Health challenges and management in geriatric group: A study from Bangalore City.

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Ageing is a natural phenomenon which is exhibited by all biological species. With the advancement of time, all of them get exposed to internal and external environmental challenges as they grow older. In the present developed world, there has been an unprecedented increase in the aged population with increase in proportion of older persons, aged 60 years and over, accompanied by the decline in proportion of younger persons. It is estimated that by the year 2050 the number of older persons in the world will exceed the number of younger persons for the first time in history.

Issues Affecting the Health of Older Citizens: Meeting the Challenge revealed that older adults seek better quality of life in the later years. Quality of life has come to mean much more than just physical health or the absence of disease. It includes a general sense of happiness and satisfaction, meaningful activity, and the ability to express culture, values, beliefs, and relationships.

In order to reduce the health problems faced by the elderly and their coping strategies to the health problems is essential and thus indirectly to improve quality of life. The word balance, when used in reference to the body, refers to the ability to keep your center of gravity over your base of support, enhancing balance and facilitates daily functional activities.

Statement of the Problem

Health challenges and management in geriatric group: a study from Bangalore city.

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding health challenges faced by the elderly before and after structured teaching program in the experimental, control group.

2. To assess the level of coping in managing health challenges faced by the elderly before and after structured teaching program in the experimental, control group.

3. To evaluate the effect of structured teaching program in terms of knowledge and coping in management of health challenges among elderly in the experimental group.

4. To find out the relationship between pretest level of knowledge regarding health challenges faced by the elderly and coping in managing health challenges among elderly in the experimental and control group.

5. To find out the association between pretest level of knowledge regarding health challenges among elderly and selected socio demographic variables in the experimental and control group.

6. To find out the association between pretest level of coping in management of health challenges among elderly and selected socio demographic variables in the experimental and control group.

Hypotheses

All the hypotheses will be tested at 0.05 level of significance.

1. The mean post – test level of knowledge scores regarding health challenges faced by the elderly will be significantly higher than the mean pretest level of knowledge scores in the experimental group.

2. The mean post – test level of coping in management of health challenges among elderly will be significantly higher than the mean pretest scores in the experimental group.

3. The mean posttest level of knowledge scores regarding health challenges faced by elderly in the experimental group will be significantly higher than the mean pretest knowledge scores of the control group.

4. The mean posttest level of coping scores in management of health challenges faced by elderly in the experimental group will be significantly higher than the mean pretest coping in management scores of the control group.

5. There will be a significant relationship between the pretest level of knowledge regarding health challenges faced by the elderly and coping in management of health challenges among elderly in the experimental and control group.

6. There will be a significant association between the pretest level of knowledge regarding health challenges faced by the elderly and selected socio demographic variables in the experimental and control group.

7. There will be a significant association between the pretest level of coping in management regarding health challenges faced by the elderly and selected socio demographic variables in the experimental and control group.

Operational Definitions

Effectiveness:

In this study, effectiveness refers to the extent to which structured teaching program has achieved the desired result on knowledge and coping in management regarding health challenges among the elderly.

Knowledge

In this study it refers to the respondent's response to the structured knowledge questionnaire regarding health challenges faced by elderly.

Coping in managing health challenges

In this study it refers to the respondent's response to the structured coping in management of health challenges questionnaire by elderly.

Structured Teaching Training Program

In this study it consists of well-planned information to enlighten the elderly with regard to old age, health challenges faced by them and the coping methods in managing the health challenges. Thus changing the thinking and help them to adapt to the health ailments so as to prevent them from stress, depression, etc. it will be given for 30 minutes.

Selected Old age Home:

Old age home refers to an agency that provides food, shelter and care for the elderly. In this study it refers to Akkare seva old age home, shree kaveri foundation trust old age home, and Holy family home in Bangalore.

Conceptual Framework

A conceptual framework used in this study was based on Widenbach's theory of helping art of nursing.

The Literature review for the present study was organized and presented under following headings.

1. Literature and studies related to elderly.

2Literature and studies related to health challenges among elderly.

3 Literature related to coping strategies in managing health challenges.

Methodology

Research Approach

A quantitative approach was used in this study

Research Design

The research design used in this study was quasi experimental design, pre-test and post-test non equivalent control group design.

Variables

Independent Variable: The Independent variable in the present study was Structured teaching program regarding health challenges and coping in management of health challenges.

