



“A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (STP) ON KNOWLEDGE OF TELEMEDICINE AMONG RURAL POPULATION IN KARAD TALUKA”

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ABSTRACT

Aims & Objectives: To improve the knowledge regarding telemedicine among rural population. To assess the knowledge on Telemedicine among rural population. To assess the effectiveness of structured teaching programme on telemedicine among the rural population. To find out association between selected socio demographic variables such as age, gender, education, occupation, religion, and place of living.

Material and Methods Used for the study is evaluative approach with pre and post test control group design. Study was conducted on 100 subjects from Kole, Karad by using Simple Random Sampling Technique with randomly allocation of groups. It was observed that overall Mean Knowledge regarding Telemedicine among the subjects was (52%) had good knowledge and (15%) had excellent knowledge. It was evident that maximum number of subjects had good knowledge regarding Telemedicine. Calculated chi-squared test value shows there is association between the socio demographic variables of subject and level of knowledge regarding Telemedicine among people residing rural area of Karad at $p < 0.05$ level of significance.

Conclusion: The STP was useful to the subjects to increase knowledge regarding Telemedicine.

KEYWORDS : assess, effectiveness, structured teaching programme, telemedicine, rural population

INTRODUCTION:

Maharashtra is the third largest state in India both in area and population. The state is bounded by the Arabian Sea in the west, Gujarat in the northwest, Madhya Pradesh in the north and the east, Andhra Pradesh in the south east and Karnataka and Goa in the south. The state of Maharashtra has an area of 307,713 sq. km. and a population of 96.88 million. There are 37 districts, 358 blocks and 43711 villages. The State has population density of 314 per sq. km. (as against the national average of 312). The decadal growth rate of the state is 22.73% (against 21.54% for the country) and the population of the state continues to grow at a much faster rate than the national rate.¹

The state of Maharashtra has well health infrastructure but, geographical area wise it is not able to satisfy the need of advanced medical care for peoples who are residing in hilly areas of Maharashtra. Telemedicine is one of the options to reduce the gap between the geographical areas regarding health. A study was conducted to assess the effectiveness of structured teaching programme on telemedicine among rural population in Karad Taluka.

LITERATURE SURVEY:

A study conducted by Sushil.K.Mehar et.al (2009) on awareness and attitudes to telemedicine from 143 doctors at 14 different hospitals in India, and from 121 patients who had come to New Delhi for treatment from other parts of India. Most doctors felt that telemedicine was important and their opinions were similar in all age groups. Only three of the 14 hospitals had not implemented telemedicine. A total of 86 doctors had used telemedicine. One hundred of the 121 patients were not aware of telemedicine. However, when the concept was explained, most patients had a positive attitude towards telemedicine. The majority of patients who had previously used telemedicine (n = 7) found it satisfactory. It is important that proper hospital training programmes should be organized for all doctors, which will assist in future utilization of telemedicine. Further awareness programmes are also required for patients.²

A study conducted by Jagat singh Bhatia et.al (2006) on telemedicine odyssey customized telemedicine solution for rural and remote areas

in india. Researcher implemented telemedicine in rural areas as 70% of total population in India living in India. As a pilot project researcher established telemedicine technology at major 6 locations in India. These locations were connected to nearby district and primary health centers to make a telemedicine hub. Result indicated that the researcher could provide medical services to the rural areas of India.³

SECTION – I:**DESCRIPTION OF DEMOGRAPHIC VARIABLES**

The most of 38 (38%) respondent of people residing rural area of Karad Taluka were in the age group of 41-50 years followed by 31 (31%) who were in the age group of 31-40 years and 21 (21%) respondents of people residing rural area of Karad Taluka were 51-60 years of age and 7 (7%) were <30 years of age and 3 (3%) were >60 years of age. Were most of 65 (65%) respondent of people residing rural area of Karad Taluka were males and the remaining 35 (35%) respondents of people residing rural area of Karad Taluka were females.

The most of 38 (38%) respondent residing in rural area of Karad Taluka were illiterate, 29 (29%) had completed primary education, 26 (26%) had secondary education and 3 (3%) respondents had completed intermediate or post higher secondary education. And were graduates each. Only 1 (1%) had completed professional education. 86 (86%) of people residing rural area of Karad Taluka were Hindus and 14 (14%) Muslims.

