Effectiveness of Empowerment Programme on Stress and Care Giving Burden among Care Givers of Chronically Ill Patients Admitted in MMIMS&R Hospital, Mullana Ambala, Haryana

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Abstract

Background- One of the most compassionate and self-sacrificing things a person can do is care for a sick loved one. Caring for a family member with impaired mental and behavioral functioning presents the most stressful of care giving situations. Keeping family caregivers healthy and able to provide care is crucial to maintaining our nation's long-term healthcare system.

Aims – To assess the effectiveness of Empowerment programme regarding stress and care giving burden among care givers of chronically ill patients in experimental and comparison group.

Material and Methods - A Quasi Experimental non Equivalent control group pretest post test design. 95 care givers of chronically ill patients (50 in experimental and 45 in comparison group) selected from hospital by using convenience sampling technique. Empowerment programme was administered in experimental group. Selected demographic characteristics, standardized perceived stress scale and standardized care giver burden scale were used to collect data.

Results- The study showed that the mean post test 1 and post test 2 stress score was 12.44 ± 2.10 & 12.26±2.05 and 14.11 ± 3.11 & 14.40± 3.12 in experimental and comparison group respectively. There was no significant correlation between stress and care giving burden .There was no association of care giving burden score of the care givers in experimental and comparison group with their selected patient demographic characteristics and there was no significant association of care giving burden scores with their selected care giver demographic characteristics in experimental group and in comparison group except gender.

Conclusion- Empowerment programme was effective in reducing stress and care giving burden among care givers of chronically ill patients

Keywords- *Effectiveness, Empowerment programme, Stress, Care giving burden*

Introduction

A chronic condition "is a physical or mental health condition that lasts more than one year and causes functional restrictions or requires ongoing monitoring or treatment". Chronic diseases includes cancer, diabetes, hypertension, stroke, heart disease, respiratory diseases, arthritis, obesity, and oral diseases which can lead to hospitalization, long-term disability, reduced quality of life, and death and requires care giving. The experience of caring for a sick family member can represent a great burden on the caregiver, leading to deprivation and changes in family dynamics

Around 68 millions Indians and 95 lakhs people of Haryana caregivers provide extensive help to impaired relatives with chronic illness. This is also because they are unprepared to provide care, have inadequate

knowledge about care giving.

Caregivers' tasks include both direct assistance (e.g., helping with activities of daily living, medication and lifestyle management) and less visible tasks such as assessing symptoms and follow health care systems.[1,2] The demands of care giving often get additional stressors in caregivers' lives, commonly referred to as caregiver burden.[3,4,5]

It has been shown that long-term chronic illnesses create an even greater burden on the family in comparison to acute illnesses.[6] Caregivers of patients with chronic physical illnesses often experience feelings of isolation and fatigue related to their increased responsibilities and challenges.[7] Caregivers experience high levels of burden due to immense physical, psychological, and economic strain, facing not only stresses of care giving but also the impending death of a loved one.[8,9] Caregiver burden has been explained as a multidimensional response to the negative appraisal and perceived stress resulting from caring sick individuals. Keeping caregivers healthy and able to provide care is crucial to maintain our nation's long-term healthcare system.

If caregivers remain healthy, the quality of life for care recipients will substantially improve.[9] It is important to reduce the burden of the care giver by training them how to do personal care (bathing, feeding, toilet, dressing etc.) properly in order to save their time and care giving burden. So that they can do all these activities effectively and by following all steps of the daily care procedures. Empowerment programme can be helpful in reducing care giving burden of the care givers of the chronically ill admitted patients.[10]

There are few studies in the literature, however, that has investigated the effect of PMR exercises and skill training programme on the care giving related stress and care giving burden for care givers. Thus, this study aimed to assessing the effect of empowerment programme and PMR technique on reducing stress and care giving burden among caregivers of chronically ill patients.[11]

Materials & Method

A Quasi - Experimental design (non-equivalent control group pre-test- post-test design) was used to achieve the objectives of this study. Power analysis was used to select the sample size. The sample included 95 care givers were selected using the convenience sampling method. (50 in experimental group and 45 in comparison group) for this study.

