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Knowledge Regarding Zoonotic Diseases Among Adults.

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Abtract

Title :- "A study to assess the knowledge regarding zoonotic diseases among adult residing in selected urban ares of a cosmopolitan city". This study aimed to assess the knowledge regarding zoonotic diseases among adult residing in selected urban areas and to find association between knowledge and demographic data.

Material & Method: Research approach was quantitative and the designed deployed was descriptive method. Non probability Purposive sampling technique was used. The population covered were adults residing in urban areas. Samples chosen were from selected urban areas of cosmopolitan city of western Maharashtra. The total sample size was 200. The inclusion & exclusion criteria were set as per the general population characteristics. Validity were done by experts in the field of Nursing with all specialties. The tool consisted of 2 sections, the first being demographic data and the second was knowledge questionnaire on zoonotic disease where both Yes & No type questions and multiple choice questions were constructed. Reliability score achieved was with test re-test and was above the desirable score of 0.7. .Pilot study was conducted on 1/10th samples and the results were feasible for conducting the main study.

Result: Analysis was done with inferential & descriptive statistics, 49% of the respondents were between the age group of 19-28 years, Majority were males (68%), education saw an almost equal proportion i.e.31% & 32% being primary & secondary educated with 37% seeking higher secondary education. Occupation analysis revealed (46.5%) as employed, 58% of the respondents had pets at home, 59% of them possessed information regarding zoonotic disease. Out of 200 adults (15%) had good knowledge regarding zoonotic diseases, whereas (78.5%) adults had average knowledge and (6.5%) adults had poor knowledge regarding the zoonotic diseases. p-value <0.05information regarding zoonotic disease associated with knowledge 0.17 among adults regarding zoonotic diseases. Support study conducted in the southern state of India, which was done of farmers where the awareness level was low to average regarding infectious zoonotic disease occurrence. Also, the source of their information was print media and it was related in terms of knowledge.

key words:- Knowledge , zoonotic diseases , Adults .

Introduction

When it comes to the ever-changing dynamics of health, disease, and wellbeing, the health care industry is the most dynamic. The term "determinants of health" refers to a broad range of factors that influence a person's overall health. Social, physical, genetic, behavioral, and most importantly environmental health are the five factors that determine health. The interdependence and connection of these characteristics require good collaboration within the healthcare team to deal with variables that may impact the balance of preserving health. The strongest link in this network, nurses, are essential in getting health services and policies to those in need through a variety of roles and cadres. She is the most important and powerful link in the system of health care planning and delivery since she encourages, prevents, and offers direct care services in all aspects, phases and situations.

In order to stop such outbreaks from happening, it is crucial for nurses in particular to be aware of illness trends, incidents, and health information that they may supply. In India, disease patterns have always appeared and reappeared over time. It is crucial that the general public is aware of certain diseases, as well as the general populace's pulse and knowledge base. India has a long history of animal husbandry. Not only as an occupation but many it serves as a livelihood in the form of cattle rearing, milking animals, used for grazing, are breed as pets. Maharashtra ranks among the top five states for cattle rearing, breeding and for agriculture purpose. Animals and humans together will suffer severely if people are ignorant of the prevalent disease that affects human health. Therefore, it's critical to understand the prevalence and developments of zoonotic diseases in order to live in harmony without risking a person's well-being.

Need of Study

What cause the need conducting our research study? A large number of nurses are looking for work in the public and private sectors. This is especially true given the variety of job opportunities available, such as Community Health Nursing Officers, who operate at the local level, and Urban Health Mission Nurses, who serve urban communities. These nurses can be assigned to work with the general public and the animal health science sectors to increase awareness of zoonotic disease and human health. As a result, increasing population awareness can help with illness awareness, responding to health emergencies, and putting national health programs into action. Nurses need to understand how zoonotic diseases spread to prevent outbreaks in healthcare settings and communities. Knowing the modes of transmission and preventive measures helps in controlling the spread. Many zoonotic diseases present with symptoms similar to other illnesses, making accurate diagnosis challenging. Nurses with knowledge of zoonotic diseases can recognize these symptoms early, ensuring proper treatment and isolation protocols. Nurses are often exposed to animals or animal products in their work environments, putting them at risk of zoonotic infections. Understanding these risks allows nurses to take appropriate precautions to protect themselves and their patients. Nurses are in a prime position to educate patients and the community about zoonotic diseases, their prevention, and the importance of seeking medical care. This can help in early detection and control of outbreaks.

Aim of the study:

The present study aims to find out the knowledge which the adults possess regarding zoonotic disease. This is essential to have a generalized view to assess the current level of knowledge. This in-turn will help to assess the pulse of the population at large to further press the need to having certain measures to spread necessary knowledge.

