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Yoğun Bakım Hemşireleri Olarak Zika Virüsünün Farkında Mıyız?

Are We Aware of Zika Virus as Intensive Care Nurses?

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ÖZ

Amaç: Bu çalışmada hemşirelerin zika virüsü ile ilgili farkındalıklarının belirlenmesi amaçlanmıştır.

Materyal ve Metot: Bu çalışmaya yoğun bakım ünitelerinde çalışan toplam 96 gönüllü hemşire dahil edildi. Araştırmacı tarafından literatür doğrultusunda hazırlanan bilgi formu ve sosyo demografik form kullanılarak elde edilen veriler bilgisayar ortamında yüzdelik, ortalama, Kruskal Wallis-H, Man Whitney U ve korelasyon testleri kullanılarak değerlendirildi.

Bulgular: Yaş ortalaması 28,06±5,57 olan hemşirelerin, %78,1'i kadın, %75'i lisans/lisansüstü düzeyinde eğitime sahiptir. Yaş, çalışma yılı, cinsiyet, mezun olunan okul, görevi, zika virüsü enfeksiyonunu nereden öğrendiği, yeterli bilgiye sahip olduğunu düşünme durumu ve zika virüs enfeksiyonuna yakalanma konusunda endişeli olma durumları hemşirelerin farkındalık düzeyini etkilememiştir (p>0,05). Hemşirelerin zika virüs enfeksiyonu hakkında bilgisi, zika virüsü enfeksiyonu hakkında bilgi almak istemesi, zika virüsü enfeksiyonunun belirtileri bilme, zika virüsü enfeksiyonundan korunma ve tatile nereye gitmeyeceğini bilme durumu istatistiksel olarak anlamlı bulunmuştur (p<0,05).

Sonuç: Yoğun bakım hemşirelerinin zika virüs enfeksiyonuna ilişkin farkındalıklarının oldukça düşük olduğu belirlendi.

Anahtar Kelimeler: Farkındalık, yoğun bakım hemşireleri, zika virüs enfeksiyonu

ABSTRACT

Objective: In the study, it was aimed to determine nurses awareness about zika virus.

Materials and Methods: A total of 96 volunteer nurses who studied intensive care units were included in this study. The data obtained by using the information form and the socio-demographic form prepared by the researcher in the light of the literature were evaluated using mean, average, Kruskal Wallis-H, Man Whitney U ve correlation tests in the computer environment.

Results: The average age of the nurses was 28.06±5.57, among whom 78.1% were female and 75% were postgraduated/graduated nurses. Mean information of the intensive care nurses about zika virus infection was 16.14±14.69. The age, working year, gender, graduated school, job, where they learned about zika virus infection, thinking they have enough information and being worried about getting zika virus infection did not affect the awareness level of nurses (p>0.05).

The nurses' knowledge about zika virus infection, their desire to get information about zika virus infection, knowing the symptoms of zika virus infection, being protected from zika virus infection and knowing where not to go on vacation were found to be statistically significant. (p<0.05).

Conclusion: The awareness level of intensive care nurses about zika virus infection is rather low.

Keywords: Awareness, intensive care nurses, zika virüs infection

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INTRODUCTION

Zika virus was first founded in Uganda in 1947. In mankind, it emerged in East Nigeria in 1952. The virus transmits by Aedes-type mosquitos and is a Flovavirus group RNA virüs.[1] Basically, it transmits to people by mosquito bite. However, it is possible to be transmitted with sexual intercourse, perinatal and theoretically during the blood transfusion.[2] Symptoms such as fever, headache, red eyes, skin rash, muscle and joint ache frequently occur one week after incubation (average of 3-12 days),[1,3-6]; there is no specific treatment yet. On the other hand, vaccine development studies are still in progress.[7] Maintaining sufficient fluid balance and rest is recommended.[8] The virus was reported ain Brazil in 2015 and was spread rapidly across America, and has been reported in more than 20 countries.[3] According to the latest Zika virus infection information update published by the World Health Organization in February 2022; its seen in 14 countries in the African region (including Ethiopia, Kenya, Nigeria, Senegal, Ugandaand Angola); in 49 countries in the Americas (including Argentina, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador and the United States of America); in 6 countries in Southeast Asia (Bangladesh, India, Indonesia, Maldives, Myanmar, Thailand); in 19 countries in the Western Pacific (including French Polynesia, Malaysia, Papua New Guinea, Philippines, Singapore, Viet Nam) and in France in the Eurozone. In the same update, it is stated that no cases have been seen in Turkey so far.[9]

With the increase of trade routes and while the weather gets hotter during the summer months, the widespread of mosquitoes emerge as a factor facilitating the spread of the Zika virus. Considering the significant role of the care nurses in preventing, healing, rehabilitating, and training people, they should be aware of the infection to be able to prevent complications of Zika virus. In this context, we aimed to determine the awareness of intensive care nurses about the virus.

