Study To Assess The Effectiveness of Structured Teaching Program on Knowledge Regarding The Early Identification and Management of Dementia Among Accredited Social Health Activist

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Abstract
A. Introduction: *knowledge of early identification and management of dementia is important to achieve the quality of life of our senior citizens. Hence present study aims to assess the knowledge and to find the effectiveness of planned teaching programs on knowledge regarding early identification and management of dementia among accredited social health activists regarding dementia, as they are the frontline health personnel to early identify and manage by referral services.*

B. Methodology: *A true experimental pretest-posttest with control group study design was adapted, using simple random sampling technique, 30 accredited social health activists were selected of which 15 were in the experimental group, and 15 were in the control group respectively, the data was collected using a knowledge questionnaire consists of 30 questions which were reliable and valid to assess the knowledge of accredited social health activist regarding dementia early identification and management. The pretest was conducted to both the experimental and control group, following which a structured teaching program was given to the experimental group; later, after 30days of the interval, both the experimental and control group were given posttest, obtained scores were analyzed using SPSS 16.0version.*

C. Results: *total 30 accredited social health activists (15 in the experimental group; 15 in the control group), the study found that there was a significant difference in mean pretest-posttest knowledge scores of the experimental group, and there was no change in mean pretest-posttest knowledge scores of the control group. The study revealed structured teaching program was effective in improving the knowledge level of accredited social health activists.*

D. Conclusion: *The study concludes that the structured teaching program was effective in improving the knowledge of accredited social health activists. Training of accredited social health activists regarding dementia is essential and vital for community early referral and management.*

Keywords: *dementia; early identification; management; accredited social health activist; structured teaching program;*

I. INTRODUCTION

The world's population is aging. Improvements in health care in the past century have contributed to people living longer and healthier lives. However, this has also resulted in an increase in the number of people with non-communicable diseases, including dementia. Current estimates indicate 35.6 million people worldwide are living with dementia. This number will double by 2030 and more than triple by 2050. Dementia doesn't just affect individuals. It also affects and changes the lives of family members. Dementia is a costly condition in its social, economic, and health dimensions. Nearly 60 percent of the burden of dementia is concentrated in low- and middle-income countries, and this is likely to increase in coming years[1].

The cost of caring for people with dementia is likely to rise even faster than its prevalence, and thus it is important that societies are prepared to address the social and economic burden caused by dementia[1].

People suffering from dementia usually do know what they want; they just have trouble communicating it properly[2]. There is a lack of awareness and understanding of dementia, at some level, in most countries. It is often considered to be a normal part of aging or a condition for which nothing can be done. This affects people with dementia, their caregivers and families, and their support structure in a number of ways. Low awareness levels contribute to stigmatization and isolation. Poor understanding creates barriers to timely diagnosis and to

accessing ongoing medical and social care, leading to a large gap in treatment[1].

Prevention of disease can involve either their elimination from the lifespan of the individual or their postponement until later in the lifespan. Prevention and management of dementia is the attempt to avoid developing dementia. Although no cure for dementia is available, there are ways of decreasing the risk of developing dementia, including both lifestyle changes and medication.

Prevention and management are key to every public health-related policy. The impressive growth of dementia in terms of incidence and prevalence occurred in the past recent years, and their prospected epidemic marks for the immediate future are not the features characterizing this disease[3]. Awareness of health personnel helps them to find out early signs of dementia and help them to take preventive and management measures[4]. Creating awareness among Accredited Social Health activists will bring a large group of community to early referral services and management, which hampers the development of dementia. Hence present study aims to assess the knowledge and effectiveness of structured teaching programs on knowledge regarding early identification and management of dementia among Accredited Social Health Activists.

II. METHODOLOGY

A true experimental pretest-posttest with control group study design was adapted, using simple random sampling technique, 30 accredited social health activists were selected of which 15 were in the experimental group, and 15 were in the control group respectively, the setting of the study was at District training center where Accredited Social Health Activist will be deputed for the training. The method of data collection was done by structured questionnaire included demographic data and knowledge base question regarding identification and management of dementia, the designed tool consisted of thirty knowledge questions which were reliable and valid. The scoring was done by awarding each correct answer by one score, and each wrong answer was given zero; the maximum score of the questionnaire was thirty, and the minimum score was zero. The obtained scores were assessed for knowledge level by classifying them as inadequate knowledge score between 00 to 15 (less than 50%), moderate knowledge score between 16 to 22 (51% to 75%), and adequate knowledge score between 23 to 30 (more than 75%) respectively. The pretest was conducted to both the experimental and control group following which a structured teaching program was given to the experimental group; later, after 30days of the interval, both the experimental and control group were given posttest, obtained scores were analyzed using SPSS 16.0version to assess the effectiveness of structured teaching program on knowledge of accredited social health activist regarding dementia early identification and management.

III. RESULTS

Table 1: The findings of the demographic variables of the experimental group.