Majority of people residing rural area of Karad Taluka were Clerical, shop owner of farmer i.e.36 (36%). skilled workers Then, 25 (25%) were semi profession, 22 (22%) were skilled workers,13 (13%) were unskilled workers. 3 (3%) were semi skilled workers. Whereas only 1 (1%) was professional. 49 (49%) monthly income was between Rs.11,451 - Rs.17,150. 22 (22%) respondents family income was between Rs.6,851 - Rs.11,450. 19 (19%) respondent had income between Rs.17,151 - Rs.22,850. 8 (8%) respondent had income between Rs.22,851 - Rs.45,750. 2 (2%) respondents family income was morethan Rs.45,751/-. Were 58 (58%) of live in joint family and 31 (31%) from nuclear family. And 11 (11%) live in extended family.

The majority of people residing rural area of Karad Taluka i.e. 49 (49%) gained knowledge about Telemedicine from news paper followed by 31 (31%) people gained knowledge from television. Knowledge gained from health workers 15 (15%), only 5 (5%) got information through radio.

SECTION-II: -

TABLE – I Classifications of people residing in rural area of Karad Taluka on pre- test knowledge level Score regarding Telemedicine

N=100

Level of knowledge	Score	Level of Respondents	
		No	%
Poor	1-9	39	39.0
Good	10-18	49	49.0
Excellent	19-25	12	12.0
Total	100	100.0	

Majority 49.0 % of the subjects had Good knowledge, 39.0 % had poor knowledge, 12.0 % subjects excellent knowledge regarding Telemedicine.

TABLE – II Classification of people residing rural area of Karad Taluka on post test knowledge level Score regarding Telemedicine

N=100

Level of knowledge	Score	Level of Respondents	
		No	%
Poor	1-9	33	33.0
Good	10-18	52	52.0
Excellent	19-25	15	15.0
Total	100	100.0	

Majority 52.0 % of the subjects had Good knowledge, 33.0 % had poor knowledge, 15.0 % subjects excellent knowledge regarding Telemedicine

TABLE – III: Association between demographic variables and post test knowledge level of people residing rural area of Karad Taluka on Telemedicine

[N=100]

Sr. No	Socio Demographic Variables	No. (%)	Post Test			Chi Square statistic	P- value
			Poor	Good	Excellent		
			No. (%)	No. (%)	No. (%)		
1	Age						
	<30	7	5	2	0	15.76	0.04*
	31-40	31	12	16	3		
	41-50	38	9	24	5		
	51-60	21	7	9	5		
>60	3	0	1	2			
2	Sex						
	Females	35	10	19	6	0.54	0.76
	Males	65	23	33	9		
3	Educational Qualification						
	Professional or Honours	1	0	0	1	9.52	0.48
	Graduate or Post-Graduate	1	2	0	1		
	Intermediate or Post-High-School Diploma	0	3	0	0		
	Middle School Certificate	6	17	3	6		
	Primary School or Literate	12	19	4	12		
	Illiterate	13	17	8	13		

4	Religion						
	Hindu	86	36	41	9	2.72	0.26
	Muslim	14	3	8	3		
5	Occupation						
	Profession	1	0	1	0	5.24	0.88
	Semi-Profession	25	10	10	5		
	Clerical, Shop-owner, Farmer	36	12	20	4		
	Skilled worker	22	5	14	3		
	Semi-skilled worker	3	1	1	1		
Unskilled worker	13	5	6	2			
6	Family Income						
	> Rs.45751	2	1	1	0	6.77	0.56
	Rs.22851-Rs.45750	8	4	3	1		
	Rs.17151-Rs.22850	19	6	11	2		
	Rs.11451-Rs.17150	49	18	24	7		
Rs.6851-Rs.11450	22	10	10	2			
7	Type of Family						
	Nuclear	31	9	16	6	2.88	0.56
	Joint	58	21	31	6		
	Extended	11	3	5	3		
8	Source of Information						
	News papers	49	13	29	7	2.88	0.56
	TV	31	10	15	6		
	Health care workers	15	7	6	2		
	Radio	5	3	2	0		

N.S- Not significant S- Significant at P<0.05level

The above table depicts the association of knowledge level of people residing rural area of Karad Taluka regarding Telemedicine after administering the Structured Teaching Programme with their selected demographical variables, using Chi –square test. The analysis revealed that there is significant association was found with age, (p < 0.05) and no association could be found with other demographic variables of people residing rural area of Karad Taluka with post test knowledge.