MATERIALS AND METHODS

Ethics Committee Approval: The permission was obtained from Ethics Committee (Date:02.05.2016, decision no:78). This study was conducted according to the Declaration of Helsinki. During the study, verbal consent was obtained from all participants.

The aim of the descriptive study was to determine the awareness of the intensive care nurses about the Zika virus. The data were collected from February to March 2017. The sample had 96 intensive care nurses who agreed to participate in the study.

Data Collection Tools: Before the study, a literature -based questionnaire was created by the researchers. The first part of the questionnaire consists of socio-demographic data (5 questions), the second part includes information about the virus (9 questions), and the third part is about the epidemiological characteristics of the virus (50 items). The score was obtained from the third section of the form ranged from 0 to 100, and the high scores were evaluated as sufficient awareness. The participants fulfilled the printed questionnaire.

Statistical Analysis: Analyzes were evaluated in a computer program. In the article, descriptive data are shown as n and % values in categorical data and mean rank±standard deviation (Mean Rank±SD) values in continuous data. Conformity of continuous variables to normal distribution was evaluated with the Kolmogorov-Smirnov test. Mann-Whitney U test was used to compare binary categories. Kruskal Wallis-H test was used to compare more than two categories. Pearson correlation analysis was performed to examine the relationship of the measurement data. The statistical significance level in the analysis was accepted as $p<0.05$.

RESULTS

A total of 96 volunteer nurses were included in this study and the average age of the nurses was 28.06 ± 5.57, among whom 78.1% were female and 75% were postgraduated/graduated nurses. The average working year of nurses was 5.93±5.51 and 5% were ICU Nurse in charge. Information on the socio-demographic characteristics of nurses is given in Table 1.

Table 1. Socio-demographic characteristics of participants.

Features		**Mean±SD**	
Age (Mean ± SD)		28.06±5.57	
Years of experience at work (Avg± SS)		5.93±5.51	
		n	**%**
Gender	Female	75	78.1
	Male	21	21.9
School that they Graduated from	Vocational School of Health	15	15.6
	Associate Degree	9	9.4
	Postgraduate/Graduate	72	75
Position	ICU Nurse in charge	5	5.2
	Intensive Care Nurse	91	94.8

Do you have information about Zika virus infection? More than half of the nurses (68.8%) answered no to the question. 66.7% of the nurses who said yes (n=30) had learned the Zika virus from the internet and 33.3% of them had gotten the information from the television. Almost all of the nurses (95.8%) thought that they had not enough information about the Zika virus infection, and 84.4% of the participants mentioned that they would have liked to get information about Zika virus infection. When the participants were questioned about the symptoms of the Zika virus, more than half (62.5%) said that they didn't know the symptoms, and 24% said there could be pain, fever, and skin problems. When they were asked about the ways of protection, the majority (63.5%) answered that they didn't know, 21.9% stated they need to protect themselves from mosquitos (long-sleeved clothes, fly repellent drugs), and 3.1% answered about hand hygiene. 4.2% of nurses answered as sexual protection is necessary during intercourse. 11.5% of the nurses said that they wouldn't go to Brazil, and 10.4% said they wouldn't go to Africa. When they were asked about the precautions in Turkey, 75% said that they didn't have any information as an answer. It was determined that 8.2% would take measures against the vectors, 5.2% take individual measures (such as long-sleeved clothes or mosquito repellent spray), and 4.2% take travel measures (such as screening at the airport). The majority of nurses (75%) stated that they have no idea about the measures to be taken in Turkey. It was determined that 57.3% of the participants were not concerned about getting Zika virus infection. It was determined that the average score of the nurses was 16.14 ± 14.69 (Table 2).

Table 2. Data for Zika virus infection.

