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Hiv/Aids Knowledge Among Hotel Employees In Türkiye

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Abstract
Aim: *During travels and holidays, patients or carrier tourists can infect people with sexual intercourse or contaminant tools and equipment at the places around them where they are located. For this reason, employees in the tourism sector who have direct contact with tourists are among the high-risk groups for HIV/AIDS. This study aimed to assess the knowledge among hotel employees about HIV/AIDS.*
Material and Methods: *The sample of this study consisted of 511 employees working in five-star hotels in Bodrum, one of the major tourism destinations of Türkiye. The study used the convenience sampling method. The questionnaire was conducted through in-person interviews in 2024, and responses were analyzed using SPSS version 24.0.*
Results: *Participants' general knowledge score about HIV/AIDS was 42.02 out of 100, knowledge score about transmission routes was 49.93 out of 100, and knowledge score about prevention and treatment methods was 47.13 out of 100. Participants' total knowledge score was 46.36 out of 100. It was determined that participants obtained information about HIV/AIDS mostly from social networks (e.g., Facebook, Instagram) (49.51%), television (42.66%), and the Internet (31.90%).*
Conclusion: *Participants' knowledge score on HIV/AIDS was determined below average. It was determined that the participants' sources of information about HIV/AIDS were mass media rather than school or health personnel. In the study, hotel employees were identified as having educational needs about HIV/AIDS.*
Keywords: *HIV/AIDS, knowledge, knowledge source, hotel employees, Türkiye.*

1. INTRODUCTION

HIV/AIDS is a rapidly spreading and epidemic disease that affects the world in general. It seems to be one of the most critical problems in contemporary human and medicine and a major global health tragedy (*1, 2*). AIDS was first described in the United States in 1981 (*3*). By 2022, according to UNAIDS data, a total of 39 million people, including 37,5 million adults (15 years old and over) and 1,5 million children (0-14 years), lived with HIV. Approximately 630,000 people worldwide died from AIDS-related illnesses (*4*). In Türkiye, the number of HIV/AIDS cases reported from 1985 to 2023 is 41.732 in total. 81,5% of the cases are men, 18,5% are women, and 16.1% are foreign nationals (*5*). In Türkiye the reasons for the increase in the number of HIV/AIDS cases; the limited and incomplete information on sexually transmitted infections *(6)*, the majority of the young population (15-49 years), population mobility, being a country of tourism, especially, an increase in unregistered sex workers, an increase in the worker population working abroad, intravenous substance use and an increasing number of foreign nationals (immigrants) (*7, 8-9*).
Different studies have indicated that tourism employees are at risk of contracting HIV/AIDS (*10, 11-12*). Tourism movements and international travel have an essential place in increasing the number of cases of HIV/AIDS (*7, 13, 14-15*). Tourists from countries with high HIV/AIDS incidence are more likely to be infected (*16*). The risky behaviors adopted by these tourists during their vacations contribute to an increase in the number of HIV/AIDS cases (*12*). Patients or carrier tourists can infect people with sexual intercourse or contaminant tools and equipment at the places around where they are located (*13*). In addition, many young, single, sexually active individuals who are away from their families for months are employed in the tourism sector. Both employees and tourists have access to commercial sex. HIV prevalence is high among sex workers and their clients. Alcohol and drug use is hefty in tourism destinations. These factors make the tourism sector more susceptible to HIV/AIDS (*12,17*). However, despite being an important tourism destination, very few HIV/AIDS studies have been found regarding the tourism sector or tourism workers in Türkiye (*13, 14, 18-19*). So, this study aims to determine HIV/AIDS knowledge among hotel employees in Tu ̀rkiye.

2. MATERIAL AND METHODS

Study design

A survey design from a non-experimental research approach was preferred to examine HIV/AIDS knowledge among hotel employees.

