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Public awareness of tropical diseases

Ilona Samek (1)*, Magdalena Jańczyk (1), Anna Wójcik (2), Justyna Białek (2), Paulina Krawiec (2), dr n. o zdr. Joanna Milanowska (3)

1) Student Research Group of Applied Psychology, Medical University of Lublin
2) Student Scientific Association at Department of Epidemiology and Clinical Research Methodology, Medical University of Lublin
3) Department of Applied Psychology, Medical University of Lublin
* E-mail address: samekilona@gmail.com

ORCID ID:
Ilona Samek: https://orcid.org/0000-0002-5538-5396
Magdalena Jańczyk: https://orcid.org/0000-0002-4948-9463
Anna Wójcik, https://orcid.org/0000-0002-2697-8600
Justyna Białek, https://orcid.org/0000-0002-8447-3395
Paulina Krawiec, https://orcid.org/0000-0002-9527-5837
Joanna Milanowska: https://orcid.org/0000-0001-9741-1583

Abstract

Introduction: Despite medical advances, the prevention and treatment of tropical diseases continue to be a current problem for communities.

Purpose: To present the public awareness of tropical diseases.

Material and method: The study was conducted by using an author's questionnaire. 158 questionnaires were collected and analysed.

Results: The study included women (55.7%) and men (44.3%) of varying ages, nearly half of whom were studying or are studying a medical profession. The analysis showed that 92.4% of the respondents were aware of the factors causing contagious and parasitic diseases. Only 5.0% of respondents expressed opposition to prevention when travelling to tropical countries. Every fourth person planning a trip would not go to a specialist on this issue. Nearly 90% of respondents wanted to be vaccinated before travelling. On the other hand, only 15.2% of respondents knew that malaria is not currently prevented by a vaccine, but by chemoprophylaxis. One in five respondents said there was no need for hygienic food consumption, while more than half (53.8%) had not heard of the rule "cook, steam, peel or forget". Among the most important preventive measures, respondents most often selected hand washing (50.6%), taking care of hygiene (20.2%) and immunization (17.8%).

Conclusions: Most of the respondents, especially those with medical education, demonstrated basic knowledge of tropical diseases. However, there is a great need for education, especially about visiting a doctor before travelling, types of prevention and methods of hygienic food consumption. The possibility of implementing programmes to supplement knowledge should be kept in mind.

Keywords: tropical diseases; contagious diseases; awareness; society.

Introduction and purpose

One of the key health problems in the 21st century is contagious and parasitic diseases. Nowadays, the movement of people is greatly facilitated due to tourism, emigration or military activity. For this reason, diseases occurring in countries with tropical climates, called tropical diseases, are an increasing problem [1]. In addition, the inevitable warming of the climate brings the risk of tropical diseases developing in other regions [2]. As many as 15-70% of tourists in the tropics experience health problems during their trip [3]. However, in 36% of cases of fever of unknown origin, tropical diseases were the cause, with malaria predominating [4].

The current major contagious disease is COVID-19, which has affected as many as 219 million people worldwide by 8 August 2021 [5]. According to a report by the National Institute of Public Health - National Institute of Hygiene, the restrictions caused by the pandemic have caused a significant decrease in the number of cases of most contagious diseases, including tropical ones [6]. However, travellers to tropical countries should not forget about other diseases such as malaria, dengue fever or schistosomiasis [7]. Despite the development of medicine, diagnosis and treatment of contagious diseases are still a serious problem for people. The aim of the study was to report on the public's awareness of tropical diseases.

Material and methods

The study was conducted in August 2021. The research technique was the author's survey questionnaire. The survey was made available via the Internet. 158 questionnaires were collected and the collected survey material was analysed.

People of varied ages, ranging from 12 to 65 years, took part in the study. The average age of respondents was 31 years. The majority of the respondents were female (55.7%). Most of the respondents 63.9% lived in the city, while 36.1% of them lived in the countryside. Half of the respondents (50.6%) had medical education or were studying a medical profession. The percentage distribution regarding the gender of the respondents, place of residence, and whether the respondents were studying a medical direction is shown below.

Gender	N	%
Female	88	55,7
Male	70	44,3

Table 1. Gender distribution of the respondents.

Place of residence	N	%
Village	57	36,1
City	101	63,9

Table 2. Distribution of the respondents' place of residence.

Medical education	N	%
Yes	80	50,6
No	78	49,4

Table 3. Distribution of medical education of the respondents.

Results

The main part of the survey consisted of questions about respondents' knowledge. The first question asked about knowledge of contagious disease agents (i.e. microorganisms, toxic products or other pathogens). As many as 92.4% of respondents were in favour of knowing this definition.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	76	48,1%	70	44,3%	146	92,4
No	4	2,5%	8	5,1%	12	7,6

Table 4. Distribution of knowledge of the definition of contagious disease agents.

Almost all respondents (95.0%) declared that visiting a tropical area carries a risk of contracting a tropical disease. The distribution between those with and without medical education was even. Only 5% of the medical students felt that there was no such risk.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	76	48,1%	74	46,9%	150	95,0%
No	4	2,5%	4	2,5%	8	5,0%

Table 5. The relationship between medical education and the possibility of getting sick in a tropical country.

