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ORIGINAL ARTICLE

Effectiveness of Structured Teaching Module (STM) On Knowledge Regarding Home Care of Intellectual Disability Children among Primary Care givers in A Special Schools at Tirunelveli District

Jeba T R.Selvam and A R. Bharathi
Principal, Sri Balaji College of Nursing, Cheranmahadevi, Tirunelveli, Tamil Nadu
Bharath Institute of Higher Education and Research, Selaiyur, Chennai- 600073 Tamil Nadu, India.
Department of Nursing, Peri Education,Chennai.
Corresponding Author Mail ID: bharathiar.75@gmail.com

ABSTRACT
Intellectual disability is a fairly disabling and chronic, lifelong condition with no real cure possible. It occurs before age 18 years, experiences significant limitations in two main areas; intellectual functioning and adaptive behavior. Basic functions of primary caregivers are to meet the physical and health needs of their intellectual disability child. When primary caregivers gain information about the condition of the child, they become more able to understand of how to deal with the child and it will be easy for them to take care of the disabled children at home.– A true experimental research design of pre and posttest with control group was adopted for the present study. Simple random sampling technique was used to allocate the groups as experimental and control group (N=60+60=120). Researcher developed the tool and structured teaching module. Validity and reliability was found valid (CVR=1) and reliable (r=0.9). After the pretest structured teaching module was administered to the experimental group whereas control group does not receive any intervention. After a month interval posttest were conducted using the same questionnaire as per schedule. Descriptive and inferential statistics were computed. In the experimental group knowledge scores had consequently improved. ANOVA and Bonferroni were computed since it was repeated measures. The mean score of knowledge in experimental group was statistically significant ($p<0.05$) whereas in control group knowledge scores was not found in significant. Considering the results, structured teaching module is effective in creating awareness of primary caregivers of intellectual disability children.
Key words: *Effectiveness, Structured teaching module, Intellectual disability children, Primary caregivers.*

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INTRODUCTION

Welcoming the newborn baby is the great excitement and expectations of joy and happiness for the family. This expectation may become shattered with the birth of an intellectually disabled child. Having an intellectual disabled child born in a family and grow into adulthood is one of the most stressful experiences a family can endure. Intellectual disability may be one of the most difficult conditions for primary care givers to accept. Worldwide, approximately 156 million people, or 3% of the world's population are intellectually disabled [8]. Census of India (2011) revealed that, 6% or 1.2 million are intellectually disabled. It is estimated that 1, 00,847 persons in Tamilnadu State, and 5195 persons in Tirunelveli District have intellectual disability children [1-3].

Intellectual disability children will most likely not be able to grow up to realize their caregiver's dreams and expectations. The primary caregivers of intellectual disability children require lifelong adjustment. Hence the primary caregivers need guidance through teaching module which is an important aspect of management. The primary caregivers should understand the actual condition of the intellectual disability

child and should avoid attitudes like rejection or over protection. They should not feel guilty, depressed or responsible for the condition. Home is the vital place of care for intellectual disability child. The child may be dependent on the primary caregivers help throughout his or her life. Care giving is a natural aspect of primary caregivers and need to help the child twenty-four hours a day with basic tasks such as feeding, dressing, hygiene etc [4]. While primary caregivers describe the positive benefits that the child with intellectual disability brings to their lives, the care of these children can have a significant impact on the family, the home and on the physical, emotional and mental health of the primary caregivers.

MATERIAL AND METHODS

True experimental research design with the study population comprised of experimental group (60) and control group (60). Simple random sampling technique was used to draw the samples from selected special schools at Tirunelveli District. The tools used for the study were, part I **-** Demographic variables. Part II - Structured knowledge closed ended interview schedule regarding home care of intellectual disability children. This study was approved by the research development committee members from Himalayan University, Ithanagar, Arunachel Pradesh. Formal permission was obtained from the Annai Jothi Seva Trust, Adayakarungulam, and Anbu illam, Cheranmahadevi, Tirunelveli District. The knowledge of primary caregivers was assessed using pretest knowledge questionnaire. After the pre test was done, structured teaching module was given to the primary caregivers on an experimental group consists of 60 primary caregivers of intellectual disability children and discussed. After one-month duration of gap the post test was carried out consequently for three times to the primary caregivers with the same questionnaire and structured teaching module.

