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Measures To Early Detect And Prevent Covid-19 Among Rural People At Southern Rajasthan

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Abstract:
Introduction: COVID-19 pandemic caused human health an unprecedented consequence. Measures for effective control of transmission and prevention covid 19 pandemic, Knowledge of Indian population plays vital role. The present study is aimed to assess knowledge regarding early detection and preventive measures of COVID-19 among rural people at Southern Rajasthan. Objectives of this study were 1. To assess the pretest knowledge scores regarding early detection and preventive measures of COVID-19 in control and experimental group. 2. To assess the post test scores of the people regarding early detection and, preventive measures of COVID-19 in control group. 3. To find out the effectiveness of an information booklet on knowledge regarding early detection and preventive measures of COVID-19 among experimental group. 4. To find out the association between pretest knowledge scores with selected socio demographic variable.
Methods: *An evaluative approach with experimental research design was used for the study. This study was conducted at selected rural area Bedla Talai Udaipur Rajasthan. 80 samples were selected by using simple random sampling technique. The pretest knowledge was collected by using structured interview schedule after this information booklet was administered to experimental group with proper explanation then after seven days posttest was taken. The data was analyzed by using descriptive and inferential statistics.*
Results: *In control group none of participants had good level of knowledge in pre and posttest. Average level of knowledge 40% was found in pretest whereas 35% was found in posttest. Poor level of knowledge 60% was found in pretest whereas 65% was found in posttest. In experimental group 7% of participants had good level of knowledge in pretest whereas 72.50% had good level of knowledge in posttest. Average level of knowledge 55% was found in pretest whereas 27.50% was found in posttest. Poor level of knowledge 38% was found in pretest whereas 0% was found in posttest.*
Conclusion: *This study concluded that the knowledge of the rural people regarding early detection and preventive measures of COVID-19 was inadequate. The information booklet significantly increased the knowledge of people and found effective.*
KeyWords: *Assess, Covid-19, Information Booklet, Knowledge, People,*

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I. INTRODUCTION

Coronavirus was fatal disease for which causative agent was SARS-COV2, which is globally a concern for all the public. It was said that origin of covid 19 was from Wuhan City, China where large number of people were exposed to wet animal market got infected. Covid 19 was spreading by person to person contact so, people were isolated to prevent transmission of covid 19 and provide effective treatments. (1)

This virus, covid 19 affects respiratory system in humans, which includes severe acute and middle east respiratory syndrome (SARS, MERS). It was initially found in bunch of people who were suffering with pneumonia and admitted for treatment with unknown etiology and was great threat to public health. (1)

All the patients early detected were found that they were epidemiologically went to sea food wholesale market in Wuhan City, China. The Chronology of infection covid 19 is as follow: first cases were reported between December 18, 2019 to December 29, 2019. There were 5 patients who were diagnosed with acute respiratory distress syndrome. And one of them died by January 2, 2020. By then 41 more patients were found with same diagnosis and laboratory confirmed infection. Which was named covid 19 by WHO on February 11, 2020. (2)

The incubation period of covid 19 was approximately 5.2 days after which symptoms used to appear in patients like fever, cough, fatigue, sputum production, headache, hemoptysis, diarrhoea, dyspnoea, and lymphopenia. From the period of onset death ranged from 6 days to 14 days with an average of 14 days which was mainly depend on the age and immunity status of patient. As for covid 19 there was no specific treatment was found initially, it was very difficult to treat disease because people were asymptomatic before onset of symptoms due to long incubation period.

For the management of covid 19 isolation was suggested with complete preventive measures such as masks, gloves for everyone. And for the caregiver's surgical mask, gloves and gowns were mandatory when in same room with the patient and in every 15 to 20 minute use hand hygiene. (3)

II. Materials and Methods

An evaluative approach with experimental research design was used for the study. This study was conducted at selected rural area Bedla, Udaipur Rajasthan. Eighty samples were selected by using simple random sampling technique. In this study People who were In the age group of 18 - 65 years, Willing to participate in the study, Available at the time of study were included and People who were Below 18 years and above 65 years, Not available at the time of data collection were excluded. The pretest knowledge was collected by using structured interview schedule after this information booklet was administered to experimental group with proper explanation then after seven days posttest was taken. The data was analyzed by using descriptive and inferential statistics.

