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A Quasi Experimental Study to Evaluate the Effectiveness of Self-Instructional Module on Stress, Coping and Burden among Primary Care Givers of Mentally Retarded Children in Selected Rehabilitation Center at Kudal, Maharashtra

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Abstract: ***A quasi experimental study was conducted to evaluate the effectiveness of self-instructional module on stress, coping and burden among primary care givers of mentally retarded children in selected rehabilitation center at Kudal, Maharashtra. The objectives of the study were to assess the stress, coping and burden of primary caregivers of mentally retarded children, to evaluate the effectiveness of self-instructional module on stress coping and burden of primary caregivers of mentally retarded children, to determine the correlation between the stress coping and burden of primary care givers of mentally retarded children, to determine the association between the stress coping and burden of care givers with their selected demographic variables. An evaluative approach was used to evaluate the effectiveness of the self-instructional module. The study design was one group pre-test post-test design was used. The sample for the present study was primary care givers of mentally retarded children from Sri Sairup Rehabilitation center Kudal. The sample size for this study was 30 primary care givers selected with non-probability Purposive Sampling Technique. The inclusion criteria for the present study was Primary care givers of mild and moderatementally retarded children, Both male and female primary care givers of mentally retarded children and exclusion criteria was Primary care givers of mentally retarded children with psychiatric co-morbidity. The tools for this consist of socio-demographic Performa, Perceived stress scale, Coping Self – Efficacy Scale, Career Burden Interview & Visual Analogue Scale for stress. The data will be collected from the structured interview schedules were used to obtain data from primary care givers of the mentally retarded children. Questionnaire was administered for and each of the primary care givers and the investigator interviewed them individually. The self-instructional module was administered after the pre-test. The same pre-test questionnaires were used for post-test. It was conducted on the 8th day after pre-test. The result of the study shows that Age of caregivers is significantly associated with their reduction score F=2.87 P=.0.05. Elder mothers are having more reduced stress than others. These types of association are statistically significant and it was calculated using one way ANOVA /independent t-test &there is significant positive, fair correlation between stress scores of perceived stress scale and visual analogue scale. The study concluded that association between perceived stress reduction score and age of caregivers is significantly associated with their reduction score. Elder mothers are having more reduced stress than others&the post-test perceived stress scale and visual analogue scale had r=-0.36 with P=0.04 showing a significant, positive fair correlation between the two.***

Keywords: Stress, Coping, Primary care givers, mentally retarded children, rehabilitation center

1. Introduction

1) Statement of the Problem

"A quasi experimental study to evaluate the effectiveness of self-instructional module on stress, coping and burden among primary care givers of mentally retarded children in selected rehabilitation center at Kudal, Maharashtra"

2) Objectives

a) To assess the stress, coping and burden of primary caregivers of mentally retarded children.
b) To evaluate the effectiveness of self-instructional module on stress coping and burden of primary caregivers of mentally retarded children.
c) To determine the correlation between the stress coping and burden of primary care givers of mentally retarded children
d) To determine the association between the stress coping and burden of care givers with their selected demographic variables.

3) Assumption

The assumption is that primary care givers of mentally retarded children will experience stress and burden which leads to coping problems in caring for their child and that by administering a self-instructional module will improve their coping and reduce their stress and burden.

4) Hypothesis

$H0_1$: There is no significant difference between stress, coping and burdenof the primary care givers of the mentally retarded children beforeand after the administration of self-instructional module.

$H0_2$: There is no significant correlation between stress, coping and burden of the primary care givers of the mentally retarded children before and after the administration of self-instructional module.

$H0_3$: There is no significant association between stress, coping and burden ofthe primary care givers of mentally retarded children and their selected demographic variables.

2. Methodology

1) Research Approach

Evaluative Research Approach

2) Research Design
Quasi experimental research design – One group pre-test post-test design.

3) Variables

Independent Variables
The independent variables in this study are the self-instructional module administered to the primary caregiversof the mentally retarded children to bring about the change in the stress, coping and burden.

Dependent Variables
The dependent variables in this study are stress, coping and burden of primary caregivers of mentally retarded children.

Extraneous Variables
Some of the extraneous variables in this study are age, gender, religion, educational status, family income, occupational status, family type.

4) Setting of the Study
Sri Sairup Rehabilitation center Kudal.