DISCUSSION

Maximum of the subjects 38 (38%) were in the age group of 41-50 years Dr. Mrs. M. S. Vinsi, et.al. (2016) in their study observe that Maximum of the subjects (42.5%) were in the age group of 31≤35yrs.⁴ Majority of the subjects 65 (65%) respondent was males and the remaining 35 (35%) respondents of people were females. 38 (38%) subjects were illiterate, Dr. Mrs. M. S. Vinsi, et.al. (2016) in their study observe that maximum of the subjects (62.5%) were B.Sc and Post Basic nurses .⁴ Majority of people were 86 (86%) of people were Hindus and 14 (14%) Muslims. Majority of people were Clerical, shop owner or farmer i.e.36 (36%).Dr. Mrs. M. S. Vinsi, et.al. (2016) in their study observe that Majority of the subjects (30%) were working in ward and ICU.⁴ Majority of people i.e. 49 (49%) monthly income was between Rs.11,451 - Rs.17,150. majority of people i.e. 58 (58%) of live in joint family. Majority of people i.e. 49 (49%) gained knowledge about Telemedicine from news paper. Dr. Mrs. M. S. Vinsi, et.al. (2016) in their study observe that Majority of the staff nurses (62.5%) had no experience of computer technology in clinical area.⁴

In the table it is noticeable that majority of people 49 (49%) had good level of knowledge whereas 39 (39%) of people had poor level of knowledge and only 12 (12%) people had Excellent knowledge regarding Telemedicine before administration of Structured Teaching Programme. Dr. Mrs. M. S. Vinsi, et.al. (2016) in their study observe that In pre test majority of the staff nurses (52.5%) had average knowledge, (37.5%) had poor knowledge & (10%) staff nurses had good knowledge & no subjects were in the category of excellent knowledge scores⁴

The post-test level knowledge of people 52 (52%) had good level of knowledge about Telemedicine. Whereas 33 (33%) of people had poor level of knowledge and only 15 people (15%) had excellent knowledge regarding Telemedicine after administration of Structured Teaching Programme. Dr. Mrs. M. S. Vinsi, et.al. (2016) in their study observe that In post test majority of the staff nurses (47.5%) had good knowledge, (37.5%) were in the category of average knowledge and (15%) were in the category of excellent knowledge. No subjects were in poor category⁴

The comparison of pre test and post-test knowledge of people The pre-test table depicts that majority of people 49(49%) had good level of knowledge about Telemedicine, whereas 39(39%) of people had poor level of knowledge and only 12 (12%) people Taluka had Excellent knowledge regarding Telemedicine before administration of Structured Teaching Programme

Majority of people 52 (52%) had good level of knowledge about Telemedicine whereas 33(33%) of people had poor level of knowledge and only 15(15%) people had excellent knowledge regarding Telemedicine after administration of Structured Teaching Programme.

CONCLUSION: - The Structured Teaching Programme was effective to increase the knowledge of rural population regarding telemedicine. There was significant association of the pre test knowledge scores regarding telemedicine among rural population and their selected demographic variables such as age, gender, education, occupation, religion, and place of living.

IMPLICATIONS:-

NURSING EDUCATION: - To educate student nurses in enhancing knowledge and skills in theory as well as in practice. Hence, it is an opportunity for the nurse educator to develop effective training modules in training the subjects in Telemedicine.

NURSING RESEARCH: - The research helps to plan new interventional studies to improve knowledge regarding Telemedicine. The study helps the nurse researcher to develop insight in to the development of teaching module and for improving their knowledge and nursing management in Telemedicine. One of the aims of nursing research is to contribute the knowledge to the body of nursing, to expand and broaden the scope of nursing. This is possible only if nurses take initiative to conduct the further research.

NURSING ADMINISTRATION: - The present study has proven effectiveness of Structured Teaching Programme enhancing the knowledge of student nurses regarding Telemedicine. So the nurse administrator can take initiative to provide facilities to conduct research such educational programmes in the hospital as well as in the colleges. The nurse administrator should take part in the making of health policies, development of protocols and standing orders with respect to Telemedicine.

RECOMMENDATIONS:-

1. A similar study can be replicated on large sample to draw more definite conclusions.
2. A similar study can be conducted among medical staff.
3. A study can be conducted to assess the effectiveness of phone monitoring regarding follow up among patients.