

Knowledge, Attitude, and Awareness of Health Insurance in Travel during the Covid-19 Pandemics

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Research

Keywords: Coronavirus infectious disease (COVID-19), travel, health insurance, pre-travel consultation

Posted Date: May 19th, 2021

DOI: <https://doi.org/10.21203/rs.3.rs-522171/v1>

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Abstract

Background

Travel has become one of the most popular leisure activities in the world, especially international traveling. The risk of accident and travel related illness including infectious and non-communicable diseases should not be neglected. To provide more comprehensive pre-travel consultation to the international travelers, we aimed to investigate the knowledge, attitude, and awareness of travel health insurance for travelers.

Methods

Anonymous structured questionnaires were distributed to 1,000 visitors of the Taiwan International Travel Fair in May 2019.

Results

The top three kinds of travel health insurance were accidental death and disablement insurance (92%), accidental medical reimbursement (90.4%) and 24 hours of emergency assistance (89%). In addition to education level, travel-associated illness, and special activities during travel, a significant association was observed between the willingness to buy various travel insurance and willingness of pre-travel consultation.

Conclusions

Although most travelers would buy travel health insurance, disproportional respondents understood the content of travel insurance. Most travelers considered travel clinics to be the most reliable information resources of travel insurance. Therefore, travel specialists are encouraged to offer more information about travel insurance during pre-travel consultation, especially during the COVID-19 pandemic.

Introduction

International traveling is appealing because of globalization and the increased trend of international tourism. According to the World Tourism Organization, the number of arrivals was 1.442 billion in 2018 [1]. As international tourism increases and travel destinations diversify, more travelers acquire infectious diseases which are not endemic in their home countries [2]. Up to 6–87% of travelers became ill during or after their travels [3]. Although keeping travelers healthy is health providers' responsibilities, it revealed that 80% of European travelers did not comply with the traditionally recommended dietary restriction and 20% of travelers did not bring any antimalaria drugs with them [4]. Even though travelers received suggestions about disease prevention from the health providers, most of them did not follow the suggestions. Besides, accidents happen even well-prepared. About 20-25% of traveler deaths were caused by injuries, and road traffic injuries are the leading causes [5]. Travel insurance is one of the most important safety nets for travelers and should be reinforced by travel health advisers [6].

However, only 4% of general practitioners (GPs) would advise a traveler going to Turkey about travel insurance in a late 1980's study in the United Kingdom [7]. More recent studies have shown about 60% of GPs in New Zealand [8] and 39% of travel clinics worldwide [9] usually give advice to travelers about travel insurance. Furthermore, we have shown previously that overseas emergency medical assistance services (EMAS) were considered important to travelers, but approximately 20-30% of travelers lacked an awareness of EMAS [10]. Since travel medicine services have also been severely required in the COVID-19 pandemic, we realized that pre-travel health care will be even more vital in the future [11]. However, there was scarce evidence relating to how travelers consider about their travel health insurance, to investigate the international travelers' knowledge, attitude, and behavior of travel health insurance is urgent and important. While there are many categories of travel health insurance, the proportion of willing-to-pay of travelers and the categories of insurance they prefer are uncertain. After buying travel medical insurance, did the travelers know about the contents and risk-coverage of the travel health insurance? Moreover, we would like to investigate what the sources of travel health insurance the travelers rely on. To provide more comprehensive pre-travel consultation to the international travelers, we conducted this study to investigate the knowledge, attitude, and awareness of travel health insurance of travelers.

Methods

Design

This was a community-based, cross-sectional questionnaire survey applying to visitors attending to the Taiwan International Travel Fair in May 2019. The questionnaire was self-administered and anonymous. The completion and return of the questionnaire represented the subject agreed to participate.

Subjects

The including criteria were aged over 20 years old, willing, and able to complete the questionnaire. The study was approved by the Institutional Review Board at National Taiwan University Hospital in Taiwan (201902070W) before the study was conducted.

Questionnaire

The four-part questionnaire included questions on socio-demographical characteristics, knowledge towards travel-related disease and vaccine, attitudes, awareness and willingness towards travel medicine clinic, and travel insurance. The questionnaire was pretested for face validity by a committee of ten

physicians. The members of the committee were from National Taiwan University Hospital (NTUH) and Centers for Disease Control (CDC), Taiwan who were experienced in the clinical practice of travel medicine. A literature review and consensus opinion from three physicians at NTUH and CDC, Taiwan, were also conducted to test the content validity of the questionnaire.