RESULTS AND DISCUSSION

Descriptive statistics (mean and SD) and inferential statistics (ANOVA and Bonferonni) were computed for analyzing the results by using SPSS software version 16.

Description of demographic data:

In the experimental group, highest percentage of the caregivers were in the age group of 31 and above (70%), Hindus (65%), had higher secondary schooling (40%), homemaker (96.7%), had income 5001-10000 (81.7%), parents had consanguineous marriage (83.3%), primary caregivers as mothers (98.3%), male child (98.3%), 11-15 years old children (50%), first child (93.3%), below one year disability was recognized (96.7%), moderate level of intellectual disability (76.7%), causes of disability is genetic (95%), child had autism (68.3%), no previous knowledge regarding homecare of intellectual disability (88.3%).

In the control group, the highest percentage of the caregivers were in the age group of 31 and above (83.3%), Hindus (53.3%), had primary schooling (50%), homemaker (100%), had income 5001-10000 (83.3%), parents had consanguineous marriage (80%), primary caregivers as mothers (95%), male child (91.7%), 6-10 years old children (73.3%), first child (98.3%), below one year disability was recognized (91.7%), moderate level of intellectual disability (66.7%), causes of disability is genetic (91.7%), child had autism (61.6%), no previous knowledge regarding homecare of intellectual disability (93.3%).

Table 1: Frequency and percentage distribution of primary care givers according to their Demographic data.

Demographic data	Control group		Experimental group	
	Frequency	Percentage	frequency	Percentage
Primary caregivers detail				
1.Age of care giver (in years):	1	1.6	0	0
20-25	9	15	18	30
26-30	50	83.3	42	70
31 and above				
2.Religion:				
Christian	21	35	17	28.3
Muslim	7	11.6	4	6.67
Hindu	32	53.3	39	65
Others	0	0	0	0
3.Educational status:				
Illiterate	10	16.7	6	10
Primary school	30	50	18	30
Higher secondary school	20	33.3	24	40
Graduate and above	0	0	12	20

4.Occupation:				
Government employee	0	0	0	0
Private sector	0	0	2	3.3
Home maker	60	100	58	96.7
5.Income:				
Below Rs5000	9	15	0	0
Rs.5001-10000	50	83.3	49	81.7
Above 10000	1	1.67	11	18.3
6.Type of marriage:				
Consanguineous marriage	48	80	50	83.3
Non consanguineous marriage	12	20	10	16.7
7.Relationship with the child:				
Mother	57	95	59	98.3
Father	3	5	1	1.7
Others	0	0	0	0
Child's detail:				
8.Sex of the child:				
Male	55	91.7	59	98.3
Female	5	8.3	1	1.7
9.Age of the child:				
1-5 years	1	1.6	4	6.67
6-10 years	44	73.3	26	43.3
11-15 years	15	25	30	50
10.Position of the child with in the family:				
First child	59	98.3	56	93.3
Second child	1	1.7	4	6.7
Last child	0	0	0	0
11. Age in which the disability was first recognized?				
Below 1 year	55	91.7	58	96.7
Above 1 year	5	8.3	2	3.3
12.Level of intellectual disability:				
Mild	16	26.7	9	15
Moderate	40	66.7	46	76.7
Severe	3	5	2	3.3
Profound	1	1.7	3	5
13.Cause of disability:				
Genetic	55	91.7	57	95
Others	5	8.3	3	5
14.Other type of disability exist:				
Blind	10	16.7	3	5
Deaf and dumb	10	16.7	6	10
Autism	37	61.6	41	68.3
Others	3	5	10	16.7
15.Previous knowledge about homecare of intellectual disability:				
Yes	4	6.7	7	11.7
No	56	93.3	53	88.3
16. Previous knowledge about homecare of intellectual disability children:				
Mass media	2	3.3	0	0
Special school	2	3.3	7	11.7
Health personnel	0	0	0	0
No information	56	93.3	53	88.3

Table 2: Comparison of pre and post tests knowledge scores before and after implementation of STM (N=60+60=120)