Features		**Mean±SD**	
Age (Mean ± SD)		28.06 ± 5.57	
		n	**%**
Do you have information about Zika virus infection?	Yes	30	31.2
	No	66	68.8
Where did you learn about Zika virus infection from (n = 30)	From the television	10	33.3
	From the internet	20	66.7
Do you think you have enough information about Zika virus infection?	Yes	4	4.2
	No	92	95.8
Want to get information about Zika virus infection	Yes	81	84.4
	No	15	15.6
Symptoms of Zika virus infection	I don't know	60	62.5
	Congenital anomalies (hydrocephalus. microcephaly. etc.)	4	4.2
	Fever	9	9.4
	Fever. pain and skin problems.	23	24.0
Protection from Zika virus infection	I don't know	61	63.5
	Protecting from mosquitos (such as long-sleeved clothes. fly-fighting medicines)	21	21.9
	Travel precautions	3	3.1
	sanitation of Environment	2	2.1
	Protection during sexual intercourse	4	4.2
	Measures during blood and transfusion	1	1.0
	Vaccine	1	1.0
	Incorrect answers such as hand washing and hygiene	3	3.1
Where would you not go for a vacation because of Zika virus infection?	Africa	10	10.4
	Brazil	11	11.5
	South America	6	6.2
	I don't know	69	71.9
Precaution to be taken in Turkey	I don't know	72	75
	Trainings for the People	3	3.1
	Measures for vectors	8	8.3
	Vaccination	2	2.1
	Travel and airport precautions	4	4.2
	Protected Sexual intercourse	2	2.1
	Individual protection measures (such as long sleeved clothing. mosquito repellent spray)	5	5.2
Concerned about getting Zika virus infection	Yes	30	31.2
	No	55	57.3
	Neutral	11	11.5
Average Score		16.14 ± 14.69	

The age, year of work, gender, educational level, working position, source of information, having confidence in their knowledge, and being worried about getting Zika virus infection did not affect the awareness level of nurses ($p>0.05$). The nurses who have knowledge about the virus, those who want to get information and who express the symptoms of Zika virus infection in the correct way and know that travel precautions must be taken and do not go for traveling in Africa because of Zika virus infection, ($p<0.05$) were found to be statistically aware (Table 3).

Table 3. Mean of nurses according to socio-demographic and Zika virus infection.

FEATURES		**r**	**p, U, z. and KW Values**
Age		r=0.174	p=0.089
Years of experience		r=0.169	p=0.100
		Mean Rank	**p, U, z. and KW Values**
Gender	Female	49.66	p=0.429 U=700.50 z=-0.791
	Male	44.36	
School that they Graduated from	Vocational School of Health	56.20	p=0.392 KW=1.875
	Associate Degree	52.78	
	Postgraduate/Graduate	46.36	
Position	Icu Nurse in charge	53.00	p=0.704 U=205.00 z=-0.380
	Intensive Care Nurse	48.25	
Do you have information about Zika virus infection?	Yes	69.58	**p=0.000** U=357.50 z=-5.127
	No	38.92	
Where did you learn about Zika virus infection from (n = 30)	Television	16.45	p=0.675 U=90.50 z=-0.419
	From the internet	15.02	
Do you think you have enough information about Zika virus infection?	Yes	41.00	p=0.573 U=154.00 z=-0.564
	No	48.83	
Want to get information about Zika virus infection	Yes	51.02	**p=0.035** U=403.50 z=-2.111
	No	34.90	
Symptoms of Zika virus infection	I don't know	56	**p=0.000** KW=39.762
	Congenital anomalies (hydrocephalus. microcephaly. etc.)	41.00	
	Fever	65.44	
	Fever. pain and skin problems.	73.11	
	Other	85.00	
Protection from Zika virus infection	I don't know	35.77	**p=0.000** KW=39.322
	Protecting from mosquitos (such as long-sleeved clothes. fly-fighting medicines)	69.81	
	Travel precautions	92.17	
	Sanitation of Environment	67.75	
	Protection during sexual intercourse	66.50	
	Measures during blood and transfusion	68.00	
	Vaccine	80.50	
	Incorrect answers such as hand washing and hygiene		
Where would you not go for a vacation because of Zika virus infection?	Africa	74.25	**p=0.000** KW=30.138
	Brazil	73.32	
	South America	69.33	
	I don't know	39.00	

r: Pearson Correlation; KW:Kruskal Wallis-H; z: Man Whitney U; *p<0.05; **p<0.01; ***p<0.001.

Table 3. Continue.