Questionnaire development

A questionnaire was developed to measure HIV/AIDS knowledge among hotel employees. The questionnaire covered socio-demographic characteristics, including gender, age, marital status, education, and a self-assessment of HIV/AIDS knowledge (5 questions), questions about general knowledge (7 questions), transmission routes (15 questions), and prevention and treatment methods (7 questions). Data were collected by this questionnaire form developed by examining the related literature *(14, 20, 21-22)*. The questions (general knowledge, transmission routes, and prevention and treatment methods) were measured by "true," "false," and "I don't know" options. In the final part of the questionnaire, a multiple-choice question was asked to determine the sources of HIV/AIDS knowledge, and the participants were informed that they could mark multiple options. A pilot test was conducted to ensure that the questionnaire could be appropriately used, and the responses were consistent.

Data collection

The research universe constituted the employees of five-star hotel enterprises operating in Bodrum, one of the vital tourism destinations of Türkiye and hosts an average of 1 million tourists every year (According to the Tourism Agency news (*23*), 1 million 375 thousand foreign tourists visited and stayed in Bodrum in 2023). Approximately 30 thousand employees work intensively in tourism businesses in Bodrum. Most of them work in hotels (*24*). It was decided to do this research in Bodrum due to the high number of both foreign tourists and employees. The research sample consists of 511 employees working in five-star hotels who voluntarily agree to participate in the research. Every participant was made aware of the purpose of the study. To make the data obtained from hotel employees healthier, the questionnaire was conducted through in-person interviews, and the study was carried out in September 2024. In this study, the use of a convenience sampling method may impact the generalizability of the results, which is a limitation of the study.

Statistical analysis

The data were analyzed using SPSS version 24.0. Frequency and percentage from descriptive statistical analyses were used to evaluate the data. The knowledge score was calculated out of 100 points, with 1 point for each correct answer, 0 points for each wrong answer, and the answer of "I don't know."

3. RESULTS

Analyzing the data, hotel employees' socio-demographic characteristics were evaluated first. 59.49% (n=304 of 511) were males, and 40.51% (n=207 of 511) were females. Most participants (43.84%, n=224 of 511) were between the ages of 25-34 and were single (53.63%, n=274 of 511). More than half of the participants (59.3%, n=303 of 511) were high school graduates. In this part of the study, the participants were asked to assess their HIV/AIDS knowledge. A little more than half of the participants (54.01%, n=276 of 511) stated that they were low knowledgeable about HIV/AIDS. 18.39% (n=94 of 511) had "none", 15.46% (n=79 of 511) had "adequate," and only 12.14% (n=62 of 511) had "high" knowledge about HIV/AIDS.

Table 1 shows participants' HIV/AIDS general knowledge. Most of the participants (70.45%, n=360 of 511) correctly answered *"A virus causes AIDS "* and 51.67% (n=264 of 511) correctly answered: *"HIV can be diagnosed with a blood test"*. The participants answered the other questions wrong. Participants got 42.02 (of 100) points from general knowledge questions.

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Table 1. General Knowledge (n=511)

Questions	*True*		*False*		*I don't know*		*Knowledge Score*
	n	*%*	***n***	*%*	***n***	*%*	*(of 100 points)*
A virus causes AIDS.	360	70.45√	122	23.87	29	5.68	70.45
People with HIV/AIDS can have a healthy appearance.	209	40.90√	263	51.47	39	7.63	40.90
AIDS is a sexually transmitted disease only.	204	39.92	192	37.57√	115	22.51	37.57
The mosquitoes can spread HIV.	245	47.94	188	36.79√	78	15.27	36.79
HIV is a virus that weakens the immune system.	148	28.96√	266	52.05	97	18.99	28.96
It can take a long time for a patient to be infected with HIV to show signs of the disease.	142	27.79√	266	52.05	103	20.16	27.79
HIV can be diagnosed with a blood test.	264	51.67√	145	28.38	102	19.95	51.67
Total Knowledge Score							**42.02**

√ *Correct answers*

Table 2 shows participants' HIV/AIDS transmission routes knowledge. Most of the participants correctly answered, *"Sharing the same swimming pool with the person with AIDS."* (65.56%, n=335) and *"From HIV-infected mother to unborn baby"* (65.17%, n=333). Most of the participants (62.63%, n=320) incorrectly answered, *"Sharing the same razor blade with a person with AIDS."* Participants got 49.93 (of 100) points from transmission routes knowledge questions.

