

A Cross Sectional Study to Assess Pretravel Health Preparation Among the International Travellers in States of Karnataka and Goa

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Abstract

Background: International travel is undertaken by large, and increasing, numbers of people for professional, social, recreational and humanitarian purposes. Travellers are an epidemiologically important population because of their motility, their potential for exposure to diseases outside their home country. Pretravel health preparation (vaccination and chemoprophylaxis) is effective to prevent health problems among travellers and spread of endemic diseases across international borders.

Objective: to assess the pretravel health preparation among the international travellers in Karnataka and Goa states of India.

Methods: A cross sectional study was conducted among 400 international travellers in tourist places of Karnataka and Goa states of India after approval by authorities, for a duration of 12 months from June 2018 to May 2019. International travellers at tourist destinations and transit sites were interviewed using self-administered pretested semi-structured questionnaire about pretravel health preparation.

Results: 51.5% participants in the study were males and majority (74%) of the participants were travelling for the purpose of pleasure and recreation. More than half of the participants were from European countries. 70.8% of the participants had received pretravel advise, 75.4% of the participants had received at least one vaccine prior to the current trip, most common being Yellow fever and Tetanus. 24.5% were taking malaria chemoprophylaxis.

Conclusion: Majority of the travellers in the current study had taken pre travel health advise and had received vaccination against various diseases. Chemoprophylaxis for prevention of malaria among the participants was not satisfactory.

Key words: *International travellers, pretravel health advise, chemoprophylaxis, vaccination, travel*

insurance

Introduction

International travel is undertaken by large, and increasing, numbers of people for professional, social, recreational and humanitarian purposes. ⁽¹⁾ International tourists are expected to increase by 3.3% a year between 2010 and 2030 to reach 1.8 billion by 2030, according to UNWTO's long-term forecast report Tourism Towards 2030. ⁽²⁾

Travellers are an epidemiologically important population because of their motility, their potential for exposure to diseases outside their home country. ⁽³⁾

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Travel medicine or Emporiatrics is the branch of medicine that deals with the prevention and management of health problems of international travellers. (4) The major content areas of travel medicine include the global epidemiology of the health risks to the traveller, vaccinology, prevention of disease and pretravel counselling. (5)

Pretravel health preparation (vaccination and chemoprophylaxis) is effective to prevent health problems among travellers. Every pretravel advise should be tailor made for each individual, including minimum necessary vaccinations and chemoprophylaxis with necessary prevention strategies specific to the particular destination, without unnecessary adverse effects, cost and inconvenience to the travellers. (6)

Pretravel health consultation should take place at least 4–8 weeks before the journey and preferably earlier if long-term travel or overseas work is envisaged. However, last-minute travellers can also benefit from a medical consultation, even as late as the day of travel. Not all the international travellers undertake pretravel consultation and those who undergo consultation are not found to be adhering to the standard preventive and protective measures recommended by the physician. (7) Hence this study was conducted with an objective to assess the pretravel health preparation among the international travellers in Karnataka and Goa states of India. This is a part of a larger study on Health Problems of international travellers, conducted in Karnataka and Goa, India.

Material and Methods

Type of study: A Cross-sectional study among international travellers visiting states of

Karnataka and Goa.

Place of study: Tourist and transit places of Karnataka and Goa states.

Duration of the study: 12months (June 2018 to May 2019).

Study participants: International Travelers visiting tourist places in states of Karnataka and

Goa, India.

Inclusion criteria:

1. International travellers over 18years of age.
2. International travellers who understood and spoke English.
3. International travellers who had stayed in India at least for 24hours.

Exclusion criteria:

1. International travellers of Indian origin.
2. International Travelers who did not give consent for the study.
3. International travellers who were staying in India for > 3months.

Sample size

Based on the previous study done in Agra by Amit Kumar Mehto et al, the proportion of the study participants having health problems was found to be 48.2% (p). (8) With absolute precision of 5%, the sample size (N) calculated was 384, which was rounded to a final sample size of 400. The study participants were selected by convenience sampling.