Dependent Variable: The dependent variables in the present study were knowledge regarding health challenges and coping in management of health challenges among elderly.

Study Setting

The study was conducted in selected old age homes such as Akkare seva old age home, shree kaveri foundation trust old age home, and Holy family home in Bangalore. This old age home was established in 1996 to serve the neglected senior citizens and destitute. The old age home comprised of Hindus, Christians, and Muslims. The home was built with all the basic facilities. The total censuses of the old age homes were 88, 240, and 166respectively.

Study Population

Target Population

The target population, for the study was elderly admitted in old age home.

Accessible Population

The accessible population for the study was elderly admitted in selected old age homes during the period of data collection.

Sample

The Sample comprised of was elderly admitted in selected old age home during the period of data collection and those who fulfilled the inclusion criteria.

Sample Size

Based on power analysis the total sample size was 300. (150 in the experimental group and 150 in the control group).

Sampling Technique

Non Probability purposive sampling technique was used in this study.

Criteria for sample selection

The sample was selected based on the following inclusion and exclusion criteria.

Inclusion Criteria

1. Old age people who are available at the time of data collection

2. Old age people who can read / write & understand either Kannada/English.

3. Old age people irrespective of sex.

Exclusion Criteria

1. Old age people who are not willing to participate in the study.

2. Old age people with sensory deficit.

3. Old age people with long term psychological or psychiatric disorder

Research Tool and Technique

The technique used in this study was interview

The Tool used in this study was a

Part A – Demographic data which consisted of gender, age, marital status, number of children, educational level, religion, means of livelihood, income and living arrangement.

Part B – Questionnaire on knowledge regarding health challenges faced by the geriatric group. This consisted of 50 questions regarding health challenges faced by the elderly under physical, psychological, social, financial, spiritual, and emotional problems. The responses had 3 options as **always (score 1,) sometimes (score 2), and never (score 3).** The maximum score was 150 and the minimum score was 50.

Part C – Questionnaire on coping strategies used in management of health challenges by the geriatric group. This consisted of 31 questions regarding management of health challenges faced by the elderly under physical, psychological, social, financial, spiritual, and emotional problems. The responses had 3 options as **always (score 1,) sometimes (score 2), and never (score 3)**. The maximum score was 93 and the minimum score was 31.

Validity

The tool and the structured teaching program selected for the study was validated by twelve of the experts in the field of Nursing, Psychology, Psychiatry, Geriatrist, Epidemiology and Statistics.

Reliability

The Reliability of the tool was established by Test Re-test method. The reliability of Knowledge questionnaire was: $r= 0.83$, and Coping on management questionnaire was: $r=0.78$. Hence the tool was reliable and used in the study.

Pilot study

In order to test the feasibility of the study a pilot study was conducted among 30 elderly (10in the experimental group and 10 in the control group) at Avyang foundation home for the old age and destitute, Hebbal, Bangalore. Data was analysed and the findings suggested that the study was feasible and practicable.

Data Collection Procedure

The data collection was done at Akkare seva old age home, shree kaveri foundation trust old age home, and Holy family home in Bangalore. Permission was sought from the heads of the concerned old age homes. Before administering the structured teaching program to the subjects, socio demographic variables,

knowledge regarding health challenges, and coping on management of health challenges faced by the elderly was assessed as a pretest. Then structured teaching program was administered to the subjects in the experimental group then posttest knowledge regarding health challenges faced and coping in management of health challenges of the elderly was assessed with the help of the respective tool by the investigator on 15th day.

Plan for Data Analysis

- ➢ Frequency and percentage was used for analyzing socio demographic variables.

- ➢ Effectiveness of STP was tested using a paired "t" test and independent "t" test.

- ➢ Chi-square analysis was used to find out the association between the levels of knowledge regarding health challenges, their coping in managing health challenges with selected socio demographic variables.

- ➢ Pearson correlation coefficient was used to find out the relationship between knowledge regarding health challenges and coping in managing health challenges among the elderly.

Table 1.Distribution of subjects according to their knowledge regarding health challenges and coping in management of health challenges among elderly. N = 300

Level of Knowledge	Control group n= 150				Experimental group n=150			
	Pretest		Post test		Pretest		Post test	
	f	%	f	%	f	%	f	%
In adequate	85	56.7	80	53.34	93	62	9	6
Moderately adequate	53	35.33	56	37.33	47	31.33	64	42.67
Adequate	12	8	14	9.33	10	6.67	77	51.33
Total	150	150	150	150	150	150	150	150

Table 1 revealed the distribution of elderly according to their level of knowledge regarding health challenges in the experimental and control group.