Table 2. Transmission Routes Knowledge (n=511)

Questions	*True*		*False*		*I don't know*		*Knowledge Score*
	n	*%*	***n***	*%*	***n***	*%*	*(of 100 points)*
From HIV-infected mother to unborn baby.	333	65.17 √	137	26.81	41	8.02	65.17
From a mother with HIV breastfeeding to a baby.	197	38.55 √	199	38.94	115	22.51	38.55
Experiencing sexual intercourse unprotected with people with HIV.	263	51.47 √	143	27.98	105	20.55	51.47
Using used or disinfected syringe needle.	236	46.18 √	203	39.73	72	14.09	46.18
Having uncontrolled blood transfusion.	288	56.36 √	141	27.59	82	16.05	56.36
Tattooing with the same instruments after an HIV-infected person.	266	52.05 √	159	31.12	86	16.83	52.05
Having a massage makes HIV easy to spread.	144	28.18	225	44.03 √	142	27.79	44.03
Shaking or touching someone who has AIDS.	144	28.18	242	47.36 √	125	24.46	47.36
Coughing or sneezing of a person with AIDS.	146	28.57	249	48.73 √	116	22.7	48.73
Kissing or hugging people with AIDS.	160	31.31	228	44.62 √	123	24.07	44.62

To share personal objects (e.g., teacup, towel, or clothes) with a person with AIDS.	135	26.42	257	50.29 √	119	23.29	50.29
Sharing the same food with a person with AIDS.	214	41.88	257	50.29 √	40	7.83	50.29
Sharing the same razor blade with a person with AIDS.	147	28.77√	320	62.63	44	8.6	28.77
Sharing the same toilet with people with AIDS.	58	11.35	304	59.49 √	149	29.16	59.49
Sharing the same swimming pool with the person with AIDS.	61	11.93	335	65.56 √	115	22.51	65.56
Total Knowledge Score							**49.93**

√ *Correct answers*

Table 3 shows participants' HIV/AIDS prevention and treatment methods knowledge. *"Only a single partner/relation, friend"* (63.21%, n=323) question was answered correctly by most participants. The question with the lowest correct answer rate was about *"Avoiding people with AIDS"* (32.09 %, n= 164). Participants got 47.13 (of 100) points from prevention and treatment methods knowledge questions.

Table 3. Prevention and Treatment Methods Knowledge (n=511)

Questions	***True***		***False***		***I don't know***		***Knowledge Score***
	n	*%*	***n***	*%*	***n***	*%*	***(of 100 points)***
Only a single partner/relation, friend.	323	63.21√	117	22.90	71	13.89	63.21
There is an AIDS treatment/vaccination.	203	39.73	228	44.62√	80	15.65	44.62
Avoiding people with AIDS.	212	41.49	164	32.09√	135	26.42	32.09
Condom use can help protect against HIV/AIDS.	263	51.46√	161	31.51	87	17.03	51.46
Can be protected from AIDS by regular exercise.	155	30.33	250	48.93√	106	20,74	48.93
There is a new vaccine against the disease.	153	29.94	226	44.23√	132	25.83	44.23
The best prevention of AIDS is education.	232	45.40√	167	32.68	112	21.92	45.40
Total Knowledge Score							**47.13**

√ *Correct answers*

Figure 1 shows participants' knowledge scores about HIV/AIDS. It was determined that the participants' knowledge score on transmission routes (49.93 of 100) was slightly higher than the others. The difference between the transmission routes score and the general knowledge score was 7.91, and the difference between the protection and treatment methods score was 2.8. The total knowledge score of the participants was 46.36 out of 100. Figure 1 shows that the participants' knowledge scores on HIV/AIDS were below average.