Method of collection of data: Approval was taken from the concerned authorities of Tourism Departments of Karnataka and Goa states. Ethical clearance was taken from Directorate of Health Services (DHS), Government of Goa. The study was conducted among the International Travelers at various places (beaches, exit site of monuments, accommodation units and transit places) of Karnataka and Goa at the time of study.

Karnataka state included data collection in four regions (North Karnataka, South Karnataka, Hyderabad Karnataka and Coastal Karnataka). Places with a greater number of foreign tourists were selected from each region of Karnataka mentioned above based on tourism statistics of Karnataka. Goa state was divided into two regions North Goa and South Goa and participants were interviewed in each of the region at beaches, restaurants and transit places.

International travellers in each of the above-mentioned place were explained about the research and written consent was taken and interviewed using

a predesigned, semi-structured, pretested questionnaire containing information about socio-demographic characteristics and pretravel health preparation.

Pilot study: a pilot study was conducted before undertaking the actual research in North Goa, a total of 21 participants were interviewed using the questionnaire. Necessary changes were made in the questionnaire after the pilot study, and a final questionnaire was prepared.

Data processing and statistical analysis: Data was entered in Microsoft excel and analysed using Statistical

Package for Social Sciences Version 21 (SPSS free version 21). Continuous data was expressed as mean and standard deviation and categorical data was expressed as proportions.

Results

Of 400 participants, 51.5% of the participants in the study were males. The mean age of the males and females in the study were 37years and 34years, with standard deviation of 9.5years and 9.9years respectively. Majority of them belonged to the age group of 25-45years. Nearly half of the study participants were following Christianity

(49.5%). Majority of the participants had completed their graduation (57.5%). Most of the participants (57.5%) were belonging to the countries of European continent, followed by Asian continent (21.8%). (Figure 1).

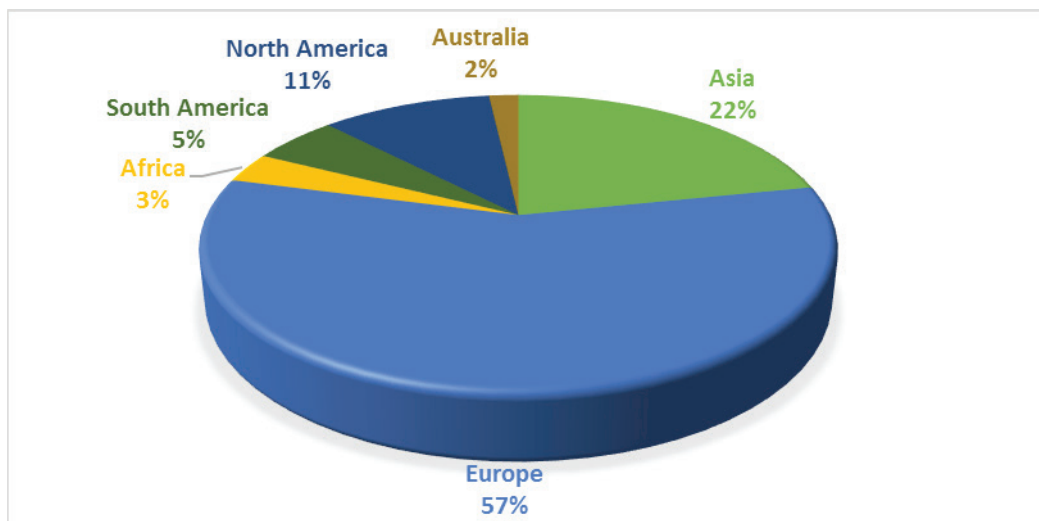


Figure 1: Continent wise distribution of international travellers in the study.

Most of the participants (57.5%) in the study were single. 13% of the participants mentioned having a pre-existing chronic health problem. The most common chronic health problems reported in the current study were Diabetes (3.5%), followed by Coronary artery Disease (3.3%).

More than half (68%) of the participants had pre-planned the trip 30-180days before beginning the trip. (table 1)

Table 1: Number of days of preplanning for the current trip among participants.