The socio-demographical characteristics included sex, age, education level, occupation, medical history, and special activities during travel. The other three parts of the questionnaire included the following components:

Knowledge towards travel-related disease: 10 questions about vaccination, malaria, yellow fever, cholera, measles, hepatitis B, rabies, meningococcus, and influenza. Each question was scored 1 point for a correct response, with a total score of 10 points. The questions tested the respondents' knowledge regarding the epidemiology, medication, and vaccine of travel-related disease.

Attitude towards travel medicine clinic and travel insurance: This part examined the subjects' perceptions regarding to the importance of travel medicine clinic and travel insurance as follows: (1) travel medicine clinic, (2) pre-travel vaccination, (3) accidental death and disablement insurance, (4) accidental medical reimbursement, (5) overseas sickness coverage, (6) 24 hours of emergency assistance, (7) travel inconvenience insurance. The scoring system used a five-point Likert Scale, ranging from "very unimportant" (1 point) to "unimportant" (2 points), "no comment" (3 points), "important" (4 points), and "very important" (5 points). Higher scores indicated positive attitudes regarding the need of certain services.

Awareness and willingness towards travel medicine clinic and travel insurance: This part sought the information on whether people had heard about the above mentioned five different kinds of travel insurance and travel clinic and whether they will use the service or not.

Statistical analysis

Data were presented as means (SDs) for continuous variables and numbers (percentage) for categorical variables. Chi-square test was used to compare the proportions of the willing to buy travel insurance between different socio-economic variables. One-way ANOVA and independent t test were used to clarify the relation between knowledge for travel medicine and socio-economic variables. A p value less than 0.05 was considered statistically significant. Statistical analysis was carried out using the statistical software SPSS 19.0 (version: 19.0, IBM Corp., Armonk, NY, USA, 2017).

Results

A total of 1,000 subjects were randomly given the questionnaire and 927 visitors responded (response rate = 92.7%). The high response rate and unbiased selection represented a good interval validity. After eliminating 99 incomplete questionnaires, the final analysis included 828 respondents (303 males and 525 females).

Table 1 shows the demographic characteristics of the respondents. The mean age of the respondents was 44.7 ± 14.0 years. There was 32.1% of respondents reported a medical history of chronic illness and 19.2% of respondents reported a previous experience of travel-associated illness. Furthermore, 38.4% of the respondents planned to join group tours and 53.9% planned a self-guide tour. A total of 22.1% of the respondents planned to participate in activities that may increase their risk of health problems, such as mountain backpacking or scuba diving during their travel.

Figure 1 shows the respondents' ratings of the importance, awareness, and willingness to pay for each travel insurance. Among the rated insurance, the top three importance were accidental death and disablement insurance (92%), accidental medical reimbursement (90.4%) and 24 hours of emergency assistance (89%). The insurance that the subjects were least aware of included accidental death and disablement insurance (31.5%), accidental medical reimbursement (36.2%) and overseas sickness coverage (37.1%). The least three willing to buy were overseas sickness coverage (68.4%), 24 hours of emergency assistance (69%) and travel inconvenience insurance (70.5%).

Table 2 shows the association between the willingness to buy different types of travel insurance and demographic characteristics. A statistically significant association was observed between the willingness to buy travel inconvenience insurance with educational level. The willingness of pre-travel consultation is associated with various travel insurances and travel-associated illness is associated with willing to buy 24 hours of emergency assistance. Furthermore, planned special activities during travel is associated with accidental death and disablement insurance.

Table 3 shows the comparison of mean scores for knowledge for travel medicine with socio-demographic variables. The knowledge for travel-related infection, vaccine and diseases was significantly associated with age, medical history, and travel-associated illness.

Discussion

Among the respondents, 19.2% of subjects reported previous travel-associated illness. Compared with previous studies, about 14.2-60% of travelers experienced health problems during travel [10, 12, 13], the reason for the relatively low proportion in this study might be due to the younger age and higher educational level of our respondents. There were 39.7% of our subjects aged 20-30 years and 79.2% of our subjects were graduated from university or higher.