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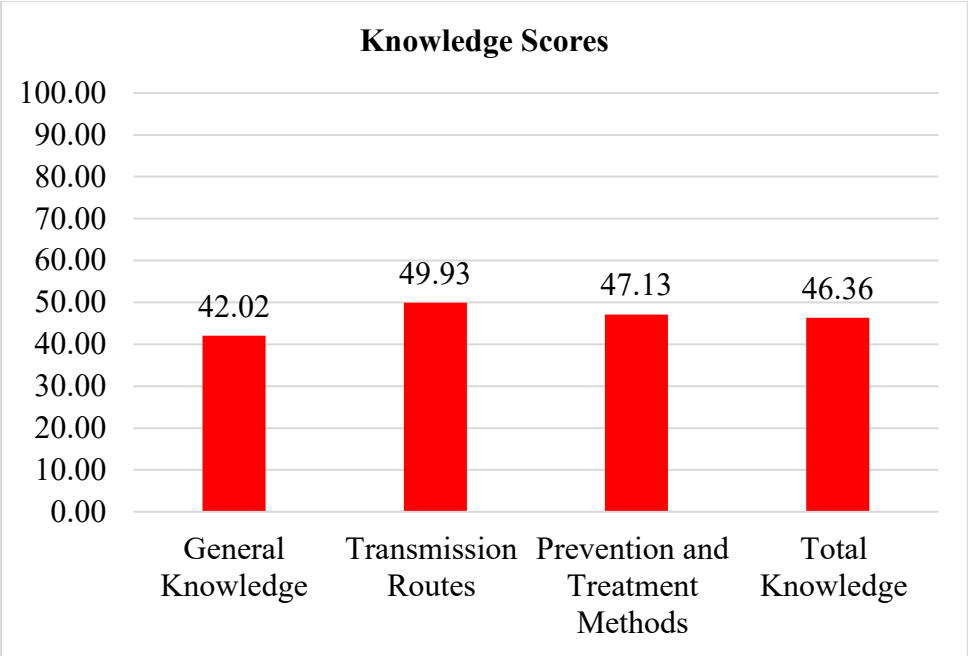

Figure 1. Participants' Knowledge Scores About HIV/AIDS

Table 4 shows participants' knowledge sources on HIV/AIDS. Participants were found to have the most information about HIV/AIDS through social networks (e.g., Facebook, Instagram) (49.51%) and television (42.66%). The Internet (31.90%) was the third most common source of knowledge. Nevertheless, it was seen that the least common knowledge sources to which participants were informed about HIV/AIDS were posters (7.83%, n=40) and health personnel (8.61%, n=44). When the knowledge sources were evaluated in general, it was determined that the mass communication tools were on the front line.

Table 4. Knowledge Sources on HIV/AIDS (n=511)

	Yes		*No*	
	n	*%*	***n***	*%*
Social networks (e.g., Facebook, Instagram)	253	49,51	258	50,49
Television	218	42,66	293	57,34
Internet	163	31,90	348	68,10
Newspaper/Magazine	132	25,83	379	74,17
Friend	124	24,27	387	75,73
Radio	121	23,68	390	76,32
Book	118	23,09	393	76,91
Family	103	20,16	408	79,84
Brochure	82	16,05	429	83,95
Conference	67	13,11	444	86,89
School	66	12,92	445	87,08
Tourist	55	10,76	456	89,24
Health personnel	44	8,61	467	91,39
Poster	40	7,83	471	92,17

4. DISCUSSION

In the study, most of the participants were male. The weighted age range of the participants was determined to be 25-34 years. The marital status of more than half of the participants was single. Most of

the HIV/AIDS cases are male and single (*5*), and the highest rate of newly diagnosed HIV-positive individuals is between the ages of 25-34 in Türkiye (*25*). The socio-demographic data of the study shows us that the participants are in risk groups for HIV/AIDS.