Formal administrative approval was obtained from the Medical Superintendent and ethical committee of MM (Deemed to be University), Mullana, Ambala (Letter Number IEC- 1511) to conduct the final study. Ninety care givers were selected using the convenience sampling method. (50 in experimental group and 45 in comparison group) for this study. Research participants were enrolled in the study after written informed consent and they were assured about the confidentiality of their response. Permission for pilot study was taken from the Medical Superintendent of MMIMS&R Hospital, Ambala. Permission for final study was taken from the Medical superintendent of MMIMS&R Hospital Consent was prepared and filled for the study subjects regarding their willingness to participate in the research study. Purpose of the study was explained to the sample subjects before data collection.

Data Collection

For data collection, the research team initially developed a demographic characteristics in two parts after an extensive review of the relevant literature to achieve good content validity. It consist of 10 items related to demographic characteristics of patient and care giver i.e. age, gender,religion, marital status, education, occupation, income, type of family, area of residence, family history, duration of illness , use of any relaxation technique. Two another standardarized tools were used to collect data. Perceived stress scale was a standardized tool used by researcher to assess the stress. There were total 10 items in the tool each item is having maximum marks 4 and minimum mark 0. Care giver burden scale was a standardized tool and it included 22 statements refer to how much burden a care giver feels while

taking care of their patient. Per statement care giver can choose one out of four option categories, varying from lowest score as 1 and highest to 4. Application of intervention was proceeded by administration of Empowerment programme for 4 days to each care giver, The empowerment programme included Progressive muscle relaxation technique session for 4 days daily along with administration of video of orientation to various important places of hospital, demonstration of oral care and bed bath procedure to the care givers and group discussion regarding management of stress , financial burden, diet management and personal hygiene of caregiver.

Intervention was pre evaluated by the experts before proceeding for administration.

To insure content validity, the tool was submitted to 9 experts: 3 from mental health nursing department, 6 from medical surgical department. The experts were requested to review and judge the items of adequacy and relevancy. The scale content validity was calculated by averaging item content validity index. The acceptable range of validity is 0.7 – 1. The tools were found to be valid for the study.

To assess the suitable sample size, a power analysis was performed. It was done with the help of formula Cohen's d i.e. μ 1 -_μ2 / SD where μ 1 was mean score of non-randomized control group, μ2 was mean score of non-randomized experimental group and S.D. was pooled standard deviation of both groups. The estimated effect size was 0.63 at the power of 0.80 , the recommended sample for each group was 44. 10% extra sample was taken from the calculated sample size. Thus a total of 105 caregivers were included in the study. Due to attrition during data collection time the final sample size was 95 care givers (50 in experimental group and 45 in comparison group). Pre test was conducted in both the groups. Empowerment programme was administered in experimental group and routine care was carried out. In comparison group post test 1 was taken on day 4 and post test 2 was taken on day 13-17. In experimental group, post test 1 was taken on day 4 immediately after completion of intervention and post test 2 was taken on day 13-17.

Data Analysis

To analyze data, descriptive tests, including frequency, percentage, mean, and standard deviation (SD) and analytical tests, including the Kolmogorov–Smirnov test was conducted to indicate that the data were sampled from a population with a normal distribution. The correlation between stress and care giving burden mean score was examined by the Pearson correlation coefficient, and ANOVA for repeated measuring using the SPSS software (version 20). There was a significant difference at the level of $P < 0.05$.