III. RESULTS

In this study the mean pre test scores of control group were 14.625 and SD was 3.74. And Mean pre test scores of experimental group was 17.675. The mean post test scores in control group was 14.475 and SD was 3.99. And the Mean post test score was 26.375 & was 4.31 in experimental group. (table 1)

In this study area wise knowledge score in control group revealed that highest 4.8 mean pre test knowledge scores whereas highest 4.6 mean post test scores was found in the area of preventive measures, mean pre test knowledge scores 3.3 as well as mean post -test knowledge scores 3.4 was found in the area of vaccination of COVID-19, mean pre test knowledge scores 2.2 and mean post test knowledge scores 2.2 was found in the area of sign/symptoms, risk &diagnosis, mean pre test knowledge scores 1.5 and mean post test knowledge scores 1.5 was found in the area of transmission and incubation period of COVID-19, mean pre test knowledge scores 1.5 and mean post test knowledge scores 1.5 was found in the area of introduction of COVID-19, and mean pretest knowledge score 1.0 and mean post test knowledge score 1.1 was found in area of appearance of symptoms. (Table 2)

In this study area wise knowledge score in experimental group revealed that highest 4.9 mean pre test knowledge scores whereas highest 7.3 mean post test scores was found in the area of preventive measures, mean pre test knowledge scores 4.5 as well as mean post -test knowledge scores 6.9 was found in the area of vaccination of COVID-19, mean pre test knowledge scores 2.9 and mean post test knowledge scores 5.0 was found in the area of sign/symptoms , risk &diagnosis, mean pre test knowledge scores 2.0 and mean post test knowledge scores 3.3 was found in the area of transmission and incubation period of COVID-19, mean pre test knowledge scores 1.9 and mean post test knowledge scores 2.0 was found in the area of introduction of COVID-19, and mean pre test knowledge score 1.3 and mean post test knowledge score 1.8 was found in area of appearance of symptoms. (Table 3)

In this study Interpretation of level of knowledge scores in Control group in pretest 60% respondents found with poor level of knowledge scores whereas in post test were 65%, in pre test 40% respondents found with average level of knowledge whereas in post test 35%, in pre test and post test none of the respondents found with good level of knowledge scores. (Table 4)

In this study Interpretation of level of knowledge scores in Experimental group in pretest 38% respondents had poor level of knowledge scores whereas in posttest 0% , in pre test 55% respondents found with average level of knowledge whereas in posttest 27.50%, in pre test 7% respondents found with good level of knowledge scores whereas in post test 72.50%. (Table 4)

This study revealed that the mean post test knowledge scores 26.375 was greater than the mean pre test knowledge scores 17.675 in experimental group. The mean difference between pre test and post test scores was 8.7. The test result shows highly significant difference in pre test and post test scores at 't' value 12.44, $P<0.05$. This indicated that the information booklet was very effective in increasing the knowledge regarding early detection and preventive measure of Covid-19 in experimental group. (Table 5)

IV. DISCUSSION

The knowledge of rural people regarding early detection and preventive measure of COVID-19 before the administration of the intervention by information booklet was very low. The information booklet significantly increased the knowledge of rural people regarding early detection and preventive measure of COVID-19. Similar studies have concluded that such intervention can prevent disasters like COVID-19 (4, 5, 6, 7, 8). Hence this kind of teaching should be conducted at the community level so that people can early aware about early detection and preventive measures of Covid-19, which will helpful in reducing the cases of disease (9). Current study indicated that the information booklet was very effective in increasing the knowledge regarding early detection and preventive measure of Covid-19 in experimental group. Similar study concluded

