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Effectiveness of health education on knowledge and attitude of health worker (F) about rabies in a urban area

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Abstract---Introduction: Rabies is a highly fatal and completely preventable viral disease of the central nervous system. It's primarily a zoonotic disease transmitted by bites and licks of rabid animals. Material & Methods: The cross sectional study was carried out over a period of 2 months on the HW(F) who were posted in the various urban Primary Health Centre of Cuttack District. 2 sets of data were collected one before and one after the awareness session on Rabies. Results: Rabies as a viral disease was known to 43% of HW(F) and the corresponding figure became 64% after the awareness session. It is a fatal disease was known to 94% of HW(F) pre-session. About 91% of Health Worker knew rabid dog was the culprit animal and after the awareness session 100% opined that it was transmitted by rabid dog. Only 70% of HW (F) knew that the wound site should be washed with soap and water which became 100% after the session. Only 21% HW (F) knew about the correct dose and total number of doses of anti-rabies vaccines, which became 95% following the awareness session. Only 13% of HWF were aware of need of Immunoglobulin at wound site which became 100% following the awareness session. Conclusion: The correct knowledge & awareness about rabies and the handling of animal bite victims by HW(F) will help a long way toward prevention of rabies in the Community.

Keywords---rabies, health worker females, awareness.

Introduction

Rabies is a vaccine preventable viral zoonosis which occurs more than 150 countries of the world¹. The Disease is transmitted to animals and humans through bites, scratches, licks on broken skin and mucous membrane and poses a threat to more than 3.3 billion people in the world specifically in Asian & African countries. In a number of countries human deaths from rabies are likely to be grossly under reported particularly in the younger age group. In India alone 20000 deaths are estimated to occur annually due to rabies¹. Multiple myths are associated with the disease, which vary from region to region and they determine the post exposure treatment seeking behaviour of animal bite victims². The annual animal bite load is estimated to be 17.4 million (1.7%) and among them around 46.9% have anti-rabies vaccination as post exposure prophylaxis³.

Objectives

1. To study the knowledge about various aspects of rabies and handling of animal bite victims of Health Worker (Female) in Cuttack city.
2. The change in knowledge status was observed after giving a rabies awareness session to Health Worker Female.

Material and Methods

The study was conducted in the Urban area of Cuttack city of Odisha. The Cuttack City has 10 Urban PHC. The Health Worker (F) working in those UPHC were visited and they were given a pre-designed and pretested questionnaires to fill up. After filling up the questionnaire the questionnaires were collected and a session of health education was given to the Health Worker Females about various aspects of rabies like causative agent of rabies, mode of transmission, signs and symptoms of the disease rabies and also advice to be given to animal bite victims like washing of the wound with soap and water, applying alcohol/povidone iodine to the wound site, getting vaccinated with proper dose and schedule administration of immunoglobulin's to the wound site, and to take vaccines and immunoglobulin's as early as possible. Then after one month a second set of questionnaire was administered and their response was obtained. The time period of study was February 2021 to March 2021.

There were 10 Urban PHC in the City of Cuttack. There were 67 Health workers posted in the urban PHCs in Cuttack. Multiple visits were made to obtain the information. From 67 Health Worker (F), only 58 could be reached for administering the 1st set of questionnaire. After 1 month of conducting the session about awareness of rabies and various input about caring and proper advising the animal bite victims, the 2nd set of questionnaire were administered. The responses were obtained and analysed. It was found that only 53 sets of the questionnaires from the health workers females who were present in both the times (before and after the awareness session) were completed properly and were considered for analysis.

Observation and Discussion

Table-1

Age distribution of Health Worker Female			
Sl. No.	Age Range	Number	Percentage
1.	21-30	20	37.7
2.	31-40	13	24.5
3.	41-50	14	26.4
4.	>50	06	11.3
Total		53	100

Most of the Health Worker (F) (37.7%) were in the age group 21-30. 26.4% were within age group 41-50 followed by 24.5% who were within the age group of 31-40.

Table-2

Educational Qualification of Health Worker Female			
Sl. No.	Education Qualification	No.	Percentage
1.	10 th Pass	23	43.4
2.	Higher Secondary	20	37.7
3.	Graduation and above	10	18.9
		53	100

It was found that 43.4% of the Health Worker (F) were matriculates followed by 37.7% who were educated up to Higher Secondary and 18.9 % were graduates and above.

Table-3

Job experience of Health Worker Female in years			
Sl. No.	Job Experience (in years)	Number	Percentage
1.	1-5 yrs	30	56.6
2.	6-10 yrs	2	3.8
3.	11-15 Yrs	2	3.8
4.	16-20 yrs.	3	5.6
5.	21-25 yrs.	4	7.5
6.	>25 yrs	12	22.6
Total		53	100

56.6% of the Health Worker (F) were having 1-5 years of job experience where as 22.6% had more than 25 yrs. of job experience.