Results

The results showed that less than half (44%) of the patients were in age group of 36 -51 years in experimental group and one third (33.3%) of them were in age group of 52-67 years in comparison group. More than half of them (54%) in experimental group were females and 53.3% in comparison group were males. All the patients (100%) had surgical diagnosis in experimental group and medical diagnosis in comparison group. One third of the patients (32%) in experimental group and comparison group (33.3%) were having 8-11 months duration of illness. Most of the patients (72%) in experimental group and (73.3%) in comparison group were married. More than half (56%) in experimental group and 55.6% in comparison group of the patients visit to hospital in a month. Also the result showed that half of the care givers (50%) in experimental group and less than half (42.2%) in comparison group of the care givers were spouse. More than one third of the care givers (36%) were in 18-33 years of age in experimental group and less than half of the care givers (44.4%) were in 34-49 years of age in comparison group. More than half group (58%) of the care givers in experimental and more than half (55.6%) of the care givers were in comparison group were females.

Less than half of the scaregivers (42%) in experimental group were having 5th pass education and

in comparison group one third of the care givers (33.3%) were non literate. Less than one third of the care givers (30%) in experimental group were having private job and 26.7% in comparison group were farmers. Less than half of the care givers (44%) in experimental group had 7000-8000rupees income per month and 40% in comparison group had 9001-10,000 rupees income per month. More than half of the caregivers (58%) in experimental group and (53.3%) in comparison group belonged to nuclear family. All care givers (100%) in both the groups were not using any type of relaxation technique.

Frequency and Percentage Distribution of Experimental and Comparison group in terms of Level of Stress among Caregivers of Chronically ill Patients before administration of Empowerment Programme

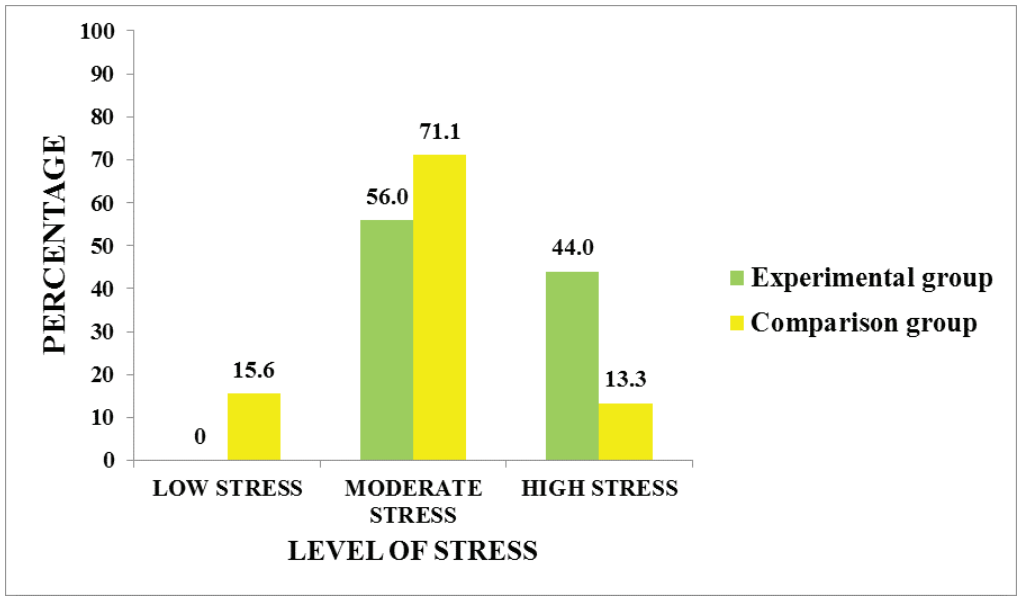

Figure 1 Bar diagram showing Level of Stress among Caregivers of Chronically ill patients before administration of Empowerment Programme

Frequency and Percentage distribution showing Comparison of Experimental and Comparison group in terms of level of Care Giving Burden among Caregivers of Chronically ill Patients before administration of Empowerment Programme

