ORIGINAL ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
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www.njcmindia.org

KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT TRAVEL VACCINE AMONG MEDICAL STUDENTS AND DOCTORS IN A TERTIARY HEALTH INSTITUTION, INDORE, MADHYA PRADESH, INDIA

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Financial Support: None declared
Conflict of interest: None declared

How to cite this article:
Upadhyay R, Tandia D, Thakur AB, Wavare RR, Deshpande A. Knowledge, Attitude and Practices about Travel Vaccine among Medical Students and Doctors in a Tertiary Health Institution, Indore, Madhya Pradesh, India. Ntl J Community Med 2016; 7(3):208-211.

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Date of Submission: 29-01-16
Date of Acceptance: 22-03-16
Date of Publication: 31-03-16

ABSTRACT

Background: Travelers play a significant role in the spread of infectious diseases across international borders, through their travel patterns and behaviors. This study was conducted to assess the Knowledge, Attitude and Practices regarding travel vaccine among medical students and doctor.

Materials and Methods: A cross-sectional study was conducted at SAMC & PGI, Indore from July to September 2015 using quantitative method of data collection among 114 medical student and doctors.

Result: The mean age of the respondents was 27.85 years with 68 (59.65%) males and 46 (40.35%) female respondents. 21(18.42 %) participants are married and 93 (81.58 %) are single. 88.60 % of the respondents were aware of the concept of travel vaccines while 88.33 % of the respondents could give correct definition of travel vaccine. Knowledge regarding travel vaccine was found to have improved the uptake of travel vaccine ($P = 0.04$).

Conclusion: The study shows that as the knowledge improves the uptake of travel vaccine increases significantly.

Keywords: Knowledge and uptake, travel vaccine, student and doctors.

INTRODUCTION

As we are entering in the world of modernization where every generation travels more frequently and at longer distances than the previous generation, with a mean increase of 30 million travelers per year from 1995 until today, physicians throughout the world are confronted with new diseases. Approximately 10% of travelers to developing countries experience a febrile illness, during or immediately after travel. In fact all major epidemics that have afflicted the human race have been spread internationally by travelers, for example plague and syphilis [1].

Travel maybe the only risk factor for infectious diseases that are well controlled in the travelers' country of residence, particularly vaccine preventable diseases such as hepatitis A, typhoid, polio, and measles.[2] The role of vaccination among travelers is an essential component of the control of travel-associated infectious disease. [3]

According to the World Tourism Organization (WTO), in 1999 an Estimated 80 million travelers from industrialized countries (US/Canada, Europe, Japan, and Australia/New Zealand) visited developing areas of the world, where the risk for infectious diseases, many of them vaccine- preventable, has increased. Most travel-related illnesses are preventable by immunizations, prophylactic medications, or pre-travel health education[4]. The risk for acquiring illness depends on the area of the

world visited, the length of stay, activities and location of travel within these areas, and the underlying health of the traveler. [5]

Because of the rising travel activity especially to tropical countries, the importance of qualified pretravel advice consultation is an increasing need, even more in a country where travel medicine is still an unknown medical discipline.[6] To improve the travelers health, attention needs to be paid to individual risk factors, the prevention and therapy of travelers ' diarrhea, malaria prophylaxis, management of respiratory illness, vaccination, and personal safety, among others.[7] For certain communicable diseases, which are under control in particular countries, travel may be an important factor in their spread, vaccination plays a major role in the control of travel associated communicable diseases.[8] The actual risk of travel related sickness and the knowledge of its prevention does not seem to be well documented amongst Indian medical personnel. This study is aimed at elucidating the knowledge of risk for travel-related diseases, and the attitude and practice towards uptake of vaccines before travel among medical students and doctors of Sri Aurbindo Medical College & Post Graduate Institute Indore.

MATERIAL AND METHODS

This was a cross sectional type of study, aimed at assessing the knowledge, attitude and practices about travel vaccines (including travel medicine, travelers ' diseases, morbidity, and prevention) among medical students and doctors. The study was based in a Tertiary Healthcare Centre, at Sri Aurobindo Medical College & Post Graduate Institute, Indore from July to September 2015. A pilot study was conducted in June 2015 on medical students so as to assess the validity of the questionnaire. The study was carried out after obtaining permission from institutional ethical committee. The purpose of the study was explained to the participants and verbal consent was obtained before the interview. After understanding the purpose of the study all the 114 participants agreed to respond to the questionnaire. A total of 114 participants who fulfilled the inclusion criteria were interviewed using a pretested semi structured questionnaire. Scoring and grading of responses for knowledge of travel vaccine was done and calculated. There were five stem questions on knowledge of travel vaccine with 13 possible responses. Only eight of these responses were correct. One mark was awarded for each correct response and no mark was awarded for wrong response or I don't know response and a total of eight maximum attainable scores were used for knowledge of travel vaccine. A score of 0-2 marks out of 8 marks was graded to be poor knowledge, 3-5 as fair knowledge, and a score of 6-8 marks out of 8 marks was graded as good knowledge. Statistical software was used for data analysis and $P \leq 0.05$ was considered statistically significant. All students and doctors (Having requisite MBBS Qualification) who consented for the study and all students above 18 yrs were included in the study.

RESULT

One hundred and fourteen medical students and doctors participated in this study with 68 (59.65%) males and 46(40.35%) female respondents of the total 21(18.42%) participants were married and 93(81.58%) were single in this study. Out of the total participants 91(70.82%) were Hindu,14(12.28%) were Muslim,06 (5.26%) were Christian and 03(2.63%) followed other religion (table 1).

