Title: STUDY OF EFFECTIVENESS OF "RABIES AWARENESS SESSION" FOR COLLEGE STUDENTS IN MADDUR TOWN OF KARNATAKA STATE

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Keywords Rabies education, Effectiveness, Awareness

Abstract The present study was conducted with the objective to assess the effectiveness of a brief educational intervention in the form of a Rabies Awareness Session on the knowledge regarding rabies among college students of Meddur town. The study is a Before and after comparison study without control. A total of 1372 college students from 4 colleges situated in Maddur town, Mandya district, Karnataka State, were included in the study that was conducted between September to November 2008.

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Original Article

Study of Effectiveness of "RABIES Awareness Session" for college students in Maddur town of Karnataka State

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ABSTRACT:

The present study was conducted with the objective to assess the effectiveness of a brief educational intervention in the form of a 'Rabies Awareness Session' on the knowledge regarding rabies among college students of Maddur town. The study is a "Before and after comparison study without control". A total of 1372 college students from 4 colleges situated in Maddur town, Mandya district, Karnataka state, India were included in the study that was conducted between September to November 2008.

1434 college students answered a predesigned and pretested questionnaire on various aspects of rabies. This was followed by an awareness session consisting of power point presentation and video clips followed by a question–answer session. One month later 1372 (95.7%) from the same students answered the same questionnaire. The difference between the pre-session answers and the follow-up answers were analysed using proportions and Mc Nemars test.

After the analysis it was found that the knowledge regarding rabies among college students increased significantly after participating in the awareness session. Knowledge that animals other than dogs can transmit rabies increased from 22.3% to 44.4%. Knowledge that rabies can be transmitted by scratch increased from 14.1% to 32.9%. 'Hydrophobia was known only to 16.3% students which increased to 81.4% after attending the session. Knowledge regarding treatment of bite wound through washing with soap &water increased from 53.0% to 92.2%. the knowledge that the vaccination schedule consists of 5 injections increased from 44.3% to 72.9%. This endorses the effectiveness of the awareness session.

Key Words: Rabies, Education, Effectiveness, Awareness

Introduction :

Rabies is a zoonotic disease transmitted to humans by rabid animal bites mainly by rabid dogs [1]. Each year about 55,000 people die from rabies throughout the world [2]. More than 99% of all human deaths occur in the developing world [3]. In India, about 17.4 million exposures and 20,000 thousand deaths occur annually among humans [4]. In humans rabies is virtually 100% fatal and is 100% preventable with appropriate wound toilet and post exposure prophylaxis.

Awareness is an effective tool for the prevention of rabies. Knowledge about prevention of rabies among the general public has been observed to be poor [5, 6, 7]. Studies have shown that brief educational interventions are highly effective to increase college students' awareness on health aspects [8,9]. However, literature review revealed that such studies have not been conducted for rabies, especially so for college students in India. The present study was carried out with the objective of assessing the effectiveness of a brief educational intervention on the various aspects of rabies among college students.

Objectives :

The present study was undertaken to assess the effectiveness of a brief educational intervention in the form of a 'Rabies Awareness Session' on the knowledge regarding various aspects of rabies like aetiology, transmission, clinical presentation and prevention. This study was conducted among college students of Maddur Town of Mandya District in Karnataka State.

Study Design :

The present study is a before and after comparison study without control

Materials and Methods :

The present study was conducted in four colleges [pre university and degree] situated in Maddur town of Mandya district in Karnataka state between September to November 2008. A total of 1679 students were studying in the four colleges. They were aged between 16 to 23 years. A total of 1434 (87.4%) students answered a predesigned and pretested questionnaire regarding various aspects of rabies and its prevention. The remaining 245 were excluded from the study as they were absent.

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The students were assembled in class-wise batches which ranged from 48 to 86 students and after administering the questionnaire, a brief educational intervention in the form of a "Rabies Awareness Session" was conducted for students. The awareness session consisted of a power point presentation and video clips which lasted for about 40 minutes. This was followed by a question–answer session.

One month later, 1372 (95.7%) students of those who attended the awareness session answered the same questionnaire. The remaining 62 students were excluded from the study as they were absent. The follow up questionnaire was administered after one month to avoid bias due to short term memory[8].

The difference between the pre-session answers and the follow-up answers were analysed using Proportions and Mc Nemar's test.

Results :

99.4% of the students had heard about rabies before the awareness session which increased to 100% after the awareness session this difference was statistically not significant. The knowledge that rabies is caused by a virus increased from 46.4% before the awareness session to 59.1%. The increase is statistically significant. The knowledge that rabies is a fatal disease and that it cannot be cured increased from 67.9% and 38.3% before the awareness session to 88.5% and 61.7%. The increase is statistically significant.

The knowledge that dogs transmit rabies increased from 97.7% to 100%. The difference was statistically not significant. The knowledge that cats transmit rabies increased significantly from 52.8% to 73.7%. The knowledge that monkeys and other wild animals transmit rabies increased significantly from 8.3% to 42.1%. The knowledge that goat, sheep, pig, donkey, etc transmit rabies increased significantly from 5.8% to 17.4%.

22.7% were under the impression that rats, bandicoots, squirrels, etc transmit rabies, which decreased significantly to 10.9% after the awareness session. The misconception that hens & birds transmit rabies was just 0.8% which further decreased to 0.3% but the decrease was not significant.

Knowledge regarding the route of transmission of rabies improved significantly, like 'biting' (from 92.1% to 100%), 'licking' (from 16.8% to 41.0%) and 'scratching' from (11.3% to 24.7%). There was no significant increase from in the knowledge that drinking milk of affected animal (6.0% to 10.8%) and touch (from 1.7% to 1.5%) was a route of infection for rabies.

