Original Article

Assessment of Knowledge, Attitude and Practice in Relation to Travel Health among Travelers in Qassim Region

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Abstract

Background: The international traveling is annually growing and is expected to reach 1.6 billion travelers in 2020. The risk of infectious diseases during traveling are not only related to the destination and duration of the trip, but also the personal health. The risk of these diseases not limited to the traveler, it's also a risk for the community. The risk can be reduced by taking some pre-traveling, travelling and post-traveling precautions. In general, only about 10% of the travelers usually consult a travel-health specialist.

Aim To determine the level of travel health knowledge, attitude and practice (KAP) among Saudi travelers at Prince Nayef international airport and to identify their source of travel health-related information.

Methods: A cross sectional study conducted at Prince Nayef International Airport in Qassim Region from 10-17 January 2018. A total of 535 travelers aged 18-60 years old had been voluntarily recruited in this study. We used the questionnaires regarding the knowledge, attitude and practices of travel health among travelers published by Neika Vendetti.

Results: Males were dominated the females with 62.8% versus 37.2%. Family and friends were the main source of general travel advice (64.5%). Poor and adequate knowledge constituted 84.3% and 15.7% respectively. Regarding attitude, 50.3% and 49.7% of respondents had positive and negative attitude respectively. For travel practice 86.0% and

الملخص

يزداد معدل السفر الدولي بشكل سنوي ويتوقع أن يصل إلى ١,٦ بليون مسافر في عام ٢٠٢٠. لا يرتبط خطر الأمراض المعدية أثناء السفر بوجهة الرحلة ومدتها فقط ولكنه يرتبط بالصحة الشخصية ايضاً. لا يقتصر خطر هذه الأمراض على المسافر وحده بل هو يشكل خطراً على المجتمع ككل. يمكن تقليل مخاطر السفر من خلال اتخاذ بعض الاحتياطات قبل وأثناء وبعد السفر. وبصفة عامة فإن نسبة ١٠ بالمائة فقط من المسافرين يستشيرون أخصائي صحة السفر.

الهدف: تحديد مستوى المعرفة، السلوك والممارسة للمسافرين السعوديين في مطار الأمير نايف الدولي وتحديد مصدر معلوماتهم الصحية المتعلقة بالسفر بشكل صحيح.

طريقة البحث اعتمد البحث على اجراء دراسة مقطعية في مطار الأمير نايف الدولي في منطقة القصيم في الفترة من ١٠ إلى ١٧ يناير ٢٠١٨. بلغت عينة الدراسة ٥٣٥ مسافر تتراوح أعمارهم بين ١٨-٦٠ سنة حيث تمت المشاركة بشكل طوعي. تم استخدام الاستبيانات المتعلقة بالمعرفة والسلوك والممارسات المتعلقة بصحة السفر بين المسافرين التي نشرها نيكا فيندي (iNeika Vendett).

النتائج: نسبة الذكور والإناث هي ٦٢,٨٪ مقابل ٣٧,٢٪ على التوالي. المصدر الرئيسي للنصائح العامة للسفر هو العائلة والأصدقاء بنسبة (٦٤,٥٪). أظهرت الدارسة ضعف انتشار الثقافة المتعلقة بالمعرفة والسلوك والممارسات الخاصة بصحة المسافرين بنسبة ٨٤,٣٪. بلغت السلوكيات الصحية الإيجابية والسلبية

14.0% acquired poor and good practice respectively.
Conclusion This study found that most travelers were having poor knowledge and practices toward pre-travel medical advice. Many of the travelers don't seek pre-travel medical advice.
Keywords
Knowledge, attitude, practices, travelers, travel health, medical advice

للمسافرين ٥٠,٣ ٪ و٤٩,٧ ٪ على التوالي. بلغت الممارسات السيئة ٨٦ ٪ مقابل ١٤,٠ ٪ للممارسات الجيدة.
الخلاصة: وجدت الدراسة أن غالبية المسافرين يعانون من ضعف المعرفة والسلوك والممارسات الصحيحة المتعلقة بالسفر. لا يهتم العديد من المسافرين بطلب المشورة الصحية قبل السفر.
الكلمات المفتاحية:
المعرفة والسلوك والممارسات والمسافرين والصحة أثناء السفر والمشورة الصحية

Introduction:

The international traveling is annually growing and is expected to reach 1.6 billion travelers in 2020.1 And in 2030, traveling to developing countries is expected to reach 57% of the international destinations.2 The risk of infectious diseases during traveling are not only related to the destination and duration of the trip, also the personal health. 1 The risk of these diseases not limited to the traveler, it's also a risk for the community and relatives in contact with the traveler. 1 The risk can be reduced by taking some pre-traveling, travelling and post-traveling precautions. 3

Traveling history can be the cornerstone in identifying the cause of such travel-related diseases.4 Some studies reported that most of the travelers are unaware about the prophylaxis and standby treatment measures which needed in their trips.5 In general, only 10% of the travelers have seen a travel-health specialist.

