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**Awareness of EVD (Ebola Virus Disease) in Population of Karachi**

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**ABSTRACT**

**Ebola has become a threat for the world. It is a viral disease which is native to Africa. Animals are usually the reservoirs for the transmission of disease to humans such as fruit bats whereas human to human transmission is through contact with the body fluids. The most common manifestation of the disease is fever, sore throat, headache and bleeding resulting from hemorrhage. Currently there is no approved treatment for Ebola. The treatment is usually supportive and it can be prevented by effective controlling measures such as isolation of the patient, sanitary measures etc. The Ebola virus is fastly spreading around the world and Pakistan is at its highest risk. This survey based study aims to find the awareness about Ebola in the population of Karachi. A random sample of 200 people was selected and they were asked to fill a questionnaire about Ebola which include its cause, transmission, symptoms, cure and prevention. The results were analyzed on the basis of gender, age and occupation. Only limited people knew complete about Ebola and thus, it is concluded that effective measures should be taken to increase the awareness of Ebola in the population of Karachi.**

**Keywords:** Ebola, Virus, Bleeding, Body Fluids, Isolation.

**INTRODUCTION**

Ebola is a rare and deadly viral disease, also known as Ebola Hemorrhagic Fever. The virus responsible to cause this fatal infection belongs to the family Filoviridae of the genus Ebola virus. Three to four species of this virus are thought to cause this disease in humans. The virus is native to Africa and the first epidemics of the disease were also reported in Africa [1]. The virus is usually animal borne and bats are likely to be the most common reservoir of the disease. It is transmitted through direct contact with the body

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fluids and tissue of the infected animal [2]. The virus is rarely transmitted in humans through air-borne route. Primarily, the virus is transmitted through the body secretion of the infected individual such as blood, vomit, urine or feaces. The virus also attacks individuals through the use of materials contaminated with the body secretions of the infected patient. This include contaminated syringe needles, bed cover etc[3].The early symptoms of Ebola are sudden onset of fever, fatigue, headache, muscle pain and sore throat. As the disease progresses the gastrointestinal symptoms develop such as gastrointestinal distress including nausea and vomiting. Along with them the

patient also experiences impaired hepatic and renal function. Individuals suffering from Ebola develop the classical hemorrhagic manifestation which leads to internal as well as external bleeding [4]. Laboratory tests show decrease in white blood cells and platelets and increase in liver enzymes.

The disease is diagnosed by detecting the virus in the blood of the individual. Once confirmed, treatment is begun. There is no yet approved treatment for this infectious disease only supportive treatment is being provided. Supportive treatment includes administering oral and intravenous solutions to provide nutrition, volume replacement and electrolytes therapy, and symptomatic treatment for fever, gastrointestinal distress as well as anxiety and pain associated with the infection [5]. Up till now millions of deaths have been reported by this deadly virus. As there is no appropriate treatment for the disease the cure rate is almost negligible. The Ebola virus which is native to Africa is spreading very fastly across the world making many of the countries at its high risk and Pakistan is one of them. World health organization has warned the health officials in Pakistan to take precautionary and preventive measures against this virus to decrease the mortality which is associated with virus. Effective precautionary and controlling measures can reduce the occurrence and spread of the disease. Such measures are isolation of the effected individual, proper sanitary measures, use of gloves and other protective materials by the health care workers responsible to look after the patients and lastly but not the least educating health care workers and common people about the Ebola virus.

### METHODOLOGY

This study is based on the awareness of Ebola among the population of Karachi. For this purpose a survey was carried out and for this a questionnaire was prepared. Following questions were asked to people of different gender, age and belonging to different working backgrounds including students and house wives. All the data was evaluated through SPSS.

Q. 1 What is Ebola?

Q. 2 Transmission of Ebola?

Q. 3 Signs and symptoms of Ebola?

Q. 4 Is Ebola curable?

Q. 5 Prevention and control of Ebola?

### RESULTS AND DISCUSSION

Ebola has become a threat to the world. This study aims to find out the awareness about Ebola in the population of Karachi. To achieve this we selected a sample of 200 people of different gender, age and occupation and they were asked questions related to Ebola through a questionnaire.