It turns out that more than half of the participants were high school graduates. This situation shows that enterprises choose employees with lower education levels rather than university graduates and qualified employees. Most of the participants in the research indicated little or no knowledge of HIV/AIDS. As a result of the study, the fact that the participants' HIV/AIDS knowledge scores were below average supported this answer of the participants. This finding is one of the crucial consequences of the research. This may be because most of the participants are high school graduates, and the level of education is low. The data of the research show us that hotel employees do not have sufficient knowledge about HIV/AIDS, and their knowledge scores are below average in all three sections (general knowledge (42.02 of 100), transmission routes (49.93 of 100) and prevention and treatment methods (47.13 of 100). This result is similar to the results of the study done by Öztürk and Kolutek in 2003 with hotel employees in Türkiye. This may be because although the most important strategy for the disease is education (*26*), education and training about HIV/AIDS is not provided in schools other than health schools in Türkiye. When the studies conducted on health workers and health students receiving training in this field in Türkiye were examined, it was determined that the knowledge of these sample groups about HIV/AIDS was sufficient in most of the studies (*27, 28, 29, 30, 31*). However, in the studies conducted on other sample groups (mariners (*19*), sex workers (*32*), tour guides (*14*), and hotel employees (*13*), it was determined that the HIV/AIDS knowledge was not sufficient and that they needed training.

In the study participants correctly answered the questions "A virus causes AIDS", "HIV can be diagnosed with a blood test", "HIV cannot be transmitted through by sharing the same swimming pool with the person with AIDS", "HIV can be transmitted through from HIV-infected mother to unborn baby" and "HIV/AIDS can be prevented by having only a single partner/relation, friend". Previous studies found similar results (*14, 22, 33-34*). This result shows us that these statements are generally the most well-known information about HIV/AIDS.

In the study, it was determined that the participants' primary source of information about HIV/AIDS was social networks (e.g., Facebook and Instagram). This situation may be due to the very high level of social networking in Türkiye[1]. Other sources of knowledge among the participants were television, the Internet, and newspapers/magazines. Similar to the results of different studies in the study (*15, 22*), the participant's knowledge about HIV/AIDS was mostly obtained through visual and printed mass media. It's unfortunate that health personnel and schools, which can provide the most accurate information, are often overlooked as sources. It's crucial to regularly verify the accuracy of shared content, particularly on social media and the internet. These platforms can be valuable tools for spreading accurate information about HIV/AIDS.

5. CONCLUSIONS

Such studies, which focus on understanding the current awareness status and measuring the level of knowledge about diseases that seriously threaten public health, are essential. This study found that hotel employees had below-average inadequate knowledge about HIV/AIDS in each category (general knowledge, transmission routes, and prevention and treatment methods). Considering that tourism employees are among the risk groups for HIV/AIDS, this result emphasizes that hotel employees need training regarding HIV/AIDS. There is a need to develop school-based education programs on HIV/AIDS. Training should be provided to tourism employees through in-service training, and continuity should be ensured. Considering that the speed of employee turnover in the tourism sector is very high, this training must be repeated regularly at specific intervals. Tourism professionals and managers should be sensitive about providing this training. Projects can be developed between the health sector and tourism businesses. This study is limited to hotel employees in Bodrum only. More research should be conducted on the knowledge, attitudes, and beliefs of tourism employees towards HIV/AIDS in Türkiye, which is

[1] As of 2024, there are 74.41 million internet users in Türkiye. This number is 87.16% of the population. The total number of social media users has exceeded 57 million (*35*).

one of the important tourism destinations (e.g., Istanbul, Antalya, Marmaris, Cappadocia) in the Eastern Mediterranean region and hosts millions of tourists every year.

Ethics Committee Approval: This study was reviewed and approved by the Ethics Committee of the University of Balikesir (09.09.2024; E-19928322-050.04-421891).

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