There has been an increasing trend for international traveling. Risk management is an important issue for travelers, since accidents and injuries are important causes of morbidity and mortality for travelers [14, 15]. However, only a minority of international travelers seek pretravel counseling. Christopher et al. revealed only 36% people sought pre-travel counseling [16]. The pre-travel consultation rate was 0.1% in Taiwan while was 40.5% for all ill GoeSentinel travelers [10]. Although the percentage of willing for pre-travel consultation was low, the percentage of willing to buy travel related insurance was about 60-80% in this study. When purchasing travel insurance, most travelers tend to consider the price instead of the service details and the quality coverage [17]. Thus, travel health insurance should provide a traveler with appropriate coverage against health problems while abroad, and the travelers should be advised to check exclusions

[18]. Especially during the COVID-19 pandemic, many insurance companies stopped selling travel insurance or not covering anything which is related to coronavirus [11].

Our results showed that most travelers would buy accidental death and disablement insurance (92%) and accidental medical reimbursement (90.4%). Only 68.4% of respondents would buy overseas sickness coverage, and 69% of respondents would buy 24 hours of emergency assistance. However, emergent medical evacuation from a low-income nation can cost \$50,000 to \$75,000 or more [16]. In the current COVID-19 pandemic, local healthcare capacity can become overwhelmed, thus both overseas sickness coverage and medical evacuation are particularly important [19]. Appropriate travel insurance is one of the most important safety nets for travelers. Besides, our study also investigated the understanding of the travel related insurance. Only 31.5-44.7% of respondents understood the content of travel insurance very well while 9.5-17.3% respondents replied that they did not understand at all. Travelers must be aware of health insurance policy regarding coverage if they might get sick with COVID-19 when abroad [20].

Travelers with high educational levels, willingness of pre-travel consultation, travel-associated illnesses, and planned special activities during travel were more willing to buy travel insurance. And travelers with older age, medical histories, and travel-associated illnesses were significantly associated with a higher knowledge for travel medicine. In other words, those travelers who have the willingness to buy travel insurance may not have good knowledge for travel medicine. Furthermore, no matter high or low knowledge toward travel medicine and high or low willingness to buy travel insurance, only about one third respondents understood the content of travel insurance. Compared with previous study, there was about 40% of European travelers could not assess the risk of infectious diseases correctly [21]. Buying travel insurance without adequate consultation is not enough for travel health and safety. Moreover, instructing travelers in travel medicine is particularly important during the COVID-19 pandemic.

Despite our respondents reported that most resource of travel-related knowledge and insurance was from social media or insurance companies, they thought that health worker was most reliable. However, little nonmedical health advice was offered to travelers in general practice. Only about 4-60% general physicians would give advice about health and travel insurance for travelers [7, 8]. Hill et al. reported that only 39% of travel clinics worldwide routinely advised travelers about health and travel insurance [9]. During the COVID-19 pandemic, the contents of travel insurance were adjusted consequently. For example, the purchased insurances do not cover COVID-19 related disease and a new insurance only covers COVID-19 related disease which provided by some airline. According to this study, we supposed that most people may not understand the contents of travel insurance. Therefore, health workers are encouraged to equip with knowledge of travel insurance before the countries reopening for tourism.

Limitations

This study has some limitations. First, 92.7% of the surveyed travelers returned a completed questionnaire. We could not examine the attitude, willingness, and awareness of the non-responders, thus the bias due to non-responders has occurred. Because most of the respondents were young, with high education levels, with fewer travel-associated illness experience and pre-existing diseases, our findings might not be able to apply to all travelers. Lastly, because this study is a cross-sectional design, we could not establish a causal relationship among awareness, attitude, and willingness with travelers' characteristics. Nevertheless, few studies have investigated the attitude, willingness, and awareness of travel insurance. We believe that this study will give an insight into pre-travel health consultation in the future, especially during the COVID-19 pandemic. Health workers must be familiar with the associated travel insurance before the countries reopening for tourism.

Conclusion

Although most travelers would buy accidental death and disablement insurance and accidental medical reimbursement, only 31.5-44.7% respondents understood the content of travel insurance very well. Most travelers thought that health worker is the most reliable resource of travel insurance. Therefore, health workers are encouraged to equip with knowledge of travel insurance to provide more information during pre-travel consultation before the countries reopening for tourism.

Declarations

Ethics approval and consent to participate

The design of the study and selection of subjects were approved by the Research Ethics Committee at National Taiwan University Hospital in Taiwan (201902070W) before the study was conducted.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

Funding

This study has been partially sponsored by the Centers for Disease Control, Taiwan (JK108026).