Materials & methods:

Research approach was quantitative and the designed deployed was descriptive method. Non probability Purposive sampling technique was used. Research variable-Knowledge regarding zoonotic diseases. Demographic variables-Age, Gender, Education, Occupation, Any Pets at home & information regarding zoonotic disease. Samples chosen were from selected urban areas of cosmopolitan city of western Maharashtra. The total sample size was 200. The inclusion & exclusion criteria were set as per the general population characteristics. The Self structured questionnaire consists of two parts:

Section 1 - Consists of selected Socio-demographic variables like Age, Gender, Education, Occupational status, any pets at home, Do you have information regarding zoonotic disease.
Section 2- A: consist of Yes & No Structured Questionnaire related to knowledge Regarding Zoonotic Disease. It consisted of 20 statements
Section 2-B: Consist of Multiple- choice questions with four option (Structured Questionnaire) related to Knowledge Regarding Zoonotic Disease. It consisted of 10 Questions Section 2A consists of Yes/No questions is mainly to assess their information level regarding zoonotic disease. In this set of questions, the knowledge level is assessed in percentage level. This section consists of 20 questions.

Section 2 B consists of MCQ questions to assess the knowledge regarding zoonotic disease. In this set of questions, each correctly answered question is scored as 1 and each wrong question is 0. As there is total 10 questions in this section, so total score comes out of 10

Validity were done by experts in the field of Nursing with all specialties. The reliability of the tool was established by using Test and Re-test method. The reliability coefficient was calculated as **Section 2 A : 0.8356** , **Section 2 B : 0.784**

Hence the tools was found to be Reliable

Reliability score achieved was with test re-test and was above the desirable score of 0.7..Pilot study was conducted on 1/10th samples and the results were feasible for conducting the main study.

Results

The results were achieved keeping in mind to fulfill the objectives stated as follows:

To assess knowledge regarding zoonotic diseases among adults residing in urban area of Pune city

2. To find out the association between knowledge score and selected demographic variables.

To achieve the above stated objectives the research type was quantitative and designed deployed was descriptive method. The total sample size was 200 sample with a non- probability sampling technique used to achieve the sample size.Non probability Purposive sampling technique was used.

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Reliability score achieved was with test re-test and was above the desirable score of 0.7.Pilot study was conducted on 1/10th samples and the results were feasible for conducting the main study.Analysis revealed that 60% of the adults had average knowledge (score 7-13) and 40% of them had good knowledge (score 14-20) regarding zoonotic diseases. Average knowledge score was 12.3 with standard deviation 3.07.

Main study analysis was done with inferential & descriptive statistics

Section I: -

Description of the respondents based on their personal characteristics.

49% of the respondents were between the age group of 19-28 years as compared to 39% who were between 29-39 years of age remaining 12% were found to be between 40-50 years.

Majority of the respondents were males (68%), followed by (31%) females & 1% were in the category of transgenders.

Education saw an almost equal proportion i.e.31% & 32% being primary & secondary educated with 37% seeking higher secondary education.

Occupation analysis reveled (26.5%) were unemployed , (46.5%) employed and (27%) had small scale business.

58% of the respondents had pets at home, 59% of them possessed information regarding zoonotic disease out of which 41% gained this information through internet & reading material

Section II A:

Table 1: Item wise analysis of knowledge regarding zoonotic disease based on Yes & No type of questions

n=200

Knowledge item related risk of contracting zoonotic disease	**Freq**	**%**
Animals may transmitting diseases to human beings	138	69.0%
Risk of contracting	117	58.5%
Mode of diseases transferred	91	45.5%
Risk of transmission	116	58.0%
Eating uncooked meat	119	59.5%
Eating raw Egg	128	64.0%
Improper Hand hygiene	115	57.5%
Residing with animals	116	58.0%
Use of remaining water for self care	126	63.0%
Apply milk cream	126	63.0%
Bite of a rabid dog	132	66.0%
Need of vaccinated after animal bite	122	61.0%
Disease caused by mosquito bite	121	60.5%
spread of virus from people from direct contact with animals	120	60.0%
Causes for virus transmission	115	57.5%
Infections spread to humans	113	56.5%
Affect on skin	102	51.0%
Virus spread from animals to humans	91	45.5%
House flies infection to humans	81	40.5%
Cockroaches infection to humans	84	42.0%

69% of them knew that Animals are capable of transmitting diseases to human beings. 58.5% of them knew the risk of contracting certain. 45.5% responded in affirmative regarding mode of transfer of disease. 58.0% of them agreed to the risk of transmission with consumption of raw milk.59.5% of them were aware that eating uncooked meat is harmful.64.0% of them agreed to eating raw can cause harm.Hand hygiene was viewed as important by 57.5% of the respondents .58.0% of them agreed to being harmful if they reside with animals. 63.0% of them were using remaining water used for animals. 63.0% of them were applying milk cream for cracks of lips. 66% of them knew that Bite of a rabid dog was harmful. 61.0% of them agreed to the importance

of vaccination. 60.5% of them knew the cause of mosquito bite. 60.0% of them knew that virus can spread to people from direct contact with infected animals. 57.5% of them knew that certain virus is caused by mosquito bite. 56.5% agreed that certain infection can cause spread to humans. 51% to them knew that Disease from animals to humans can affect skin. 45.5% of them knew that certain virus spread is from animals to humans. 40.5% of them knew that House flies can spread infection to humans. 42% of them knew that Cockroaches can spread infection to humans.