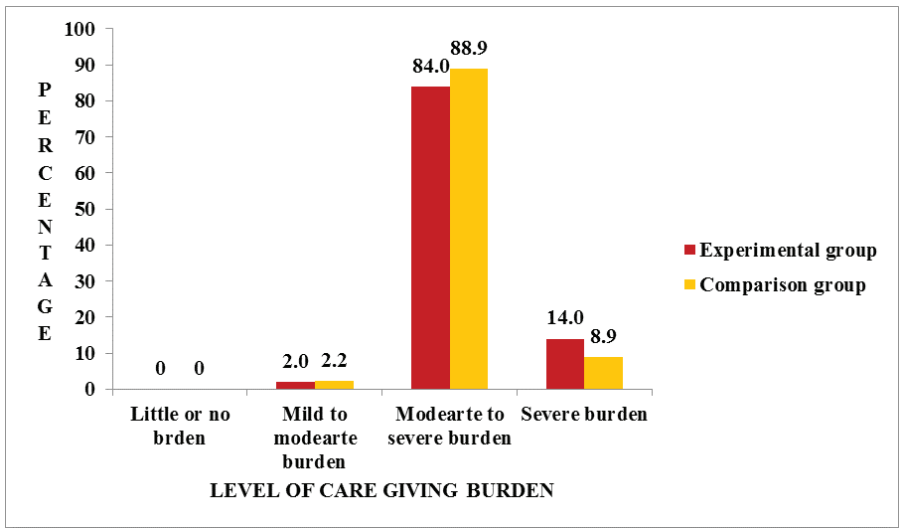

Figure 2 Bar diagram showing level of care giving burden among Caregivers of Chronically ill Patients before administration of Empowerment Programme.

Research findings showed that the comparison of mean stress among care givers before the administration of empowerment programme in experimental and comparison group by using independent 't' test. The calculated 't' value was found to be statistically significant ('t (93) =1.98; p=0.00*) which showed the difference between stress score was significant in both the groups and the comparison of mean score of care giving burden score among care givers before the administration of empowerment programme in experimental and comparison group by using independent 't' test. In the experimental group, the mean pre-test care giving burden score of care givers was found to be 54.94 ± 4.683 and 52.73 ±8.097 in comparison group before the administration of empowerment programme with the mean difference of 2.206 and standard error of mean difference was 1.34. The calculated 't' value was found to be (t(93) =1.98; p=.150NS) statistically non significant which showed that the difference between care giving burden score was non significant in both the groups.

Research results revealed that post test 1 and post test 2 stress score ranged from 8-18 & 8-16 in experimental and 9-21 &10-21 in comparison group. The mean post test 1 and post test 2 stress score was 12.44 ± 2.10 & 12.26±2.05 and 14.11 ± 3.11 & 14.40± 3.12 in experimental and comparison group respectively and post test 1 and post test 2 care giving burden score ranged from 35-53 & 33-53 in experimental and 34-66 & 34-66 in comparison group. The mean post test 1 and post test 2 stress score was 41.34 ± 3.52 & 40.84 ± 3.62 and 51.98 ± 5.28 & 51.56 ± 5.31 in experimental and comparison group respectively**. [Table 1, Table 2].** Results of ANOVA with repeated measurement uncovered that in experimental and comparison group there was a significant difference in the mean stress score in pre test (25.96) (19.96), post test 1 (12.44) (14.11) and post test 2 (12.26) (14.40) and computed F value was 706.7 and 42.23, p= 0.00 which was statistically significant at 0.05 level of significance. Also, in experimental and comparison group there was a significant difference in the mean stress score in pre test (54.94) (52.73), post test 1 (41.34) (51.98) and post test 2 (40.84) (51.56) and computed F value was 28.94 and .885, p= 0.00 and p=.354NS in experimental and comparison group respectively, which was statistically significant at 0.05 level of significance in experimental group **[Table 3, Table 4].** Pearson correlation coefficient showed that there is no significant relationship between stress and care giving burden. In addition, research results also demonstrated that there was no significant association of association of pre-test stress score of the care givers in experimental and comparison group with their selected patient demographic characteristics.