Table-4
Change in knowledge and attitude after attending rabies awareness session
(n=53)

Sl. No.		Pre-session	%	Post-session	%
1.	Know about rabies	53	100	53	100
2.	Rabies is caused by virus	23	43.4	34	64.1
3.	Rabies is a fatal disease	50	94.3	53	100

The results were not statistically significant ($p>0.05$)

The responses of total 53 HW(F) were analysed and it was found that all had heard about the disease rabies. Similarly in a study by Suman Ghosh et. al. it was seen that majority (77%) of respondents had heard about rabies⁴. It was seen that 43.4% of HW (F) were aware that rabies is a viral disease which became 64% after conducting the awareness session. Rabies is a fatal disease, was opined by 94.3% of the HW(F) before the session which became 100% after the session.

Table-5

Animal responsible for rabies transmission					
Sl. No.		Pre-session	Percentage	Post-session	Percentage
1.	Dog	48	90.6	53	100
2.	Cat	21	39.6	53	100
3.	Monkey & other wild animals	18	34	53	100
4.	Scorpion	1	1.9	0	0
5.	Snake	1	1.9	0	0
6.	DNK	2	3.8	0	0

From among the HW(F) 90.6% were already aware that rabies was transmitted by biting or licking by the rabid dog before the session. 21% of HW (F) believed that cat was responsible for transmitting rabies and 18% of the HW(F) believed that Monkey and other wild animals were responsible for transmission of rabies which rose to 100% after the conduction of awareness session. The results are not statistically significant.

Table-6

Signs and symptoms of rabies in humans						
Sl. No.	Signs and symptoms	Pre-session	Percentage	Post-session	Percentage	P value
1.	Hydrophobia	37	69.8	53	100	$P<0.05$
2.	Fits/Epilepsy	29	54.7	49	92.5	$P<0.05$
3.	Animals like behaviour	48	90.6	2	3.8	$P<0.05$

When asked about the symptoms of rabies 70% of the HW(F) were already aware of hydrophobia being the most prominent symptoms of rabies. After the awareness session 100% of HW (F) were aware of the fact that Hydrophobia was the symptom in rabies. The notion that the person with rabies shows animal like behaviour declined to 3.8% from 91% after the awareness session was conducted.

Table-7

Treatment of bite wound						
Sl. No.		Pre-session	%	Post-session	%	P Value
1.	Wash with water	41	77.3	53	100	
2.	Wash with soap and water	37	69.8	53	100	
3.	Application of alcohol / povidine iodine	47	88.7	52	98.1	
4.	Application of turmeric and bitter gourd juice	52	98.1	1	1.9	P<0.05

As regards the first aid and treatment of animal bite victims, 100% of the respondents were of the opinion that the bite site was to be washed with soap and water after the session as against 70% response in pre-session. In a study by D. Shobha Malini et. al. 90% of Health Worker knew the wound site should be washed with soap and water⁴. Similarly 98% become aware of application of antiseptic after attending the awareness session as against 89% response of pre-session level. 98% of the respondents were of the opinion that bitter ground juice and turmeric to be applied on the wound before the session which sharply declined to 2% after the awareness session. The result was statistically significant.

Table-8

Vaccination and prevention of transmission						
Sl. No.		Pre-session	%	Post-session	%	P Value
1.	Vaccine is required for exposed person	53	100	53	100	
2.	Vaccine scheduled has 5 injections by IM Administration	11	20.7	50	94.3	P<0.05
3.	Vaccine -4 doses by ID Administration in Govt. Hospital	17	32.1	51	96.2	P<0.05
4.	Immunoglobulin at wound site is a must	7	13.2	53	100	P<0.05
5.	Animal should be vaccinated	45	84.9	50	94.3	P<0.05

Although 100% of respondents already knew anti-rabies vaccines were required for the treatment of animal bite victims only 21% of knew that 5 intramuscular doses of vaccine required as a complete course. These figures rose to 94% and 96% respectively after the session. The results were statistically significant. In a study of Awareness on prophylaxis against Rabies among the ASHA by Ravish HS et al⁵. it was seen that only 26% of the study subjects knew about the correct dose and schedule of anti rabies vaccine. It was seen that Immunoglobulin administration was life saving was opined by only 13% of HW (F) which become 100% after the conduction of the awareness session.

Conclusion

HW(F) play a very important role in delivering a number of services to the community they serve. The correct knowledge and awareness about the handling of animal bite victims of HW (F) will help a long way towards prevention of rabies in the community.

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