Respondent those who were aware of the concept of travel vaccine were 101(88.60 %) while 95 (83.33) could give correct definition of travel vaccine. About 63(55.26%) medical doctors in this study had good knowledge of travel vaccine (table 2).

Table 1: Socio demographic characteristics of the respondents

Characteristics	Frequency (n=114) (%)
Age group (years)	
18-27	69 (60.53)
28-37	28 (24.56)
38-47	17 (14.91)
Sex	
Male	68 (59.65)
Female	46 (40.35)
Marital status	
Single	93 (81.58)
Married	21 (18.42)
Religion	
Hindu	91 (70.82)
Muslim	14 (12.28)
Christian	6 (5.26)
Others	3 (2.63)

Table 2: Knowledge of travel vaccines

Parameters	Frequency (n=114) (%)
Awareness of travel vaccines	
Yes	101 (88.6)
No	13 (11.4)
Definition of travel vaccine	
Correct	95 (83.33)
Incorrect	19 (13.19)
Level of knowledge*	
Poor	27 (23.68)
Fair	24 (21.05)
Good	63 (55.26)

*Score of assessing the knowledge – Poor (0-2), Fair (3-5) , Good (6-8)

Table 3: Uptake of travel vaccines

Parameters	Frequency (n=114) (%)
History of international travel	
Yes	65 (57.01)
No	79 (69.3)
Uptake of travel vaccine in the last international travel	
Yes	37 (59.92)
No	28 (43.07)
Type of vaccine received	
Yellow fever vaccine	35 (94.59)
Meningococcal vaccine	5 (13.51)
Hepatitis B vaccine	30 (81.08)
Typhoid vaccine	5 (13.51)
Reasons for poor uptake of travel vaccine	
Paucity of information	33 (28.95)
Distressing protocols	53 (46.49)
Financial constraint	37 (32.46)
Poor monitoring	61 (53.51)

In the study 65(57.01%) participants among 114 had history of international travel and 37(59.92%) had taken the vaccination for the destination countries in their last international travels.

Yellow fever vaccine was most received vaccine by 35(94.59%) of the respondents who had travelled internationally. Other vaccines received were meningococcal vaccine 05(13.51%), hepatitis B vaccine 30 (81.08 %) and typhoid vaccine 05(13.51 %). The reasons adducted for low uptake of travel vaccination in this study were, paucity of information of travel vaccination in 33(28.95%)participants, distressing protocol and requirement for travel vaccination in 53(46.49 %) participants and poor monitoring on uptake of required vaccines for international travels by relevant authorities in 61(53.51 %) participants (table 3) .

Majority of the participants fell within the age group of 29-39 and were males of which 28 participants had good knowledge of travel vaccine of whom 26(92.86%) had taken vaccines of which 14 participants had fair knowledge and of which 11 (78.57%) had taken vaccines of which 23 participants had had poor knowledge of vaccines of which 15 (65.22%) had taken vaccines. Significant relationship was found between level of knowledge and vaccine uptake (p value=0.04)

Table 4: Relationship between factors and uptake of travel vaccine

Characteristics	Uptake of travel vaccine		Total	P value
	No (n=13) (%)	Yes (n=52) (%)		
Age group (years)				
18-28	03 (15)	17(85)	20(100)	0.513#
29-39	05 (17.86)	23(82.14)	28(100)	
40-50	05 (29.41)	12(70.5)	17(100)	
Sex				
Female	3(12.5)	21(87.5)	24(100)	0.247##
Male	10(24.39)	31(75.61)	41(100)	
Level of knowledge –				
Poor	8(34.78)	15(65.22)	23(100)	0.04*
Fair	3(21.43)	11(78.57)	14(100)	
Good	2(7.14)	26(92.86)	28(100)	

chi- square test; ## Fisher exact test; *<0.05 statistically significant

DISCUSSION

The ratio of male to female in the study was higher while large majority were single, which was similar to a study conducted in Nigeria. [2] The average age of participants was 27.85 years which is unlike the studies conducted in Nigeria where mean age of respondents was significantly higher and much lower in the study conducted in the Chile study.[4] Most of the participants were Hindus.

As per the conducted study a large group of participants were aware of what travel vaccines are (88.60%), with 83.33% of participants knowing the correct definition of the travel vaccine. More than 55% of the participants had a good level of knowledge regarding travel vaccines which is consistent with the study conducted in Nigeria, but contradictory results have been obtained in the study conducted in Chile. [3]

Majority of the subjects (who have received any vaccine n=37) had taken the Yellow fever vaccine (94.59%) followed by Hepatitis B vaccine (81.08%). Distressing protocols, cost of vaccination and poor monitoring system for ensuring travel vaccination at the entry and exit points of the countries were considered to be the main reasons for poor uptake of the travel vaccine according to the subjects which is similar to results obtained in a similar study done in Nigeria. [2]

Statistical influence on travel vaccine uptake was apparent due to level of knowledge, whereas other studies have shown statistically significant influence due to age and gender [9].

CONCLUSION

The study shows that as the knowledge improves the uptake of travel vaccine increases significantly. All other factors did not show any significant relationship with knowledge, attitude or practice.

LIMITATION OF STUDY:

This study has been conducted in one institute of Indore City, therefore, it may be difficult to generalize the study for the state or nationwide population.

It is recommended that similar such studies should be carried out at a higher level comprising of various institutes so as to get a clearer picture.

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