Days of preplanning	Frequency	Percent
<30days	107	26.8
30-180	272	68.0
>180	21	5.3
Total	400	100.0

Most of the participants were travelling to India for the purpose of pleasure and recreation (74%), followed

by academic purpose (8.5%) and work (7.3%). 25.5% of the participants were travelling alone and 21.5% of the participants were travelling with their spouses in the current trip. 72.5% of the participants had travel insurance for the current trip. 70.8% of the participants sought pretravel health advise from various sources. (table 2)

Table 2: Pretravel health seeking among the participants.

Pretravel health advise	Frequency	Percent
yes	283	70.8
no	117	29.3
Total	400	100.0

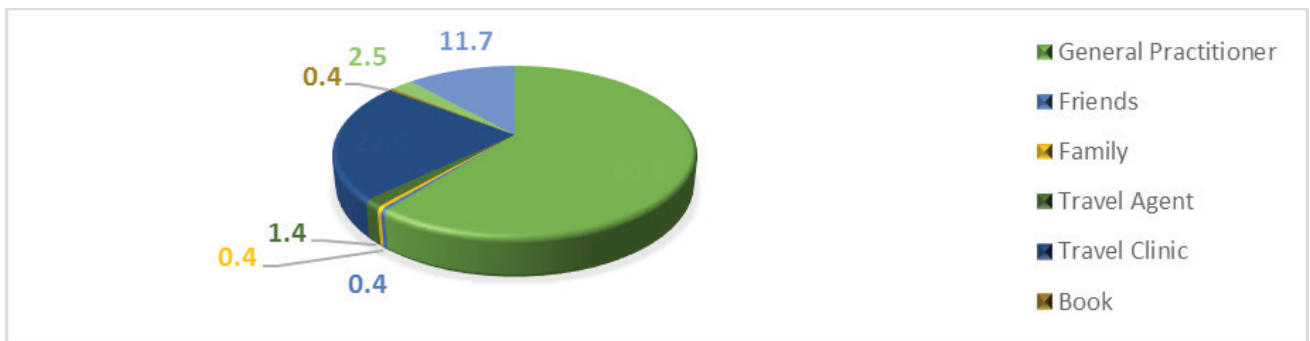


Figure 2: Source of pretravel health advise among the participants who sought pretravel health advice.

The most common source of pretravel health advise was from General practitioners. (figure 2). On interviewing about the content of the pretravel health advise, the most common advice was found to be regarding vaccination (94%). (table 3)

Table 3: Content of pretravel health advise among the participants who sought pretravel health advice.

Content of the pretravel Health Advise	Yes	No	Total
Preventive measures of various health problems	69(24.4)	214(75.6)	283(100)
Chemoprophylaxis	149(52.7)	134(47.3)	283(100)
Vaccination	268(94.7)	15(5.3)	283(100)

59.3% of the participants were aware about basic first aid and were carrying first aid kit during their current trip. 75.4% of the participants reported that they had received at least one vaccine prior to the current trip. Of 400 participants, majority of the participants were vaccinated against Yellow fever (65.5%) and tetanus (62.5%). (figure 3)

