EFFECTIVENESS OF STRUCTURED TEACHING MODULE (STM) ON KNOWLEDGE ENHANCEMENT REGARDING HOME CARE AMONG PRIMARY CAREGIVERS FOR INTELLECTUAL DISABILITY IN CHILDREN IN SELECTED SPECIAL SCHOOLS AT TIRUNELVELI DISTRICT OF TAMIL NADU

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ABSTRACT

Introduction: *Intellectual disability is a fairly disabling and chronic, lifelong condition with no real cure possible. It occurs before age 18 years and experiences significant limitations in two main areas; intellectual functioning and adaptive behaviour. Basic functions of primary caregivers in this regard are to meet the physical and health needs of children afflicted with intellectual disability. 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.*

Materials and Methods: *A true experimental research design of pre- and pos-test 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). The researcher developed the tool and structured teaching module. As regards validity and reliability it was found valid (cvr=1) and reliable (r=0.9). The pre-test structured teaching module was administered to the experimental group whereas control group did not receive any intervention. After a month's interval post-test was conducted using the same questionnaire as per schedule.*

Results: *Descriptive and inferential statistics were computed. In the experimental group knowledge scores had consequently improved. ANOVA and Bonferroni were computed since it involved repeated measures. The mean score of knowledge in experimental group was statistically significant ($p<0.05$) whereas in control group knowledge scores were not found significant.*

Conclusion: *Considering the results, structured teaching module was found effective in creating awareness of primary caregivers about intellectual disability in children.*

KEYWORDS: *Effectiveness, Structured teaching module, Intellectual disability children, Primary caregivers.*

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INTRODUCTION

Welcoming the newborn baby is of great excitement and arouses expectations of joy and happiness for the family. This expectation may be shattered with the birth of an intellectually disabled child. Having an intellectually 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 (WHO, 2013). 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.

Children with Intellectual disability will most likely not be able to grow up to realise their caregivers' dreams and expectations. The primary caregivers of children with intellectual disability 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 intellectual disability of a 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 intellectually disabled 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 they need to help the child twenty-four hours a day with basic tasks such as feeding, dressing, hygiene etc. 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.

METHODOLOGY

True experimental research design was adopted with the study population comprising 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 of Tamil Nadu. The tools used for the study were — part I: Demographic variables and Part II: Structured knowledge closed ended interview schedule regarding home care of intellectual disability in children. This study was approved by the research development committee members of Himalayan University at Itanagar in Arunachel Pradesh. Formal permission was obtained from the Annai Jothi Seva Trust, Adayakarungulam, and Anbu illam, Cheranmahadevi in Tirunelveli District. The knowledge of primary caregivers was assessed using pre-test knowledge questionnaire. After the pre-test was done, structured teaching module was given to the primary caregivers of an experimental group consisting of 60 primary caregivers of intellectually disabled children and was discussed. After a gap of one month the post-test was carried out consecutively for three times on the primary caregivers with the same questionnaire and structured teaching module.

FINDINGS AND INTERPRETATIONS

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

Description of demographic data:

In the experimental group, highest percentage of the caregivers was in the age group of 31 and above (70%), Hindus (65%), had higher secondary schooling (40%), homemakers (96.7%), had income Rs.5001-10000 (81.7%), parents having 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 recognised (96.7%), moderate level of intellectual disability (76.7%), causes of disability being genetic (95%), child having 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%), having primary schooling (50%), homemakers (100%), having income Rs.5001-10000 (83.3%), parents having 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 recognised (91.7%), moderate level of intellectual disability (66.7%), causes of disability being genetic (91.7%), child having 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

Sl. No.	Demographic data		Control group		Experimental group	
	Primary caregivers detail:		Frequency	Percentage	frequency	Percentage
1.	Age of care giver (in years):	20-25	1	1.60	0	0
		26-30	9	15.00	18	30.00
		31 and above	50	83.30	42	70.00
2.	Religion:	Christian	21	35.00	17	28.30
		Muslim	7	11.60	4	6.67
		Hindu	32	53.30	39	65.00
		Others	0	0	0	0
3.	Educational status	Illiterate	10	16.70	6	10.00
		Primary school	30	50.00	18	30.00
		Higher secondary school	20	33.30	24	40.00
		Graduate and above	0	0	12	20.00
4.	Occupation	Government employee	0	0	0	0
		Private sector	0	0	2	3.30
		Home maker	60	100.00	58	96.70
5.	Income	Below Rs5000	9	15.00	0	0
		Rs.5001-10000	50	83.30	49	81.70
		Above 10000	1	1.67	11	18.30
6.	Type of Marriage	Consanguineous marriage	48	80.00	50	83.30
		Non consanguineous marriage	12	20.00	10	16.70
7.	Relationship with the child	Mother	57	95.00	59	98.30
		Father	3	5.00	1	1.70
		Others	0	0	0	0
	Child's detail:					
8.	Sex of the child	Male	55	91.70	59	98.30
		Female	5	8.30	1	1.70
9.	Age of the child	1-5 years	1	1.60	4	6.67
		6-10 years	44	73.30	26	43.30
		11-15 years	15	25.00	30	50.00
10.	Position of the child with in the family:	First child	59	98.30	56	93.30
		Second child	1	1.70	4	6.70
		Last child	0	0	0	0
11.	Age in which the disability was first recognised	Below 1 year	55	91.70	58	96.70
		Above 1 year	5	8.30	2	3.30

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

Sl. No.	Demographic data		Control group		Experimental group	
12.	Level of intellectual disability	Mild	16	26.70	9	15.00
		Moderate	40	66.70	46	76.70
		Severe	3	5.00	2	3.30
		Profound	1	1.70	3	5.00
13.	Cause of disability	Genetic	55	91.70	57	95.00
		Others	5	8.30	3	5.00
14.	Other type of disability exist	Blind	10	16.70	3	5.00
		Deaf and dumb	10	16.70	6	10.00
		Autism	37	61.60	41	68.30
		Others	3	5.00	10	16.70
15.	Previous knowledge about homecare of intellectual disability:	Yes	4	6.70	7	11.70
		No	56	93.30	53	88.30
16.	Previous knowledge about homecare of intellectual disability of children	Mass media	2	3.30	0	0
		Special school	2	3.30	7	11.70
		Health personnel	0	0	0	0
		No information	56	93.30	53	88.30

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	65.0	39	65.0	39	65.0	36	60.0	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	100.0	60	100.0	60	100.0	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 (1) and 90% in post test (2) and 100% in post test (3). It was observed that in control group of post-test (1), (2) and (3) [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 efficacy of STM on home-care among primary caregivers for intellectual disability in children

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
Post-test I (K_2)	37.97	3.91			22.28	6.58		
Post-test II (K_3)	39.07	3.63			22.53	6.39		
Post-test 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, whereas 'F' test is used to test the null hypothesis which means 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 which 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 efficacy of STM among primary caregivers, on homecare for intellectual disability in children.

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)	15.90	0.573	0.000***	0.80	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 where it was minimal. This indicates significant improvement in knowledge among the experimental group.

These findings are 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) showing 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 the study done by Chakravorthy in which 30 mothers were given a planned teaching programme and 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.

CONCLUSION

The findings of the present study revealed that, on comparison, the post-test knowledge scores were significantly higher than the pre-test knowledge score. This indicates that the structured teaching module (STM) on homecare of

intellectual disability in 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 in children. Hence structured teaching module on homecare of intellectual disability in children for primary caregivers will be helpful in increasing the knowledge.

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