SL NO	DEMOGRAPHIC VARIABLE		EXPERIMENTAL GROUP (n=15)	PERCENTAGE
1	Age	20 to 30 years	9	60.00%
		31 to 40 years	6	40.00%
2	Highest qualification	Primary School	1	6.66%
		High school	10	66.66%
		Pre-university	2	13.33%
		Degree	2	13.33%
3	Annual income	8000	2	13.33%
		10000	11	73.33%
		12000	2	13.33%
4	Marital status	Married	15	100.00%
		Widow	00	00.00%
5	Work experience	One year	4	26.66%
		Two years	5	33.33%
		Three years	2	13.33%
		Four years	2	13.33%
		Five years	2	13.33%
6	Previous training in dementia		NIL	
7	Family member with dementia		NIL	
8	Friend with dementia		NIL	

In the experimental group (Table:1), out of 15 accredited social health activists, 9(60.00%) were in the age group 20 to 30 years, majority of them were having high school 10 (66.66%), as their highest education, 11 (73.33%) of the annual income is ten thousand rupees, all of them were married, all of them had at least one year of previous experience. And none of them had previous training in dementia, none of their family members was living with dementia, and none of their friends had dementia.

Table 2: **The findings of the demographic variables of the control group**

SLNO	DEMOGRAPHIC VARIABLE		CONTROL GROUP (n=15)	PERCENTAGE
1	Age	20 to 30 years	12	80.00%
		31 to 40 years	3	20.00%
2	Highest qualification	Primary School	1	6.66%
		High school	7	46.66%
		Pre-university	4	26.66%
		Degree	3	20.00%
3	Annual income	8000	2	13.33%
		10000	10	66.66%
		12000	3	20.00%
4	Marital status	Married	14	93.33%
		Widow	1	6.66%
5	Work experience	One year	4	26.66%
		Two years	5	33.33%
		Three years	2	13.33%
		Four years	1	6.66%
		Five years	3	20.00%
6	Previous training in dementia		NIL	
7	Family member with dementia		NIL	
8	Friend with dementia		NIL	

In the control group (Table:2), out of 15 accredited social health activists 12(80.00%) were in the age group 20 to 30 years, majority of them were having high school 7(46.66%), SSLC as their highest education, 10(66.66%) of the annual income is ten thousand rupees, 14(93.33%)were married, all of them had at least one year of previous experience. And none of them had previous training in dementia, none of their family members was living with dementia, and none of their friends had dementia.

Table 3: Findings relating to the descriptive statistics knowledge scores of Accredited Social Health Activists regarding early identification and management of dementia in the experimental group.

Knowledge scores (Total 30)	EXPERIEMENTAL GROUP (n=15)				
	Minimum score	Maximum score	Range	Mean	Standard deviation
PRETEST	2	9	7	5.33	1.95
POSTTEST	18	25	7	21.53	2.20

In the experimental group (Table:3), for a total knowledge score of 30, the pretest knowledge score has a minimum score of 2, maximum score of 9, the range at 7, mean of 5.33, and standard deviation of 1.95, and the posttest knowledge score have a minimum score of 18, maximum score of 25, the range at 7, mean of 21.53 and standard deviation of 2.20

Table 4: **Findings relating to the descriptive statistics knowledge scores of Accredited Social Health Activists regarding early identification and management of dementia in the control group.**

Knowledge scores (Total 30)	CONTROL GROUP (n=15)				
	Minimum score	Maximum score	Range	Mean	Standard deviation
PRETEST	4	8	4	6.07	1.22
POSTTEST	4	8	4	6.07	1.22

In the control group (Table:4), for a total knowledge score of 30, the pretest knowledge score has a minimum score of 4, maximum score of 8, the range at 4, mean of 6.07, and standard deviation of 1.22, and the posttest knowledge score have a minimum score of 4, maximum score of 8, the range at 4, mean of 6.07 and standard deviation of 1.22

Table 5: Findings relating to the effectiveness of structured teaching programs on knowledge regarding early identification and management of dementia.

N=30

EXPERIMENTAL GROUP (n=15)					
	MEAN	SD	df	't' value	p-value
PRETEST	5.33	1.95			
POSTTEST	21.53	2.20	14	23.19	0.001
CONTROL GROUP (n=15)					
PRETEST	6.07	1.22	As Mean and Standard Deviation scores are similar, the difference in the mean cannot be computed.		
POSTTEST	6.07	1.22			

SD- standard deviation, **df**-degrees of freedom

In the experimental group (Table:5), the pretest mean ± standard deviation is 5.33 ± 1.95 and posttest mean ± standard deviation is 21.53 ± 2.20 with a degree of freedom is 14, the student t value is 23.19, the p-value is 0.001, The 95% Class Interval of difference mean was between 14.70 to17.69
The difference in the mean signifies that the structured teaching was effective in improving the knowledge scores of accredited social health activists regarding early identification and management of dementia.

In the control group (Table:3), the pretest means ± standard deviation is 6.07 ± 1.22 and posttest mean ± standard deviation is 6.07 ± 1.22, the mean scores of pretest and post-test are similar, hence mean difference cannot be computed, this implies that there was no significant difference in knowledge scores.