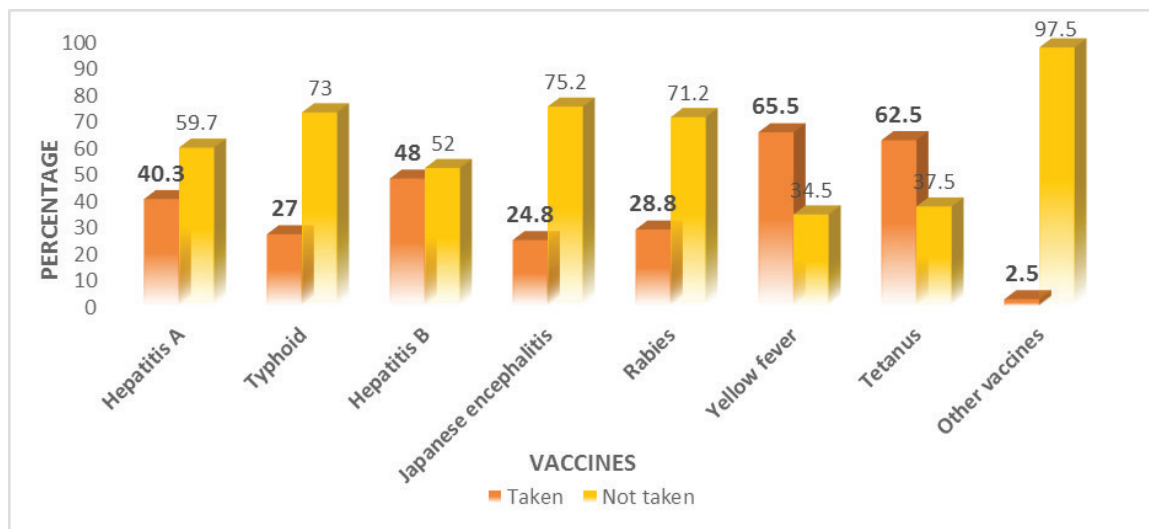


Figure 3: vaccines received by the participants prior to current trip.

24.5% of the travellers reported that they were taking chemoprophylaxis against malaria as advised, others reported using mosquito repellents, nets and other personal protection methods. On interviewing about the awareness about the health facilities available in the destination, 34.2% were knowing about the health facilities beforehand, most common reason for not being aware was easy availability of information through internet and having travel insurance.

Discussion

The present study was conducted among 400 international travellers who visited Karnataka and Goa states of India during the study period who met inclusion criteria, with an objective to assess the pretravel health preparation.

The study was conducted among 400 participants which included 206(51.5%) of male and 194(48.5%) female travellers, and majority of the participants (57.5%) in the current study were from countries of European continent, which was similar to the finding in the study conducted by Amit Kumar Mehto et al which had 52% male participants and 47.6% of the participants from European continent. ⁽⁸⁾

In the present study, it was found that 70.8% of the participants had sought pretravel health advise before beginning the current trip from various sources. In a study by Amit Kumar Mehto et al reported that three fourth of all participants (319, 75.6%) sought Pre-travel health advice, which was similar to the current study. ⁽⁸⁾ In a study by Santanu Chatterjee pretravel health advice was sought by 377 (83%) tourists, which was higher than the current study findings. ⁽⁹⁾

The most common vaccine received by the participants was yellow fever which was received by 65.5% of the participants in the current study. 62.5% of the participants were vaccinated against tetanus. 48% and 40.3% of the participants had received vaccines against Hepatitis B and Hepatitis A respectively. In a research by Amit Kumar Mehto et al in Agra reported that Hepatitis A was the most common (68.2%) followed by Hepatitis B (60.2%), Tetanus (59.5%) and Typhoid (53.3%), which was similar to the current study. Yellow fever vaccine was received by 38.5% of the participants, which was less compared to the current study. ⁽⁸⁾

Only 24.5% of the participants were taking chemoprophylaxis for malaria prevention in the current study, which was higher than the finding in a study

conducted by Amit Kumar Mehto et al in Agra and similar to similar (24%) to the finding in the study conducted by Santanu Chatterjee at Kolkata. ⁽⁸⁾⁽⁹⁾

The strength of this study is, it is the first research to be done on travel medicine in South India. Personal interviewing all the participants by the researcher has yielded good quality and quantity of information about pretravel health preparation.

The limitation of this study is the use of convenience sampling. Vaccination confirmation through certificates was not done, hence there could be possibility of recall bias.

The study concluded that majority of the travellers in the current study had taken pre travel health advise and had received vaccination against various diseases, however improvement is required in provision of pretravel preparation services. Chemoprophylaxis for prevention of malaria among the participants was not satisfactory. Further research in the field of travel medicine is recommended.

Conflicts of Interest: Nil

Source of Funding: Self

Ethical Clearance: Taken from Institute Ethics Committee of Karnataka Institute of Medical Sciences (KIMS), Hubballi and Directorate of Health Services (DHS), Government of Goa.

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