Table 1 showing Mean, Range, Median and Standard Deviation of Stress among Caregivers of Chronically ill Patients after Administration of Empowerment Programme in Experimental and Comparison group

N=95

Variable	Group	Range		Mean ±SD		Median	
		Post 1	Post 2	Post 1	Post 2	Post 1	Post 2
Stress	Experimental group n=(50) Comparison group n=(45)	8-18 9-21	8-16 10-21	12.44±2.10 14.11±3.11	12.26±2.05 14.40±3.12	13.00 14.00	12.00 14.00

Maximum score=40 Minimum score=0

TABLE 2 showing Mean, Range, Median and Standard Deviation of Care Giving Burden among Caregivers of Chronically ill Patients after Administration of Empowerment Program in Experimental and Comparison group

N=95

Variable	Group	Range		Mean ±SD		Median	
		Post 1	Post 2	Post 1	Post 2	Post 1	Post 2
Care giving burden	Experimental group n=(50) Comparison group n=(45)	35-53 34-66	33-53 34-66	41.34 ±3.52 51.98 ±5.28	40.84 ±3.62 51.56 ±5.31	41.00 53.00	40.00 52.00

Maximum score=88 Minimum score=1

TABLE 3 showing Repeated measure ANOVA showing that significant difference within group in terms of Stress among Experimental and Comparison Group

N=95

Group	Test	Mean	F value	p value
Experimental group (n=50)	Pre test Post test 1 Post test 2	25.96 12.44 12.26	70.67	0.00*
Comparison group (n=45)	Pre test Post test 1 Post test 2	19.96 14.11 14.40	42.23	0.00*

*Significant p≤0.05 NS Non Significant p>0.05

TABLE 4 showing Repeated measures ANOVA showing the significant difference within group in terms of Care Giving Burden in Experimental and Comparison group.

N=95

Group	Test	Mean	F value	p value
Experimental group (n=50)	Pre test Post test 1 Post test 2	54.94 41.34 40.84	28.94	0.00*
Comparison group (n=45)	Pre test Post test 1 Post test 2	52.73 51.98 51.56	0.88	0.35NS

*Significant p≤0.05) NS Non Significant p≥0.05

Discussion

In this study, more than half of the care givers (58%) were females and most were married (68%). This findings was consistent with the results of study conducted by **Nimisha K. Parekha, Shamita Shahb** et al which showed that most number of care givers were females (66.9%) and majority of them were married (87.7%).[12] Another study conducted by **Sharon L. Lewis, Denise Miner-Williams et al** which showed that majority of the care givers (81.3%) were married.[13]

In this study half of the care givers (50%) were spouse of patients. The finding was contradictory with the result of study conducted by **Sharon L. Lewis, Denise Miner-Williams et al** which showed that majority of the care givers (74.5%) relationship with the patient was spouse.[14]

In the present study less than one third of the care givers (30%) were having private job. The finding was contradictory to the study conducted by **Sharon L. Lewis, Denise Miner-Williams et al** which showed that maximum (75.5%) of the care givers were unemployed.[15]

In the present study none of the care givers were using any type of relaxation technique . This finding was contradictory with the result of study conducted by **Nimisha K. Parekha, Shamita Shahb et al** which showed that more than half (53%) of the care givers were not using any relaxation techniques.[16]

In the present study, the mean stress scores of care givers in experimental group before and after the administration of empowerment programme was 25.96 and 12.44 in post test 1 respectively and the p value was statistically significant p=0.00*. The result was consistent with the study conducted by **Palak Patel** which showed that mean stress score before and after administration of the intervention was 64.67 and 36.67 respectively and the p value was statistically significant p=0.00*.[17]

Recommendations

1. The study can be replicated on a large scale to investigate whether the significant findings can be sustained among a larger group.

2. A similar study can be conducted in different settings

3. The experimental study can be conducted to find out the effectiveness of Progressive Muscle Relaxation Therapy on stress among caregivers of mentally ill patients.

4. A comparative study can be conducted to find out the level of stress and care giving burden among care givers of patients admitted in the selected government and private hospitals.

5. A Qualitative study can be done to assess stress and care giving burden among care givers of chronically ill patients.

Conclusion

Empowerment programme was effective in reducing stress and care giving burden among care givers of chronically ill patients.

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Conflicts of interest There are no conflicts of interest.

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