Measures to be taken in Turkey	I don't know	41.15	**p=0.000** KW=25.459
	Trainings for the People	59.67	
	Measures for vectors	70.12	
	Vaccination	50.25	
	Travel and airport precautions	86.75	
	Protected Sexual intercourse	91.00	
	Individual protection measures (such as long sleeved clothing. mosquito repellent spray)	64.70	
Be worried about getting Zika virus infection	Yes	47.62	p=0.390 KW=1.881
	No	50.93	
	Neutral	38.77	

r: Pearson Correlation; KW:Kruskal Wallis-H; z: Man Whitney U; *p<0.05; **p<0.01; ***p<0.001.

DISCUSSION AND CONCLUSION

In this study, it was determined that more than half of the nurses had no information about the Zika virus and their average scores were very low. In the study of Sert et al.[10], more than half (62.1%) of the students seemed to have no information about the Zika virus. Similarly, when the literature is examined, Asokan et al.,[11] Rabbani et al.[12] and Harapan et al.[13] studies determined that participants have low/ bad levels of knowledge.

Unlike the mentioned studies, In the study of Francis et al.[14], which evaluated nurses' knowledge, attitudes, and practices about the Zika virus, it was stated that 60% of the nurses had good knowledge. Also, in the study of Yung et al.[15], in which they looked at the level of knowledge of clinical specialists in Singapore, it was determined that the level of knowledge of doctors about the signs and symptoms of Zika virus was good. The reason of the difference in the current study might be the possibility of the occurrence of the Zika virus. Also, the sample of the study may differ.

In this study, nurses gain knowledge about the Zika virus mostly from TV and the internet, and almost all of them find their knowledge inadequate. Plaster et al.[16] also reported that university students learned about zika virus infection from news, websites, and newspapers. In the same study, it is reported that only 33% of the participants thought they had enough information about the virus. These results seem to support the outcome of the current study. In the study, questions were asked from the nurses about "where to measure their knowledge on the localization of virus, which precautions should be taken for that country, signs and symptoms of the virus and the treatment and general information about Zika virus". In this study, it was determined that more than half of the nurses didn't know the symptoms of the Zika virus. In the study of El-Shereef et al.,[17] it is seen that only 32.2% of the participants know the signs of Zika virus infection. In the study of Sert et al.[10] it was observed that 74.9% of the students stated that they did not know how to protect themselves, 29.7% stated that they would not go to Africa because of Zika virus infection, 16.5% of them stated that they would not go to Brasil. According to Aidoo-Frimpong et al.[18] only 9.3% of respondents know that condoms can be used to protect against virus infection. Half of them are worried about getting a virus infection. These results support the current study results.

The age, year of work, sex, educational level, mission, source of information, having confidence in their knowledge and being worried about getting Zika virus infection did not affect the awareness level of nurses.

In the study of Asokan et al.[11] it can be seen that the school of graduation and the year of work experience did not affect the level of knowledge, similar to the results of the present study.

Rabbani et al.[12] also reported that there was no significant relationship between age and knowledge level, supporting the results of the present study. Similarly, in the study of Francis et al.[14] it is seen that there is no statistically difference between the working year and age of nurses and their knowledge scores on Zika virus infection.

The nurses who have knowledge about the virus, those who want to get information and who who express the symptoms of Zika virus infection in the most correct way and know that travel precautions must be taken and do not go for travelling in Africa because of Zika virus infection, were found to be statistically aware.

Better awareness of those who know the correct answers to Zika virus infection symptoms and prevention is an expected outcome.

In conclusion, Zika virus infections have been known for years but are among the rising infections that have been updated again in recent years. These viral infections and brief information about their importance will be beneficial for healthcare person-

nel. Universities, press, professional organizations and health institutions should cooperate in this regard. The internet and the visual media should be enhanced with scientific materials.

Intensive care awareness of the nurses on virus infection is very low and therefore, nurses should be included in the orientation programs, seminars, conferences, or in-service pieces of training to keep up to date with the updated virus infection so that their awareness can be increased.

The limitations of this study are that the study was conducted only on the intensive care nurses of a single hospital, and the virus was not seen in Turkey.

Ethics Committee Approval: Our study was approved by the Sakarya University Medical Faculty Ethics Committee for Non-invasive Clinical Investigations (Date:02.05.2016, decision no:78).

Conflict of Interest: No conflict of interest was declared by the authors.

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