Level of knowledge	Control group								Experimental group							
	pre test O1		post test O2		Post test O3		Post test O4		pre test O1		post test O2		post test O3		Post test O4	
	F	%	F	%	F	%	F	%	F	%	f	%	F	%	F	%
Poor	37	61.6	39	65	39	65	39	65	36	60	0	0	0	0	0	0
Moderate	22	36.7	16	26.7	16	26.7	16	26.7	23	38.3	12	20	6	10	0	0
Good	1	1.7	5	8.3	5	8.3	5	8.3	1	1.7	48	80	54	90	60	100
Total	60	100	60	100	60	100	60	100	60	100	60	100	60	100	60	100

Table 2 depicts that poor knowledge was found in both experimental group (60%) and control group (61.6%) before the implementation of STM. In the experimental group knowledge scores had consequently improved after the implementation of STM. That is 80% in post test one and 90% in post test two and 100% in post test three. It was observed that in control group post test one, two, and three (8.3%) had good knowledge. From the findings it can be interpreted that STM improved the level of knowledge in the experimental group significantly higher than the control group.

Table 3: ANOVA for repeated measure of knowledge scores of experimental and control groups to assess the effectiveness of STM on home care of intellectual disability children among primary caregivers. [N=60+60=120]

Group	Experimental Group				Control Group			
	Mean	SD	F-Value	P-value	Mean	SD	F-Value	P-Value
Pre test (K_1)	22.03	6.23	602.73	P<0.001***	21.48	7.27	1.94	0.053
Posttest I (K_2)	37.97	3.91			22.28	6.58		
Posttest II (K_3)	39.07	3.63			22.53	6.39		
posttest III (K_4)	41.30	2.42			23.05	6.64		

*-P<0.05 ,significant and **-P<0.01 &***-P<0.001 , Highly significant

ANOVA is a method used to compare the means of repeated measurement. As 'F' test is used to test the null hypotheses that means of all the groups are equal. The data presented in the table 3 depicts that there was significant increase in knowledge scores in the experimental group (F=602.73, P<0.001) than the control group was found (F=1.94, P<0.053).

Table 4: Comparison of knowledge scores within and between experimental and control groups through Bonferroni comparison post hoc test to assess the effectiveness of STM on homecare of intellectual disability children among primary caregivers. [N=60+60=120]

Observations		Experimental Group			Control Group		
		Mean Difference	SE	P-value	Mean Difference	SE	P-value
Pre test (K_1)	Post test I(K_2)	15.9	0.573	0.000***	0.8	0.53	0.837
	Post test II(K_3)	17.03	0.622	0.000***	1.05	0.62	0.589
	Post test III(K_4)	19.26	0.701	0.000***	1.56	0.67	0.139

*-P<0.05, significant and **-P<0.01 &***-P<0.001, highly significant

The Bonferroni test presented in table 4 shows that there was significant difference in knowledge scores from pre test to post tests both in the experimental and control groups (p<0.001). Mean difference was 15.9 to 19.26 in the experimental group and in the control group mean difference was 0.8 to 1.56. Experimental group showed significant improvement in knowledge scores whereas, Bonferroni test showed mean difference was significantly higher in the experimental group than the control group which was minimal. This indicates significant improvement in knowledge among the experimental group.

These findings is supported by a study done by Tara to evaluate the effectiveness of planned teaching programme on home based care for the parents of mentally retarded children in a special school at Mangalore in 2004. The study findings revealed that the mean post test knowledge was significantly higher than the mean pre test knowledge score (t=52.6, p<0.001) showed effectiveness of planned teaching programme in improving the knowledge of parents in home based care of mentally retarded children. The finding is also supported by study done by Chakravorthy in which 30 mothers were given a

planned teaching programme and found that it was effective in increasing the knowledge of mothers. Similarly Traneha concluded that the psycho educational programme based on Roy's adaptation model was effective in improving knowledge of mothers [5-8].

CONCLUSION

The findings of the present study revealed that, on comparison, the post tests knowledge scores were significantly higher than the pre test knowledge score. This indicates that the structured teaching module (STM) on homecare of intellectual disability children was effective in increasing the knowledge of primary caregivers. The study identified that, almost all the primary caregivers were devoid of knowledge before implementation of structured teaching module regarding homecare of intellectual disability children. Hence structured teaching module on homecare of intellectual disability children for primary caregivers will be helpful in increasing the knowledge.

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