Table 6: **Findings relating to the Mean% enhancement of knowledge score of the experimental group.**

MAXIMUM SCORE (30)	EXPERIMENTAL GROUP (n=15)		
	PRETEST MEAN %	POSTTEST MEAN %	MEAN % ENHANCEMENT
	16.66	63.33	46.66 %
	13.33	66.66	53.33 %
	16.66	73.33	56.66 %
	16.66	70.00	53.33 %
	23.33	73.33	50.00 %
	6.66	80.00	73.33 %
	26.66	83.33	56.66 %
	16.66	73.33	56.66 %
	23.33	76.66	53.33 %
	16.66	66.66	50.00 %
	20	60.00	40.00 %
	20	63.33	43.33 %
	6.66	66.66	60.00 %
	30	76.66	46.66 %
	13.33	83.33	70.00 %

In the experimental group (table: 6), the difference of pretest mean% and posttest mean% is mean% enhancement that is 53.99 ± 9.01, which implies that there was a significant improvement in the knowledge of each accredited social health activist regarding early identification and management of dementia.

Table 7: Findings relating to the Mean% enhancement of knowledge score of the control group.

MAXIMUM SCORE (30)	CONTROL GROUP (n=15)		
	PRETEST MEAN %	POSTTEST MEAN %	MEAN % ENHANCEMENT
	16.66	16.66	00.00 %
	20.00	20.00	00.00 %
	20.00	20.00	00.00 %
	16.66	16.66	00.00 %
	23.33	23.33	00.00 %
	20.00	20.00	00.00 %
	13.33	13.33	00.00 %
	26.66	26.66	00.00 %
	23.33	23.33	00.00 %
	16.66	16.66	00.00 %
	16.66	16.66	00.00 %
	23.33	23.33	00.00 %
	26.66	26.66	00.00 %
	23.33	23.33	00.00 %
	16.66	16.66	00.00 %

In the control group (table: 7), the difference of pretest mean% and posttest mean% is zero, which implies that there was no change in their knowledge level regarding early identification and management of dementia and mean% enhancement was equal to zero.

Table 8: Findings relating to the knowledge level of accredited social health activists regarding early identification and management of dementia in the experimental group.

KNOWLEDGE LEVEL			EXPERIMENTAL GROUP (n=15)	
SCORE	PERCENTAGE	INTERPRETATION	PRE TEST	POST TEST
00 - 15	Less than 50%	INADEQUATE	15	-
16 – 22	51% to 75%	MODERATE	-	10
23 - 30	More than 75%	ADEQUATE	-	5

In (Table: 8), out of 15 accredited social health activists in the experimental group, almost all of them had inadequate knowledge scores in the pretest. And in the posttest knowledge score the there were ten accredited social health activists who had moderate knowledge scores and 5 accredited social health activists who had adequate knowledge scores, respectively. This implies that the difference in knowledge level is due to the structured teaching program.

Table 9: Findings relating to the knowledge level of accredited social health activists regarding early identification and management of dementia in the control group.

KNOWLEDGE LEVEL			CONTROL GROUP (n=15)	
SCORE	PERCENT AGE	INTERPRETA TION	PRE TEST	POST TEST
00 - 15	Less than 50%	INADEQUATE	**15**	**15**
16 – 22	51% to 75%	MODERATE	-	-
23 - 30	More than 75%	ADEQUATE	-	-

In (Table: 9), out of 15 accredited social health activists in the control group, all of them has inadequate knowledge levels in pretest and posttest knowledge scores, respectively.

IV. DISCUSSION

The present study found that in both experimental and control groups, the majority of the Accredited Social Health Activists were in the age group of 20 to 30 years, most of them were having high school education, majority of them had an annual income of ten thousand rupees, majority of them were married, all accredited social health activist had at least one year of work experience, none of them had previous training in dementia, none of their family members were living with dementia, and none of their friends were living with dementia.

The study signified that the structured teaching program was effective at student t value 23.19, p-value 0.001 in bringing change in mean knowledge score of accredited social health activists in the experimental group.

The mean% enhancement of the experimental group was 53.99 ± 9.01, which implies that there was a significant improvement in the knowledge of each accredited social health activist regarding early identification and management of dementia. In contrast, the control group had no change in pretest-posttest knowledge mean scores, and the mean% enhancement of knowledge score was zero.

The knowledge level of 15 accredited social health activists in the experimental group showed that in the pretest, almost all of them had inadequate knowledge scores. And in the posttest, out of 15 accredited social health activists, 10 of them had moderate knowledge scores, and 5 had adequate knowledge scores, respectively. And in the control group, out of 15 accredited social health activists, all of them have inadequate knowledge levels in both pretest-posttest knowledge scores, respectively.

V. CONCLUSION

The present study concludes that the structured teaching program was effective in improving knowledge of accredited social health activists; this is proved by comparing the mean knowledge scores of the experimental and control group; the experimental group had a significant change in the mean knowledge score and control group had no change in the mean knowledge scores.

VI. RECOMMENDATION

The study recommends that continuing education by the workshop, training is essential for improving knowledge of Accredited Social Health Activists so that early referral and management can be achieved.

VII. REFERENCES

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