Section II B

Table 2: Item wise analysis of knowledge regarding zoonotic disease based on Multiple Choice Question

n=200

Knowledge item	**Freq**	**%**
Zoonotic infection / disease	121	60.5%
Risk for getting a zoonotic disease	108	54.0%
Silent carriers	112	56.0%
Cause of spread	94	47.0%
Spread from animals to humans	118	59.0%
Managing during outbreak	110	55.0%
Primary mode of transmission	125	62.5%
Training to manage zoonotic disease	113	56.5%
Personal protective equipment use	97	48.5%
Effective way to prevent zoonotic diseases	92	46.0%

60.5% answered correctly regarding zoonotic infection / disease , 54.0% of them knew who is most at risk for getting a zoonotic disease. 56.0% of them knew which animals are silent carriers of virus. 47.0% of them knew the cause of spread of zoonotic disease. 59.0% of them knew the cause of spread from animals to humans. 55.0% of them knew management of an outbreak of zoonotic disease. 62.5% of them knew the primary mode of transmission of zoonotic diseases. 56.5% of them knew training to manage zoonotic disease .48.5% of them knew which personal protective equipment can help in the reduction of risk of spread of zoonotic disease. 46.0% of them knew the most effective way to prevent zoonotic diseases.

Table 3: Fisher's exact test for the association between the knowledge and selected demographic variables

n=200

Demographic variable	**p-value**	**Result**
Age	0.988	NA
Gender	0.791	NA

Education	0.245	NA
Occupation	0.341	NA
Any pets at home	0.671	NA
Do you know information regarding zoonotic disease	**0.017**	**SA**

***NA: No Association**

***SA: Significant Association**

Since the p-value corresponding to information regarding zoonotic disease was small (less than 0.05), the demographic variable information regarding zoonotic disease was found to have significant association with knowledge among adults regarding zoonotic diseases.This is also relevant with the Knowledge score , which shows that 59.00% of the samples had knowledge regarding zoonotic disease.

Discussion

6.5% of the adults had poor knowledge regarding zoonotic diseases, 78.5% of them had average knowledge and 15% of them had o good knowledge regarding zoonotic diseases.The mean was evaluated to be 7.196 for SD of 1.88.This findings is supported by a study conducted in the southern state of India, which was done of farmers where the awareness level was low to average regarding infectious zoonotic disease occurrence.A study conducted in the capital city of India (2020) to know the knowledge regarding the risk of zoonotic disease among women through a cross sectional method revealed that they were ignorant about the risk associated with diseases spread from animals . Theses were the women who worked with livestock. Another International study conducted in African continent (2018), among health team members on zoonotic disease knowledge covering areas on cause, transmission, management etc. The total samples involved were 140 and the method utilized fro assessment was through a questionnaire. Results identified that there was average knowledge regarding various aspects of zoonotic disease.

A study conducted on among 122 adults in southern state of India (2024), to know the awareness about the potential risk of zoonotic diseases with the help of questionnaire as a assessment method. It was seen that maximum of the participants had average to low awareness about the statement studied. Also it was seen that source of information was print media, internet & mass media. This aslo found an association with average awareness and education level . Thus concluding that government needs to increase awareness with the help of health care team.

Conclusion

The summary conclusion of the results finding considering the objectives stated and the view up-held in the form of assumption are hereby laid down in relation to the other research work embedded in this research. It also views how other concepts in the form of recommendation can be woven through this evaluation of the research objective as well as the findings which have scored in the highest category. 59% of them possessed information regarding zoonotic disease out of which 41% gained this information through internet & reading .

Studies supporting the claim of gender & education is a study conducted at Texas USA which says that among the respondents who were adults & teachers maximum were males (57 %) & had associate education which is seen as equal to secondary.

When the results of the variables being studied were seen , it was realized that of all the knowledge the adults from the respective areas where the responses were taken they had average knowledge 78.5 per cent as it was scored as per the category.

Maximum awarded score 69.00% was for the item analyzed as knowledge of transmission from animals to human kind in succession to 66% who affirmed rabies acquired dog causes human harm. 62.5% of the people confirmed zoonotic diseases, primary mode transmission.

Association data revealed that Since the p-value corresponding to information regarding zoonotic disease was small (less than 0.05), the demographic variable information regarding zoonotic disease was found to have significant association with knowledge among adults regarding zoonotic diseases. This findings is supported by a study conducted in the southern state of India, which was done of farmers where the awareness level was low to average regarding infectious zoonotic disease occurrence. Source of their information was print media and it was related in terms of knowledge.

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