 1.91)	>0.05
Duration			
	1.4	(1.22, 1.66)	<0.001
History previous travel			
	0.1	(0.08, 0.24)	<0.001
Know/T.H clinic			
	0.6	(0.39, 0.93)	0.02

Table 3
Preventative measures provided to the visitors to THC

Preventive measures	Total		Asia		Africa		S. America		Others	
	No	%	No	%	No	%	No	%	No	%
	755	100	196	100	355	100	76	100	128	100
• Yellow Fever	431	57.1	-	-	355	100	76	100	-	-
• ACWT meningococcal vaccine	685	90.7	193	98.4	348	98.0	63	82.9	81	63.3
• Typhoid	246	32.6	103	52.6	112	31.5	31	40.8	-	-
• Tetanus	311	41.2	73	37.2	213	60.0	25	32.9	-	-
• Influenza	122	16.2	40	20.4	-	-	21	27.6	61	47.7
• Malaria Drugs										
- Mefloquine	383	50.7	139	70.9	201	56.6	43	56.6	-	-
- Vibramycin	201	26.6	14	07.1	154	43.4	33	43.4	-	-
• Health Education										
- General HE message	723	95.7	193	98.4	355	100	76	100	99	77.3