Authors' contributions

CJ, Yang was responsible for the study's conception and initiation, data analysis and interpretation, drafting, and editing of the paper. CW, Lu participated in data analysis and interpretation, drafting, and editing of the paper. CH, Chiang contributed to the analysis and interpretation of the results, drafting, and editing of the paper. HH, Chang contributed to the analysis and interpretation of the results, drafting, and editing of the paper. CA, Yao contributed to the analysis and interpretation of the results, drafting, and editing of the paper. KC, Huang contributed to the analysis and interpretation of the results, drafting, and editing of the paper. All authors reviewed and approved the final submission.

Acknowledgements

We would like to thank Miss Chia-Chi Yu for her assistance in this study.

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Tables

Table 1 Basic characteristics of survey respondents (N=828)

Characteristic	Number	Percentage (%)
Age (mean=44.7±14.0 years)		
20-29	127	15.3
30-39	202	24.4
40-49	209	25.2
50-69	149	18
60-89	141	17
Sex		
Male	303	36.6
Female	525	63.4
Education level		
High school or below	172	20.8
University or college	532	64.2
Graduate school and higher	124	15
Medical history ^a		
Yes	266	32.1
No	562	67.9
Purpose of trip (multiple choices)		
Group tours	318	38.4
Self-guide tour	446	53.9
Study abroad	7	0.8
International volunteering	4	0.5
Business travel	32	3.9
Visiting friend and relatives	21	2.5
Live abroad	7	0.8
Travel-associated illness ^b		
Yes	159	19.2
No	669	80.8
Planned special activities ^c		
Yes	183	22.1
No	645	77.9

^a Hypertension, diabetes, hyperlipidemia, cardiovascular disease, gout, chronic renal disease, liver disease, chronic urticaria, thyroid disease, vasculitis, sleep disorder

^b Common cold, influenza, travelers' diarrhea, trauma, herpes zoster, conjunctivitis, animal bite

^c Mountain backpacking, scuba diving, river rafting, snow skiing, surfing, marathon, cycling, glacier hiking

Table 2 Association between various characteristics and willingness to pay for difference travel insurances (N=828)													
Variable	Number	Accidental death and disablement insurance			Accidental medical reimbursement			Overseas sickness coverage			24 hours of emergency assistance		
		Unwilling N (%)	Willing N (%)	<i>P</i> Value	Unwilling N (%)	Willing N (%)	<i>P</i> Value	Unwilling N (%)	Willing N (%)	<i>P</i> Value	Unwilling N (%)	Willing N (%)	<i>P</i> Value
Age(years)				0.748			0.311			0.346			0.41
20-29	127	1.6	78.7		7.1	73.2		7.1	66.1		7.9	64.6	
30-39	202	2	77.2		3	75.7		5.9	66.8		7.9	66.3	
40-49	209	1.9	77		1.4	77.5		4.3	67.9		2.9	73.2	
50-59	149	3.4	81.2		4	77.9		6.7	69.1		7.4	68.5	
60-89	141	4.3	75.9		5.7	76.6		9.9	72.3		7.8	70.9	
Sex				0.78			0.276			0.579			0.53
Male	303	2.6	76.6		5	73.6		5.9	67		6.3	67	
Female	525	2.5	78.7		3.2	77.9		6.9	69.1		6.7	60.1	
Educational level				0.115			0.077			0.085			0.09
High School or below	172	4.7	73.3		6.4	70.3		8.1	63.4		7.6	65.7	
University or College	532	2.3	78		3.6	76.7		6.8	67.7		7.3	68	
Graduate School and higher	124	0.8	83.9		1.6	83.1		3.2	78.2		1.6	77.4	
Medical history				0.271			0.087			0.518			0.78
Yes	266	3.8	75.9		6	74.4		7.9	68		7.1	69.5	
No	562	2	78.8		2.8	77.2		5.9	68.5		6.2	68.7	
Willingness of pre-travel consultation				0.000**			0.000**			0.000**			0.00
Yes	493	1.8	86.8		3.4	85.4		5.7	79.7		4.5	81.3	
Undetermined	307	2	64.5		3.3	62.9		6.8	50.5		7.8	50.8	
No	28	21.4	67.9		17.9	64.3		17.9	64.3		28.6	50	
Travel-associated illness				0.082			0.235			0.182			0.03
Yes	159	3.8	82.4		5.7	78		7.5	73		8.8	74.2	
No	669	2.2	76.8		3.4	75.9		6.3	67.3		6	67.7	
Planned special activities during travel				0.006**			0.068			0.076			0.04
Yes	183	5.5	79.2		6	78.7		9.3	70.5		7.1	75.4	
No	645	1.7	77.5		3.3	75.7		5.7	67.8		6.4	67.1	

Chi-square test was applied to compare the proportions of the willing to buy travel insurances between different socio-economic variables.