Three out of four of the respondents would like to see a travel medicine specialist when travelling to tropical countries. However, among medical students, this answer was chosen by as many as 88.8% of people.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	71	44,9%	47	29,8%	118	74,7%
No	9	5,7%	31	19,6%	40	25,3%

Table 6. Relationship between medical education and a visit to a specialist practising in travel medicine.

If travelling to tropical countries, nearly 90% of respondents intended to be vaccinated. Among students, only 8.8% would not undergo vaccination. In the case of non-medical students, the non-vaccinated percentage would be 15.4% in the event of a trip.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	73	46,2%	66	41,8%	139	88,0%
No	7	4,4%	12	7,6%	19	12,0%

Table 7: Relationship between medical education and vaccinations administered before travelling to tropical countries.

86.5% of those surveyed were aware that vaccination against yellow fever and meningococcal infections is mandatory in some countries. Only 6.4% of the medical students indicated the wrong answer.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	73	47,1%	61	39,4%	134	86,5%
No	5	3,2%	16	10,3%	21	13,5%

Table 8. Relationship between medical education and awareness of the need for vaccination in some countries.

Very few respondents (15.2%) knew that there is no publicly available malaria vaccine yet. Only 16.7% of those with medical education knew the correct answer. A very high number of people (41.9%) admitted to not knowing about malaria vaccination.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Is available	35	22,1%	33	20,9%	68	43,0%
Not available (correct)	14	8,9%	10	6,3%	24	15,2%
Do not know	31	19,6%	35	22,2%	66	41,8%

Table 9. Relationship between medical education and awareness of malaria vaccine.

One in five respondents felt that there was no need to take care of food hygienically, such as peeling all fruits and vegetables. 41.9% of people in this group were medical students.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	67	42,4%	60	38,0%	127	80,4%
No	13	8,2%	18	11,4%	31	19,6%

Table 10. Relationship between medical education and awareness of peeling fruit.

53.8% of the respondents had not heard of the "cook, steam, peel or forget" rule regarding thermal treatment of food. Of this group, 41.2% were medical university students.

Answer	Persons with medical education	Percentage of total (%)	Persons without medical education	Percentage of total (%)	Total - 158	Percentage of total (%)
Yes	45	28,5%	28	17,7%	73	46,2%
No	35	22,2%	50	31,6%	85	53,8%

Table 11. Relationship between medical education and knowledge of "cook, brew, peel or forget".

A question was also asked about activities regarding prevention of contagious diseases. Half of the respondents (50.6%) stated that in order not to get sick one should first of all wash hands. Every fifth respondent chose general hygiene care, while 17.8% of the respondents put emphasis on vaccination. Only 7.0% of people considered wearing protective masks as the most important, while 4.4% of people chose to avoid contact with sick people as prevention.

Prevention of contagious diseases	N	%
Washing hands	131	50,6
Hygiene	78	20,2
Vaccination	65	17,8
Wearing protective masks	11	7,0
Avoiding contact with ill people	7	4,4

Table 12. Prevention of contagious diseases according to respondents.

Discussion

The results of the conducted study showed low awareness of the society about tropical diseases. A review of databases was made in order to find articles relating to the knowledge of Poles on this subject.

The article by M. Mianowany, examining the knowledge of medical students on diseases occurring in tropical areas, turned out to be relevant. As many as 94.9% of students were aware that staying in a tropical zone carries a risk of getting a tropical disease [8]. In the survey analysis, both the result of all respondents (94.8%) and medical students (95.0%) were very similar.

Before travelling to a tropical area, it is important to obtain information about potential health risks. According to the analysis of A. Woźniak, however, very few people went to a medical facility (34%) or performed a preventive medical examination (40.39%) [9]. However, the results of the questionnaire indicated that three out of four persons (75.5%) would like to consult a physician before travelling.

Vaccinations are another important step. In some countries these are compulsory before arrival.

The research shows that the respondents were usually aware of the importance of vaccinations, as in the survey by A. Woźniak as many as 75.86% would like to be vaccinated before travelling [9]. Even better result was obtained by M. Mianowany - as much as 83.2% [8]. However, the respondents in the analysis showed even greater willingness, as 87.7% of them were ready to receive the vaccine dose in case of travel.

Local dainties are often available on trips, but food hygiene, such as peeling fruits, must be observed to avoid getting sick. In a study conducted by K. Van Damme-Ostapowicz with 500 nurses, "sensible consumption of food and drinks" was the most frequently cited recommendation for the prevention of tropical diseases, with 18.6% of them in favour of it. On the other hand, taking into account the group of nursing students, it was 23% [2]. In the study conducted by A. Woźniak, 78.33% of the respondents were aware of the necessity of hygienic food consumption [9]. The result of the analysis was very similar - 81.3% among all respondents and 83.8% among students.

The thermal processing of food products is extremely important during trips. However, only half of the respondents (52.6%) in the study by M. Mianowany were aware of this [8]. In the analysis, on the other hand, it was an even smaller percentage of respondents - only 45.8%.

Conclusions

Respondents are aware of the need for prevention of contagious diseases when travelling to tropical countries. However, not all of them would like to visit a specialist or get vaccinated. People with medical education should constantly update their knowledge of basic data on tropical diseases. It is essential to educate the public about malaria and prevention against it, as well as other contagious diseases, by following the right rules.

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