The aim of this study is to determine the level of travel health knowledge, attitude and practice (KAP) among Saudi travelers at Prince Nayef international airport in Qassim and to identify their source of travel health-related information.

Methods:

A cross-sectional design to assess knowledge, attitude and practice of travelers at Prince Nayef International Airport in Qassim Region (ELQ) in Qassim region. International travelers aged ≥18 years were considered on Jan 10th to Jan 17th, 2018 with exception of those who don't speak Arabic or English languages or younger than 18 years old. The data were collected randomly from different flights and different times of airplanes departures.

Sample was 600 participants from whom 535 responded to this study. Self-administered and pre-tested questionnaire was used 6,17. The questionnaire covered the following aspects: demographic data, pre-travel, travel and post-travel health parts. The data was collected by trained medical students after acquiring a written consent from the participants. The data was kept confidential and only used for the purpose of the study.

The data was analyzed by Statistical Packages for Social Sciences (SPSS) version 20. Both descriptive and inferential statistics were performed where numbers and percentages were used to presents all categorical variables. A p-value cut off point of 0.05 at 95% CI was used to determine statistical significance. The analyses measured the re-

lationship between socio-demographic and knowledge, attitude and practices of travelers regarding health pre-travel advice by using chi square test.

The evaluation of attitude of travelers toward health pre-travel advice which comprised of 2 questions where "yes" coded as 1, "no" coded as 0 were the answer options and the total score had been calculated by adding the 2 questions. The minimum score was 0 and the maximum was 2, score of 1 – 2 were classified as positive attitude while no score (0) were classified as negative attitude.

The assessment of practices of travelers toward health pre-travel advice which composed of 5 questions and the answers were coded as 2 (most appropriate answer) or 1 (least appropriate answer) and for "yes" as 1, and "no" coded as 0 were the answer options and the total score had been calculated by adding all 5 questions. The minimum score was 0 and the maximum was 7. Score of 0 – 3 had been classified as poor practices while score of 4 – 7 were classified as good practice.

The measurement of traveler's knowledge toward health pre-travel advice which comprised of 8 questions and "yes" coded as 1, "no" and "I don't know" coded 0 were the answer options and the total score had been calculated by adding all 8 questions. The minimum score was 0 and the maximum score was 8. Score of 0 – 4 was classified as poor knowledge and score of 5 – 8 were classified as good (adequate) knowledge.

Results:

The socio demographic data of 535 travelers were voluntarily enrolled in this study. Of the 535 participants, 412 (77.0%) were Saudi and 123 (23.0%) were non-Saudi. Age ranged was from 18 to 60 years old of whom 295 (55.1%) were in the age group of 18 – 25 years, 125 (23.4%) were in the age group of 26 – 35 years, 79 (14.8%) were in the age group of 36 – 45 years, 31 (05.8%) were in the age group of 46 – 60 years and 05 (0.9%) participants were in the age group of more than 60 years. Males were 336 (62.8%) while females were 199 (37.2%). Nearly all travelers were living in Saudi Arabia (95.0%) with only 27 participants living abroad. Most participants (89.7%) had already been traveled outside of Saudi Arabia and few of them don't (10.3%). Majority of the travelers had 1–2 companion during the travel (40.6%), 27.9% traveled with 3 – 5 companions, 11.2% traveled with more than 5 companions while 20.4% traveled alone. Many participants already been traveled to their preferred destination (79.8%) while 20.2% were travelling for the first time. Travelers preferred to stay for days only were (48.6%), for months (36.6%), for weeks (10.5%) and for years (4.3%). Most of the travelers were going to tourist spot country (87.7%) while few of them on the opposite (12.3%). Most (61.5%) were planning to visit rural areas or countryside. About a half of the participants (49.5%) planned the trip at least one month prior to travel, 15.6% 2 to 4 weeks prior to travel, 14.5% during 1 to 2 weeks and 20.4% during the week of the

trip. Nearly all travelers debriefed toward the general travel information of destination prior to the trip and only 11.2% don't. Table1