The first question asked was the cause of Ebola. With a p value using chi-square test ( $0.00 \leq < 0.05$ ) out of 166 females, 133 knew about the cause whereas 33 don't know. On the other hand only 13 out of 34 males knew about the cause. The second question was about the transmission of Ebola for which 102 females out of 166 and 12 out of 34 males knew the correct answer. The next question asked was about signs and symptoms of Ebola. Out of 34 males only 9 knew about the signs and symptoms whereas 100 females out of 166 knew. The fourth question was about the cure of Ebola. Only 92 people knew about the answer of which 11 were male and 81 were female. The last question in the survey was about prevention and control of Ebola. Only 80 females and 8 males knew the correct answer in a population of 200. When results were evaluated through different age groups it was found that about the cause of Ebola people of age group 18 – 28 years knew the most, 50 % of the people of age group 28 – 48 years knew whereas people above 48 years don't knew about the cause of Ebola. The same pattern of results were obtained as previous when people were asked about transmission of Ebola, signs and symptoms of Ebola. When people were asked about the prevention and control of Ebola 50 % of the population having age between 18 – 48 years knew whereas people above 48 years don't knew. Lastly the results were evaluated through different occupations. According to our results students and working man / lady knew

most about the cause, transmission, signs and symptoms, cure and prevention and control of Ebola. When group statistics of two groups were compared then females were found more aware with ebola as compare to male group ( $p < 0.05$ ) same in the case of different age groups and profession. (Table 1) Upon question about transmission of Ebola and difference among two groups lies under non significant range ( $p > 0.005$ ) results given in table 2. When group statistics of different groups were compared then females were found more aware with signs and symptoms ebola as compare to male group ( $p < 0.05$ ) same in the case of different age groups and profession (Table 3). The results of question 4 about cure given non significant results with p values, 0.091, 0.499, 0.103 that is ( $p < 0.005$ ) table 4. When group statistics of different groups were compared then females were found more aware with ebola prevention as compare to male group ( $p < 0.05$ ) but in the case of different age groups and profession results are highly significant (Table 5).

**CONCLUSION**

Thus, we conclude that limited people of the society knew about Ebola and preventive measures should be taken to avoid the outbreak and spread of this lethal disease.

**Table 1:** Awareness about Ebola in different groups with p value

		What is Ebola		Total	P value
		NO	YES		
<b>Gender</b>	Male	21	13	34	.000
	Female	33	133	166	
<b>Age</b>	18-28 yr	34	132	166	0.001
	29-38 yr	10	9	19	
	39-48 yr	2	4	6	
	above 48 yr	8	1	9	
<b>Occupation</b>	Student	24	126	150	.000
	House wife	13	5	18	
	Working man / lady	12	15	27	
	Retired	5	0	5	

**Table 2:** Awareness about Transmission of Ebola in different groups with p value

		Transmission of Ebola is through		Total	P value
		NO	YES		
		<b>Gender</b>	Male	22	12
	Female	64	102	166	7
<b>Age</b>	18-28 yr	62	104	166	0.00
	29-38 yr	12	7	19	
	39-48 yr	3	3	6	
	above 48 yr	9	0	9	
<b>Occupations</b>	Student	51	99	150	.000
	House wife	16	2	18	
	Working man / lady	14	13	27	
	Retired	5	0	5	

**Table 3:** Awareness about Signs and symptoms of Ebola in different groups with p value

		Signs and symptoms of Ebola		Total	P value
		NO	YES		
		<b>Gender</b>	Male	25	9
	Female	66	100	166	1
<b>Age</b>	18-28 yr	64	102	166	0.00
	29-38 yr	14	5	19	
	39-48 yr	4	2	6	
	above 48 yr	9	0	9	
<b>Occupation</b>	Student	53	97	150	.000
	House wife	16	2	18	
	Working man / lady	17	10	27	
	Retired	5	0	5	

**Table 4:** Awareness About Cure of Ebola in Different groups with P Value

		Is Ebola curable			P Value
		NO	YES	Total	
<b>Gender</b>	Male	23	11	34	0.091
	Female	85	81	166	
<b>Age</b>	18-28 yr	87	79	166	0.499
	29-38 yr	11	8	19	
	39-48 yr	3	3	6	
	above 48 yr	7	2	9	
<b>Occupations</b>	Student	76	74	150	0.103
	House wife	14	4	18	
	Working man / lady	14	13	27	
	Retired	4	1	5	

**Table 5:** Awareness about Prevention and Control of Ebola in Different groups with P Value

		Prevention and Control of Ebola			P Value
		NO	YES	Total	
<b>Gender</b>	Male	26	8	34	.008
	Female	86	80	166	
<b>Age</b>	18-28 yr	84	82	166	0.004
	29-38 yr	15	4	19	
	39-48 yr	4	2	6	
	above 48 yr	9	0	9	
<b>Occupations</b>	Student	72	78	150	0.000
	House wife	16	2	18	
	Working man / lady	19	8	27	
	Retired	5	0	5	

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