*p value < 0.05; **p value < 0.001

Table 3 Comparison of mean scores for knowledge for travel medicine with socio-demographic variables

Variable	Number	Mean(\pm SD)	P value
Age(years)			0.000**
20-29	127	5.6(\pm 1.68)	
30-39	202	6.13(\pm 1.75)	
40-49	209	6.68(\pm 1.85)	
50-59	149	6.81(\pm 2.02)	
60-89	141	7.5(\pm 1.94)	
Medical history			0.000**
Yes	266	6.89(\pm 2.0)	
No	562	6.38(\pm 1.87)	
Travel-associated illness			0.035*
Yes	159	6.83(\pm 2.0)	
No	669	6.48(\pm 1.91)	
Planned special activities during travel			0.532
Yes	183	6.62(\pm 2.1)	
No	645	6.52(\pm 1.9)	

One-way ANOVA and independent t test were applied to exam the relation between knowledge for travel medicine and socio-economic variables.

*p value < 0.05; **p value < 0.001

Figures

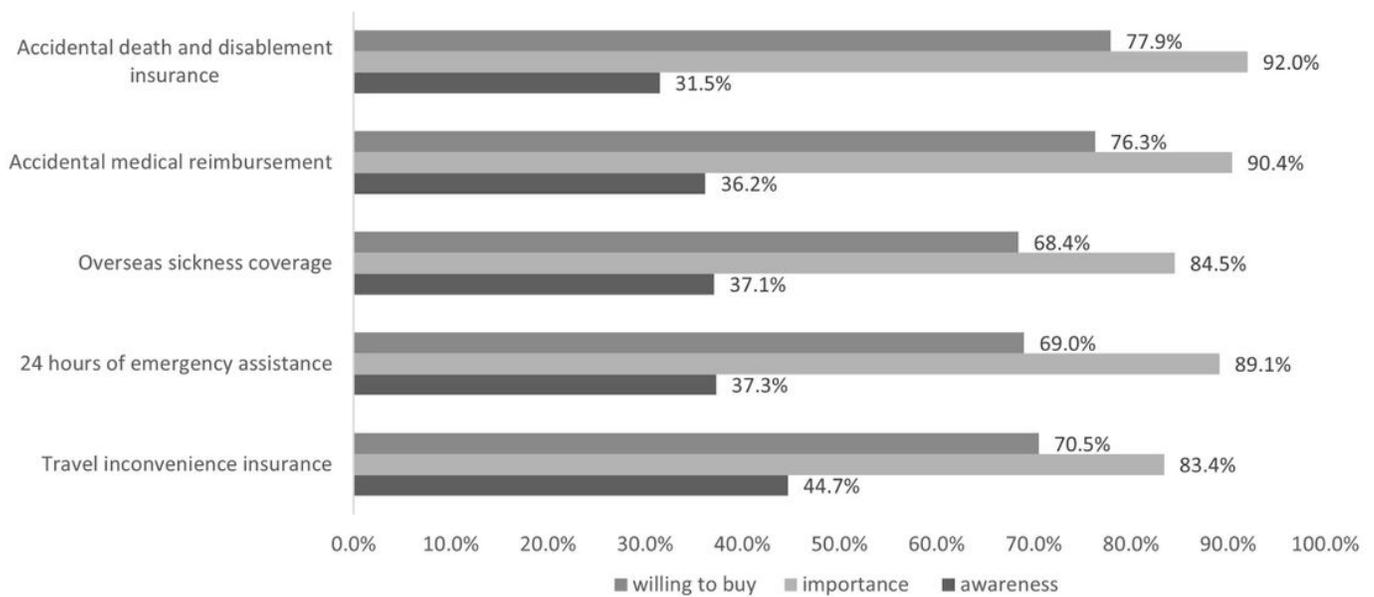


Figure 1

Percentage of travelers' rating of awareness, importance, and willingness of travel insurances.