5) Population
The target population for the present study isprimary care givers of mentally retarded children in selected rehabilitation center at Kudal.

6) Sample & Sampling Technique
The sample in the study Primary care givers of mentally retarded children in selected rehabilitation center. The sample size for this study was30 primary care givers selected with non-probability Purposive Sampling Technique

7) Criteria for Selection of Sample
Inclusion Criteria
1) Primary care givers of mild and moderatementally retarded children.
2) Both male and female primary care givers of mentally retarded children
3) Primary care givers of mentally retarded children who are willing to participate in the study.
4) Primary care givers of mentally retarded children, who can read, speak andunderstand Kannada or English.
5) Primary care givers of mentally retarded children who are available at the time ofdata collection.

Exclusion Criteria
1) Primary care givers of mentally retarded children with psychiatric co-morbidity.
2) Primary care givers of mentally retarded children who already have undergonetraining to care for mentally retarded children.
3) Primary care givers of severe and profound mentally retarded children.

8) Description of Tool
The tools selected by the investigator for this study are as follows:
1) Socio – demographic Profile (was developed for the present study)
2) Perceived stress scale by Cohen, Kamarch and Mermelstein.
3) Coping Self – Efficacy Scale by Chesney, Folkman, Neilands, Chambers and Taylor.
4) Career Burden Interview by Zarit.
5) Visual Analogue Scale for stress

9) Procedure for Data Collection of the Main Study
The structured interview schedules were used to obtain data from primary care givers of the mentally retarded children. Questionnaire was administered for and each of the primary care givers and the investigator interviewed them individually. The self-instructional module was administered after the pre-test. The same pre-test questionnaires were used for post-test. It was conducted on the 8th day after pre-test.

10) Plan for Data Analysis
Organization of data in master sheet.The Demographic variables in categories will be given in frequencies with their percentages.Stress, coping and burden score will be given in mean and standard deviation.Association between demographic variables and Stress, coping and burden scorewill beanalyzed using one-way ANOVA F-test and independent t-test. Pretest and posttest differences will beanalyzed using Student's paired t-test.

3. Result

Section I: Distribution of demographic profile

Section II: Level of stress, coping and burden of caregivers of mentally retarded children.

Pre-test level of stress, coping and burden of primary caregivers of mentally retarded children.

Section III: Effectiveness of Self-instructional module on stress burden and coping.
1) Post-test level of stress, coping and burden of primary caregivers of mentally retarded children.
2) Comparison of pre-test and post-test based on the mean score of primary caregivers of mentally retarded children.
3) Comparison of pre-test and post test scores based on mean difference.

Section IV: Correlation between stress, coping and burden of primary caregivers ofmentally retarded children.

Section V: Association between the stress, coping and burden of primary care givers ofmentally retarded children and their selected demographic data.

Section VI: Correlation between stress scores of perceived stress scale and visualanalogue scale.

Section I: Distribution of demographic Profile

Table1: Showing Demographic Profile of Primary care givers

Characteristics	Category	No. of care givers	%
Age	< 20 yrs	6	20.0%
	21 -30 yrs	7	23.3%
	31 -40 yrs	9	30.0%
	41 -50 yrs	8	26.7%
Gender	Male	12	40.0%
	Female	18	60.0%
Marital status	Married	16	53.3%
	Single	12	40.0%
	Widowed	1	3.3%
	Separated but not divorced	1	3.3%
Educational status	Illiterate	2	6.7%
	School education	13	43.3%
	Diploma	10	33.3%
	Graduate	5	16.7%
Religion	Hindu	9	30.0%
	Muslim	4	13.3%
	Chirstian	6	20.0%
	Sikh	4	13.3%
	Jain	7	23.3%
Occupation status	Unemployed	2	6.7%
	Unskilled worker	5	16.7%
	Office worker	4	13.3%
	Professional	6	20.0%
	Housewife	8	26.7%
	Students	5	16.7%
Income	< Rs.5000	11	36.7%
	Rs. 5001 – 10000	7	23.3%
	Rs.10001 – 15000	10	33.3%
	Rs.15001 – 20000	2	6.7%
Relationship with the care receiver	Mother	9	30.0%
	Father	6	20.0%
	Sister	7	23.3%
	Brother	1	3.3%
	Others	7	23.3%
Have you cared for the mentally ill patient earlier	Yes	3	10.0%
	No	27	90.0%
Duration of illness of the child	Less than 1 year	2	6.7%
	3-5 years	1	3.3%
	More than 5 years	27	90.0%

Section II: Level of stress, coping and burden of primarycaregivers of mentally retarded children

1) Pre-test level of stress, coping and burden of primary caregivers of mentally retarded children.