Table 1: Demographic data and travel characteristics of participants

Study Variables	N (%)
Nationality	
• Saudi	412 (77.0%)
• Non-Saudi	123 (23.0%)
Age group in years	
• 18 – 25 years old	295 (55.1%)
• 26 – 35 years old	125 (23.4%)
• 36 – 45 years old	79 (14.8%)
• 46 – 60 years old	31 (05.8%)
• >60 years old	05 (0.9%)
Gender	
• Male	336 (62.8%)
• Female	199 (37.2%)
Is KSA your country of residence?	
• Yes	508 (95.0%)
• No	27 (05.0%)
Have you ever traveled out KSA?	
• Yes	480 (89.7%)
• No	55 (10.3%)
Companions during the travel	
• No	109 (20.4%)
• 1 – 2 persons	217 (40.6%)
• 3 – 5 persons	149 (27.9%)
• >5 persons	60 (11.2%)
Is this your first time traveling to this country?	
• Yes	108 (20.2%)
• No	427 (79.8%)
How long are you staying at your destination?	
• Days	260 (48.6%)
• Months	196 (36.6%)
• Weeks	56 (10.5%)
• Years	23 (04.3%)
Is your primary destination a tourist/vacation area?	
• Yes	469 (87.7%)
• No	66 (12.3%)
Do you plan on visiting rural area/countryside?	
• Yes	329 (61.5%)
• No	206 (38.5%)
When did you begin planning this trip prior to your departure date?	
• At least one-month prior	260 (49.5%)
• 2 to 4 weeks prior	82 (15.6%)
• 1 – 2 weeks prior	76 (14.5%)
• During the week of the trip	107 (20.4%)
Did you get general travel information about your destination prior to your trip?	
• Yes	475 (88.8%)
• No	60 (11.2%)

Figure 1 shows the distribution of the favorite travel destination, majority of them preferred both Middle East and Asia (31.4%), 31% preferred Africa, 6.2% likes North America and very few likes South America (0.6%).

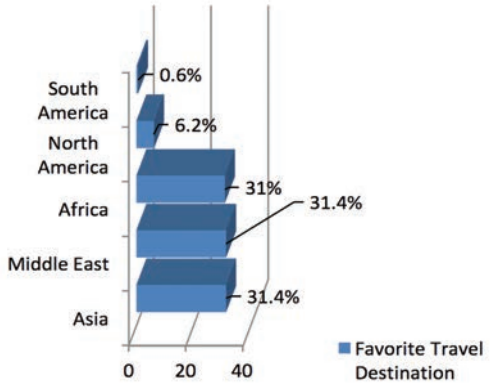


Figure 1: Distribution of the favorite travel destination

The distribution of sleeping arrangement of trip. Among the travelers, 64.5% of them choose hotel or resorts, 25.2% like private home, and 2.8% preferred dorm or youth hostel with very few like camping and 3% with other staying arrangements as shown in Fig. 2.

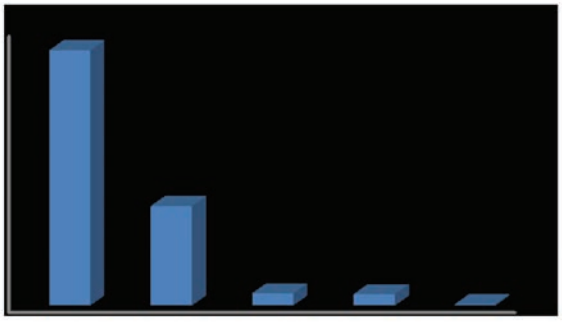


Figure 2: Distribution of sleeping arrangement of trip

Many travelers do not seek travel health medical advice prior to departure with 71.2% contrary to those who seek with 28.8% while more of the travelers do not have health insurance (68.8%) compared to those with travel insurance (31.2%). About 80 percent of the travelers do not purchase nor receive any preventive medications prior to trip while 20.8% of them were having preventive medication for the trip where more than a half of them (54.3%) were having non-prescription medicine while on the other hand, 45.7% have vaccine. Only 14 participants adhere to anti-malaria medicine. 33.1% of them were planning to participate in any outdoor activities such as running or walking (72.3%), swimming and other water sports (17.5%) with 10.2% of them planned to participate both activities. For health safety during the travel, 40.4% of them preferred to cover arms or legs while outside at night, 18.3% will use bug repellant and 17.6% will close windows or might use mosquito nets. The following food might cause illness according to travelers such as; food from street vendor's (71.2%), tap water (32.9%), raw fruits or vegetables (25.5%), sushi/shellfish (19.5%), ice cream (15.5%), ice cubes (13.3%) and milk (09.2%)