that a study by Naveed Ahmed, et al. conducted Descriptive Cross Sectional study. Respondents filled a pre-tested structured questionnaire consisting of 21 multiple-choice questions. The variables were accessed their knowledge of disease regarding etiology, mode of transmission, prevention and control measures of COVID-19 infection. A total of 1875 questionnaires were collected. Results: The data showed that 49.6% of respondents were male and rest 50.4% were females. From the total data 6.56% of respondents were doctors by profession. While 14.4% were nurses, 6.08% laboratory & other medical staff and 72.96% were students. 74.68% of respondents give correct answers on their knowledge about COVID-19, while 13.92% of respondents were wrong. 65.6% were aware about cause of COVID-19. However, 34.4% of participants were not aware of its cause. 60.0% of our respondents were not aware about symptoms and treatment. 89.04% of participants have no knowledge about transmission. 26.96% of respondents even didn't know how to prevent this pandemic disease. Conclusion: Awareness campaigns should be conducted to make people aware of the ways COVID-19 spreads, its mode of transmission, severity of infection and preventive measures to minimize its spread as well as chances to acquire COVID-19 infections. It is important to understand the need to educate people, especially from lower socio-economic statuses as they might not know about these infections and how its spreads. (10) Similar study concluded that a study by Elizebeth Rani. V conducted a study to assess the knowledge and practices of COVID-19 among general public at the selected setting, Chennai. The main objective was to assess the knowledge and practice on COVID-19, correlate the knowledge with practice on COVID-19, and associate the knowledge and practice on COVID-19 with the demographic variables among the public. A Quantitative non-experimental analysis style was used to assess the knowledge and practice of COVID-19. Sixty individuals were chosen through the non-probability convenience sampling technique. The findings of the analysis disclosed that the majority (40%) of the samples had a high level of knowledge and 43.3% of them had a good practice, 33.3% of them had a moderate level of knowledge and 30% of them had moderate practice, whereas 26.7% of them had a low level of knowledge and 26.7% of them had poor practice on COVID 19. (11)

V. CONCLUSION:

The Administration Of The Intervention Using An Information Booklet About Preventive Measure Of Covid-19 Was Found To Be Effective. This Study Was Delimited To The Size Of The Sample And The Area And The Knowledge Aspect Alone Was Assessed In The Present Study.

DECLARATION

Ethical Approval: R N T MEDICAL COLLEGE & CONTROLLER & ATTACHED HOSPITAL, UDAIPUR, Registration Number: EC/NEW/INST/2020/1051
Acknowledgement: Nil
Conflict of Interest: Nil

Table: 1 Mean Pre and Post Test Knowledge Scores in Control and Experimental group.

		Mean	**SD**			**Mean**	**SD**
(**Control group)**	Pre test	14.625	3.74	**(Experimental group)**	Pre test	17.675	4.86
		Mean	SD			Mean	SD
(Control group)	Post test	14.475	3.99	**(Experimental group)**	Post test	26.375	4.31

Table 2 Area Wise Comparison of Mean Pre Test and Post Test knowledge scores in control group

S. No	**Area & question (32)**	**Control group**			
		Pre test		**Post test**	
		Mean	**Sd**	**Mean**	**Sd**
1	Introduction	1.5	0.5	1.5	0.5
2	Transmission incubation period	1.5	0.6	1.5	0.6
3	Sign, symptom, Risk &diagnosis	2.2	0.6	2.2	0.6
4	Preventive Measures	4.8	1.0	4.6	1.2
5	appearance of symptom	1.0	0.2	1.1	0.3
6	Vaccination	3.3	1.5	3.4	1.6

Table 3 Area Wise Comparison of Mean Pre Test and Post Test knowledge scores in experimental group

S. No	Area & question (32)	Exp. Group			
		Pre test		Post test	
		Mean	Sd	Mean	Sd
1	Introduction	1.9	0.3	2.0	0.0
2	Transmission &incubation period	2.0	0.9	3.3	0.7
3	Sign. Symptoms, Risk &diagnosis	2.9	0.9	5.0	1.0
4	Preventive Measures	4.9	1.3	7.3	1.5
5	appearance of symptom	1.3	0.4	1.8	0.3
6	Vaccination	4.5	1.7	6.9	1.0

Table: 4 Interpretation of level of knowledge scores in control & experimental group

Control group	Pre-test		Post test	
Level of knowledge	**n**	**%**	**n**	**%**
Poor	24	60	26	65
Average	16	40	14	35
Good	0	0	0	0
Experimental group	**Pre-test**		**Post test**	
Level of knowledge	**n**	**%**	**n**	**%**
Poor	15	**38**	0	**0**
Average	22	**55**	11	**27.50**
Good	3	**7**	29	**72.50**

Table 5 Comparison of Mean Pre and Post Test knowledge Scores in experimental group.

Variables	Experimental group				
	n	Mean	SD	t	Df
Pre test	40	17.675	4.86	12.44	39
Post test	40	26.375	4.31		

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