Table 2: Pre Test Scoreof stress coping and burden of primary care givers

	Min –Max score	Pretest score	
		Mean score	%
Stress (Perceived stress)	0 -56	25.87	46.2%
Coping	0 -260	160.23	61.6%
Burden	0 -88	30.70	34.9%
Stress (VAS)	0 -10	4.90	49%

The primary caregivers pretest scores are as follows; stress assessed by Perceived Stress scale has a mean score of 25.87 i.e. 46.2%,Coping has a mean score of 160.25 i.e. 61.6%, burden interview has a mean score of 30.70 i.e. 34.9% and stress assessed by Visual analogue scale has a mean score of 4.90 i.e. 49%.

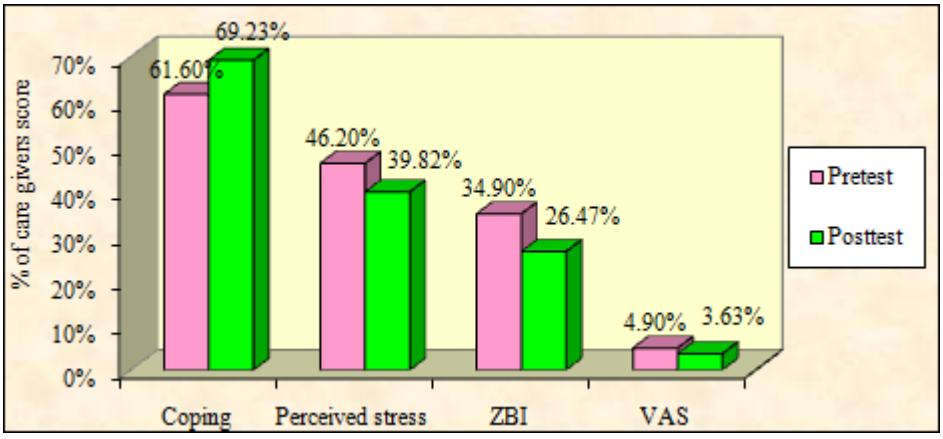
Section III: Effectiveness of Self-instructional module on stress burden and coping.

1) Post-test level of stress, coping and burden of primary caregivers of mentally retarded children.

Table 3: Post Test Score of stress coping and burden of primary care givers

	Min –Max score	Posttest score	
		Mean score	%
Stress (Perceived stress)	0 -56	22.30	39.82%
Coping	0 -260	180.70	69.23%
Burden	0 -88	23.30	26.47%
Stress (VAS)	0 -10	3.63	36.3%

The primary caregivers post test scores are as follows: Stress assessed by Perceived stress scale has a mean score of 22.30 i.e. 39.82%, Coping has a mean score of 180.70 i.e. 69.23% , Burden has a mean score of 23.30 i.e. 26.47% and stress assessed by visual analogue scale has a mean score of 3.63 i.e. 36.3%.

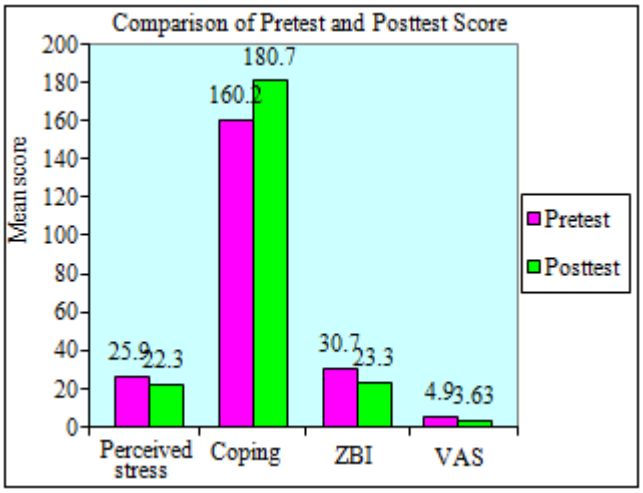


Bar diagram showing comparison of pretest and post test scores expressed in mean percentage

Comparison of pre-test and post-test based on the mean score of primary caregivers of mentally retarded children.