Table 1:
Significance of change in knowledge and attitude after attending a brief educational intervention on rabies called 'Rabies Awareness Session'

	Pre-session	Follow-up	Statistical Significance
Know about rabies	1364	1372	p>0.05
Rabies is caused by virus	637	811	p<0.01
Rabies is a fatal disease	932	1214	p<0.01
Rabies cannot be cured	525	846	p<0.01
Animals responsible for rabies transmission			
Dog	1341	1372	p>0.05
Cat	725	1011	p<0.01
Monkeys & wild animals	114	577	p<0.01
Goat, Sheep, Donkey, Pig, Horse, etc	80	239	p<0.05
Rat, Bandicoot, Squirrel	311	149	p<0.05
Hen & birds	11	4	p>0.05
Modes of transmission			
Bite	1263	1372	p<0.05
Scratch	231	563	p<0.01
Lick	155	339	p<0.01
Milk	82	148	p>0.05
Touch	24	20	p>0.05
Symptoms of rabies in animals			
Excessive frothing	1069	1182	p<0.05
Unprovoked biting	452	890	p<0.01
Lethargy & drowsiness	157	237	p>0.05
Symptoms of rabies in humans			
Animal like behaviour	676	121	p<0.01
Insanity	543	407	p<0.05
Fits / epilepsy	288	266	p<0.05
Hydrophobia	224	1117	p<0.01
Treatment of bite wound			
Wash with water	985	1006	p>0.05
Application of irritants	518	239	p<0.01
Wash with soap & water	727	1265	p<0.01
Application of Antiseptic	483	710	p<0.01
Vaccination and prevention of transmission			
Vaccine is required for exposed person	1243	1368	p<0.01
Vaccine schedule has 5 injections	608	1000	p<0.01
Animals should be vaccinated	1131	1237	p<0.05
Stray animals should be decreased	922	1118	p<0.01

Knowledge regarding symptoms of rabies in animals improved significantly, like 'excessive frothing in the mouth' (from 77.9% to 86.2%) and 'unprovoked biting' (from 32.9% to 64.9%). Knowledge that 'Lethargy & drowsiness' is a symptom did not increase significantly (from 11.4% to 17.3%).

49.3% of the students thought that the persons affected by rabies would start behaving like animals. This significantly decreased to 8.8%after the intervention. 39.6% thought that the human rabies cases would go mad, this perception decreased significantly to 29.7%. The knowledge that hydrophobia is a manifestation increased significantly from 16.3% to 81.4%.

The Knowledge regarding treatment of bite wound (washing with soap & water and application of virucidal agent) increased very significantly from 53.0% and 35.2% to 92.2% and 51.7%. Initially 37.8% opined that irritants like turmeric, lime, coffee etc. should be applied to the bite wound, this significantly decreased to 17.4% after the awareness session.

90.6% of the students knew that vaccine is required for the exposed person and 44.3% knew that the schedule consists of 5 injections. This proportion significantly increased to 99.7% and 72.9% after the awareness session. 82.4% felt that animals should be vaccinated to prevent rabies which significantly increased to 90.2% after the awareness session. 67.2% felt that stray animal population should be controlled to prevent rabies transmission. This proportion very significantly increased to 81.5% after the awareness session.

Conclusion :

Studies have shown that the correct knowledge regarding various aspects of rabies among college students leave a lot to be desired. This study shows that a brief focussed educational intervention in the form of a 'Rabies Awareness Session' is an effective method to enhance college students' knowledge regarding rabies. The improvement in knowledge was sustained even after one month after the 'Rabies Awareness Session'. Use of multimedia and an interactive question answer session boosts students' enthusiasm to gain knowledge. This study finds that college students can comprehend the various aspects regarding rabies easily and may help spread the knowledge to their houses and neighbourhoods. The persistent low levels of knowledge in some aspects only reflect the need to reinforce the awareness amongst the students.

Rabies awareness sessions are effective in increasing college students' knowledge of rabies and should be conducted regularly in all colleges. More such studies on a larger scale will further endorse the efficacy of awareness drives.

References :

1. George M Baer. The Natural History of Rabies. 2nd Ed. CRC Press, Boston: 2000: 515-516
2. WHO Expert Consultation on Rabies – First Report. WHO Technical Report Series 931, Geneva: WHO. 2005: 3-4
3. World Survey of Rabies: No. 32 for the year 1996, Geneva WHO, 1998 [WHO/EMC/ZDI/98.4]
4. APCRI, Assessing the burden of rabies in India: WHO sponsored national multi-centric rabies survey, 2004
5. Ichhpujani RL, Chhabra M, Mittal V, et al, KAP about animal bites and rabies in general community – A multi centric study. J Commun Dis, 2006 Dec, 38(4):355-356
6. US Singh, SK Choudhury, KAP study on dog bites and its management in the context of prevention of rabies in a rural community of Gujrat. Ind J Community Med. July-Sept 2005; 30(3):81-83
7. Alan C Jackson, William H Wunner ed. Rabies; 2nd Ed 2007: 565
8. Erika C. Lambert, 'College Students' Knowledge of Human Papillomavirus and Effectiveness of a Brief Educational intervention'; J American Board of Family Practice, Vol 14, Issue 3 178-183
9. Shepherd J Weston R, Peersman G, Napuli IZ. Interventions for encouraging sexual lifestyles and behaviours intended to prevent cervical cancer (Cochrane Review) In: The Cochrane library, issue 1 2000 Oxford