The Percentage of knowledge, attitude and practices toward health travel has been presented at table 3. Poor knowledge dominated the good knowledge with 451 (84.3%) as poor while only 84 (15.7%) were having good knowledge while attitude shows, half of the participants were having positive attitude as 269 (50.3%) and 266 (49.7%) were having negative attitude. Poor practices were more on travelers with 460 (86.0%) with relatively low ratings on good practices with 75 (14.0%).

Majority of them obtained informa-

tion about medical advice prior to departure from pharmacist (40.6%), followed by primary doctor (23.9%), next travel health clinic (12.2%) and health department (2.2%) with 21.1% from mixed sources (Figure 3).

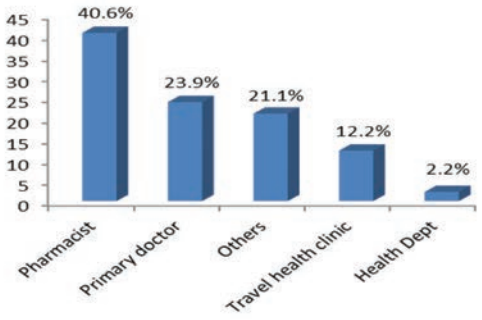


Figure 3: Sources of information about medical advice prior to departure

The reason for not seeking pre-travel medical advice were 37% who were not seeking pre-travel medical advice because they knew already the necessary information, 24.2% were too busy, 21.7% had no idea where to find information, 8.1% without health problems, 1.4% were concerned about the cost of pre-travel medical advice and 7.5% had other reason for not seeking pre-travel advice.

There was significant difference on nationality against attitude (p-<0.001) while both knowledge and practices have no significant difference. Age group in years were not statistically significant for all the dependent variables while gender was statistically significant at knowledge (p-<0.001). Saudi Arabia residency also shows negative relationship and travel to country outside Saudi Arabia shows the same. Number of companions during the travel was statistically significant at knowledge (p-<0.001) and on the other hand plan on visiting rural area or countryside was statistically significant at attitude (p-0.010).

Table 2: Attitude and practices of travelers toward health pre-travel advice (n=535)

Statement	**n (%)**
Attitude	
Did you seek travel health or medical advice prior to departure	
• Yes	154 (28.8%)
• No	381 (71.2%)
Do you have health insurance	
• Yes	167 (31.2%)
• No	368 (68.8%)
Practices	
Q1. Prior to your travel date did you receive or purchase any preventative medications for this trip specifically (including vaccine)?	
• Yes	109 (20.8%)
• No	414 (79.2%)
Q1a. If yes to question, what type of preventative medication did you receive?	
• Vaccines	43 (45.7%)
• Non-prescription medicine	51 (54.3%)
Q2. If you received anti-malarial medicine, did you begin taking them?	
• Yes	14 (02.8%)
• No	483 (97.2%)

Q3. Do you plan on participating in any outdoor activities?	
• Yes	177 (33.1%)
• No	358 (66.9%)
Q3a. What kind of outdoor activities?	
• Walking and running • Swimming/water sports • Both	128 (72.3%) 31 (17.5%) 18 (10.2%)
Q4. Do you plan outdoor activities?	
• Using bug repellant	98 (18.3%)
• Covering arms/ legs while outside at night	216 (40.4%)
• Sleeping with windows closed or under mosquito nets	94 (17.6%)
Q5. Food that might cause illnesses:	
• Food from street vendor's	381 (71.2%)
• Tap water	176 (32.9%)
• Raw fruit or vegetables	136 (25.5%)
• Sushi/shellfish	104 (19.5%)
• Ice cream	83 (15.5%)
• Ice cubes	71 (13.3%)
• Milk	49 (09.2%)

Table 3: Percentage of knowledge, attitude and practices toward travel health

Factor	N (%) (n=535)
Knowledge	
• Poor	451 (84.3%)
• Good	84 (15.7%)
Attitude	
• Negative	266 (49.7%)
• Positive	269 (50.3%)
Practices	
• Poor	460 (86.0%)
• Good	75 (14.0%)

Discussion:

In this study, despite that fact that many of the travelers were visiting high risk countries with some infectious diseases still most of them did not seek any pre travel medical advice (71.2%). This number is quite alarming since some of these diseases are endemic for those high-risk countries. Obtaining medical advice prior to travel is as necessary as the travel. This is in order to obtain general information about the disease which is prevalent in the planned country to visit. Generally, the medical advisor would suggest what is necessary to bring and avoid in the planned country of destination. Incidentally, several of the published articles locally and internationally showed that travelers were not accustomed to getting pre-travel medical advice.6,7,16,19,20,21,22 However, studies suggest that Europeans were more aware of the danger of diseases from those high-risk countries as many of them sought medical ad-

vice prior to the travel. 5,12,15

The most common reason for not seeking pre-travel health advice as the travelers remarked was about "they already knew" and others indicated busy schedules. In Oman, Al-Jabri et al 3, among travelers who did not seek pre-travel advice, they stated that "having no time" was the main reason for not seeking and another reason traveler's mentioned was about "having no idea about it" whereas in UAE 20, travelers stated that the most common reason for not seeking pre-travel health advice was about "not seeing the importance of pre-travel health advice." On the other hand, In Asia Pacific, Wilder-Smith et al 22, reported that the main reason of the travelers regarding the subject was the perception of not being at risk and short duration of travel.

Moreover, our study found that many of the travelers who sought pre-travel medical advice considered pharmacist and medical doctor as the best sources of information. This finding is consistent with most of the published articles where either general practitioner or other health care providers were the most sought for sources of information about pre-travel medical advice. 5,7,12,15,16,19,20,21,22 However, Al-Abri et al stated that most of the travelers preferred internet as the sources of health advice prior to travel rather than healthcare providers. 6

Vaccination prior to travel was the least important issue for the travelers in this study, only 20.8% of the travelers received or purchased preventative medications and vaccination. We further observed that the most common preventive vaccination used were that against communicable diseases such as polio vaccine and MMR and few took Hepatitis virus vaccine (A or B). Low adherence to pre-travel vaccination was stated from international literature. 16,19,21,22 However, this is contrary from the studies conducted by Al-Jabri et al as well as Alghamdi et al. 6,7 Both studies exhibited a relatively higher prevalence of adherence to pre-travel vaccination (52.7% and 57.1% respectively). Moreover, in regard to preventive vaccination of communicable diseases our report was not in agreement with most of the published articles in the same subject, where we observed that the most common pre-travel vaccination of the travelers from the previous literature for Hepatitis virus. 6,7,8,16,19,21,22

The level of knowledge, attitude and practices (KAP) regarding health travel showed, poor knowledge with (84.3%) versus (15.7%) while attitude shows, half of the participants were having positive (50.3%) and (49.7%) were negative. More travelers were having poor practices toward health travel with (86.0%). Regarding relationship between knowledge, attitude and practices versus socio demographic characteristics of travelers it was revealed that there was significant difference on nationality against attitude while gender was statistically significant at knowledge whilst number of companions during travel was statistically significant at knowledge. On the other hand, plan on visiting rural area or countryside was statistically significant with the attitude. Results published by Alghamdi

et al was slightly higher in prevalence. They also showed more significant results when comparing KAP to the socio demographics characteristics. 7 In Oman, most travelers were having good knowledge and positive attitude while the correlation between KAP and socio demographic data viewed to be consistent.6 We further observed that the knowledge and practices of travelers in our study were lower than the previous mentioned studies. This signifies the need to educate Saudi Arabian travelers more about the importance of pre-travel health advice

The present study also measured the determinants of KAP among the socio demographic characteristics of travelers. We found out that the determinants of knowledge in this study was gender and companions to travel while the determinants of attitude were nationality and planned to visit rural area whereas practices showed no determinants. Al Jabri et al, reported that the determinant of knowledge and attitude were gender and travel destination respectively.6 On the other hand, Alghamdi and colleagues 7, revealed that the KAP was statistically significant at age, education, companions' settings and chronic diseases.

Limitations:

Just like any other study, this paper is also subjected to some limitations such as; the limited destinations that departed directly from Prince Nayef International Airport.

Conclusion:

This study found out that most travelers were having poor knowledge and practices toward pre-travel medical advice. Many of the travelers don't seek pre-travel medical advice. Travel clinics and campaign are needed to reflect the importance of getting pre-travel medical advice. Travel agency as well as general practitioner are requested to educate the travelers about the risks in the country of destination. Proper medications and awareness to about risks at country of destination is advised to be taught by the concerned parties prior to travel.

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