Table 4: Comparison of Pretest and Posttest Score expressed in mean score

	Pretest		Posttest		Students paired t-test
	Mean	SD	Mean	SD	
Stress (Perceived stress)	25.87	6.34	22.30	5.91	t=6.80 P=0.001
Coping	160.23	26.90	180.70	22.06	t=4.72 P=0.001
Burden	30.70	10.40	23.30	11.00	t=10.07 P=0.001
Stress (VAS)	4.90	2.93	3.63	2.58	t=7.99 P=0.001



Comparison of pre and posttest stress, coping, burden and VAS mean score

1) Comparison of pre-test and post test scores based on mean difference.

Table 5: Comparison of pre-test and post test scores based on mean difference.

	Posttest	Pretest	Difference	% of benefit from base line
Stress (Perceived stress)	22.30	25.87	-3.57	-13.8%
Coping	180.70	160.23	20.47	12.8%
Burden	23.30	30.70	-7.40	-24.1%
Stress (VAS)	3.63	4.90	-127	-25.9%

Section IV: Correlation between stress, coping and burden of primary caregivers of Mentally retarded children

Table 6: Pretest Correlation between Coping, Stress and Burden

	Mean ±SD	Karl pearson correlation coefficeint	Interpretation
Coping Vs perceived stress	160.23±26.89 25.87±6.34	r=-0.11 P=0. 13	Not significant, negative poor correlation
Coping Vs Burden	160.23±26.89 30.70±10.39	r=-0.18 P=0.22	Not significant, negative poor correlation
Coping Vs VAS	160.23±26.89 4.90±2.92	r=-0.17 P=0.35	Not significant, negative poor correlation

Table 6 shows that there is a negative poor correlation between coping, stress and burden which is not significant.

Table 7: Posttest Correlation between Coping, Stress and Burden

	Mean ±SD	Karl pearson correlation coefficeint	Interpretation
Coping Vs perceived stress	160.23±26.89 25.87±6.34	r=-0.22 P=0.05	significant, negative fair correlation
Coping Vs Burden	160.23±26.89 30.70±10.39	r=-0.361 P=0.01	significant, negative fair correlation
Coping Vs VAS	160.23±26.89 4.90±2.92	r=-0.43 P=0.01	significant, negative moderate correlation

Table 7 shows that there is a significant negative fair correlation between coping and perceived stress and coping and burden while there is a significant negative moderate correlation between coping and stress scores of visual analogue scale.

Section V: Association between the stress, coping and burden of primary caregivers of mentally retarded children and their selected demographic data.

a) Association between Demographic Variables and Perceived Stress Reduction Score

Age of caregivers is significantly associated with their reduction score F=2.87 P=.0.05. Elder mothers are having more reduced stress than others. These types of association are statistically significant and it was calculated using one way ANOVA /independent t-test.

b) Association between Demographic Variables and Coping Gained Score

The association between coping gain score and care givers demographic variables. Age (F=3.36 P=0.03) and monthly income of caregivers (F=3.25 P=0.03) are significantly associated with their gained score. Elder mothers are having more gain score than others. Middle income group care givers gained more than others.

c) Association Between Demographic Variables and Burden Reduction Score

The association between Burden reduction score and care givers demographic variables. Age (F=3.32 P= 0.04) and duration of illness of the child of caregivers (F=9.09 P=0.001) aresignificantly associated with their reduction score. Elder mothers are having more reduced burden score than others. Less than one year child care givers having more reduced score than others these type of association are statistically significant and it was calculated using oneway ANOVA /independent t-test.

d) Association Between Demographic Variables And Vas Stress Reduction Score

The associations between VAS stress reduction score and care givers demographic variables. Sex (F=2.09 P=0.04) and education status of caregivers (F=3.18 P=0.04) is significantly associated with their reduction score. Male care givers are having more reduced VAS score than others. More educated having more reduced score than others these type of association are statistically significant and it was calculated using one way ANOVA /independent t-test. The null hypothesis H_{03} states that there is no significant association between stress, coping and burden of the primary care givers of mentally retarded children and their selected

demographic variables. Hence the null hypothesis is Rejected.

Section VI: Correlation between stress scores of perceived stress scale and visual analogue scale.

Table 8: Pretest Correlation Between stress scores of perceived stress scale and visual analogue scale

	Mean ±SD	Karl pearson correlation coefficeint	Interpretation
Perceived Vs VAS	25.87±6.34 4.90±2.92	r=0.08 P=0. 33	Not significant, positive poor correlation

Table no 8 shows that there is a positive poor correlation between perceived stress scale and visual analogue scale (r=0.08, P=0.33) but it is not significant,

Table 9: Posttest Correlation Between stress scores of perceived stress scale and visual analogue scale

	Mean ±SD	Karl pearson correlation coefficeint	Interpretation
Perceived Vs VAS	25.87±6.34 4.90±2.92	r=0.36 P=0. 04	significant, positive, fair correlation

Table no. 9 shows that there is significant positive, fair correlation between stress scores of perceived stress scale and visual analogue scale.

4. Discussion

In this study stress, coping and burden score were given in mean and standard deviation. The primary caregivers pretest stress has a mean score of 25.87 i.e. 46.2%, coping has a mean score of 160.25 i.e. 61.6%, burden has a mean score of 30.70 i.e. 34.9% and visual analogue scale for stress showed a mean score of 4.90 i.e. 49%. This explains that the percentage of coping was more and stress and burden was less.

The primary caregivers post-test stress has a mean score of 22.30 i.e. 39.82%, coping has a mean score of 180.70 i.e. 69.23%, burden has a mean score of 23.30 i.e. 26.47% and visual analogue scale to assess the level of stress has a mean score of 3.63 i.e. 36.3%. This also shows that the coping is more and the stress and burden is reduced.

In all the aspects, caregiversimproved after the administration of Self Instructional Module.

Considering perceived stress score, in pretest, care givers scored 25.87, after SIM they have scored 22.30, so the difference is 3.57. The difference between pre and post- test score is large and it is statistically significant. Considering coping, in pretest, care givers scored 160.23, after SIM they have scored 180.70, so the difference is 20.47. The difference between pre and post- test score is large and it is statistically significant.

Considering burden, in pretest, care givers scored only 30.70, after SIM they scored 23.30, so the difference is 7.4. The difference between pre and post- test score is large and it is statistically significant. Considering VAS score, in pretest, care givers scored only 4.90, after SIM they scored 3.63, so the difference is 1.27. The difference between pre and post- test knowledge score is large and it is significant. Statistical significance was calculated by using student's Paired 't' test.

Pretest and posttest differences wereanalyzed using student's paired t-test. The data analyzed showed that the caregivers coping gained by12.8% and Perceived stress, burden and VAS has reduced significantly after administration of SIM.

The present study was supported by a study conducted by Elaine Susan Book, (1994), on a course for caregivers: group work as an intervention with family caregivers of hospitalized elderly. The study highlights the significance of individual differences in caregiving situations and in the experience of caregiver stress.

5. Conclusion

- Association between perceived stress reduction score and age of caregivers is significantly associated with their reduction score.Elder mothers are having more reduced stress than others.
- Association between coping gain score, age and monthly income of caregivers is significantly associated with their gained score. Elder mothers are having more gain score than others. Middle income group care givers gained more than others.
- Association between burden reduction score, age and duration of illness of the child of caregivers is significantly associated with their reduction score. Elder mothers are having more reduced burden score than others. Less than one year child care givers having more reduced score than others.
- Association between VAS stress reduction score, sex and education status of caregivers is significantly associated with their reduction score. Male care givers are having more reduced VAS score than others. Higher education status has increased reduced score than others.
- In the post test perceived stress scale and visual analogue scale had r=-0.36 with P=0.04 showing a significant, positive fair correlation between the two.

6. Recommendations

Keeping the limitations in mind as well as the salient findings of the study, few suggestions were offered for further research by the nurse researcher.

1) A similar study may be conducted on a larger sample for wider generalization.
2) Comparison could be done with the normal population and within the population.
3) An experimental study can be undertaken with control group for effective comparison.
4) A study can be conducted to evaluate various teaching strategies like Structured Teaching Programme, information booklet.
5) A longitudinal study could be planned through the transitional period of the children. The stress, coping and

burden during these developmental stages could be studied.

6) A comparative study could be planned to study the difference in stress and coping in single parent family and children with both parents.

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