Table- 2 Distribution of elderly according to the level of coping in management of health challenges in experimental and control group.   N = 300

Group	Control group n= 150				Experimental group n=150			
	Pre test		Post test		Pre test		Post test	
Level of Coping	f	%	f	%	f	%	f	%
Poor	65	43.3	61	40.67	70	46.67	7	4.67
Moderate	78	52	81	54	74	49.33	63	42
Good	7	4.67	8	5.33	6	4	80	53.3
Total	150	150	150	150	150	150	150	150

Table 2 shows the distribution of elderly according to their coping in management of health challenges in experimental and control group.

TABLE 3: Effectiveness Structured Teaching Programme On Knowledge Regarding Health Challenges Among Elderly

Knowledge		Max score	Mean score	Mean Difference of knowledge gain score with 95% Confidence interval	Percentage of knowledge gain score with 95% Confidence interval
Experiment	Pretest	150	77.04	30.24(29.97 – 30.50)	20.16%(19.98%–20.33%)
	Posttest	150	107.28		
Control	Pretest	150	78.39	1.72(-0.03 – 3.47)	1.37%(-0.01% –2.31%)
	Posttest	150	80.11		

Table 3 reveals the effectiveness of structured teaching programme on knowledge regarding Health challenges among elderly.

In the experimental group, on an average, in posttest after undergoing structured teaching programme, the subjects had gained 20.16% more knowledge score than the pretest scores. Whereas in the control group, on an average, in posttest, the subjects had gained 1.37% more knowledge scores than the pretest scores. Hence the difference of gain in scores between experimental and control group shows the effectiveness of the intervention.

TABLE 4: Effectiveness Structured Teaching Programme on coping in managing the health Challenges Among Elderly.

Coping		Max score	Mean score	Mean Difference of coping gain score with 95% Confidence interval	Percentage of coping gain score with 95% Confidence interval
Experiment	Pretest	93	48.59	20.89(20.34 – 21.43)	22.46%(21.87%– 23.04%)
	Posttest	93	69.48		
Control	Pretest	93	49.31	1.30(-0.05 – 2.65)	1.40%(-0.05% –2.84%)
	Posttest	93	50.62		

Table 4 In experimental group, on an average, in posttest after the structured teaching program, the subjects gained 22.46% higher coping scores than the pretest scores. Whereas in the control group, on an average, in the posttest, the subjects had gained 1.40% increased coping scores than the pretest scores. The Difference in the scores between the experimental and control group was due to the intervention and not by chance hence it shows the effectiveness of the intervention. (Structured teaching program) The effectiveness of the study was given in mean with 95% confidence interval and percentage with 95% confidence interval.

Table 5 Correlation between pretest knowledge score and Pretest coping score among elderly in the Experiment group

Variables	Mean score ±SD	Karl Pearson Correlation coefficient	Interpretation of correlation coefficient
Knowledge score Vs Coping score	**77.04±10.92 Vs 48.59±7.88**	**r=0.24 P=0.05***	Significant, Fair, positive correlation

Table 5 Karl Pearson correlation coefficient was computed and the findings (**r=0.24 P=0.05***) suggested that there was a statistically significant, fair positive correlation between them knowledge and coping. As the knowledge increases their coping also increases fairly.

Table 6 ASSOCIATION BETWEEN PRETEST LEVEL OF KNOWLEDGE REGARDING HEATH CHALLENGES AND SELECTED SOCIO DEMOGRAPHIC VARIABLES IN THE EXPERIMENTAL GROUP   **N =300**

Demographic variables		Pretest level of knowledge score						f	Chi square test χ^2
		Inadequate		Moderate		Adequate			
		f	%	f	%	f	%		
Gender	Male	67	67.68%	24	24.24%	8	8.08%	99	χ^2=7.06 P=0.03*
	Female	26	50.98%	23	45.10%	2	3.92%	51	
Age	60-70	38	55.88%	24	35.29%	6	8.82%	68	χ^2=11.38 P=0.02*
	70-80	31	67.39%	13	28.26%	2	4.34%	46	
	80 -Above years	12	33.33%	22	61.11%	2	5.56%	36	
Marital status	Married	58	58.00%	35	35.00%	7	7.00%	100	χ^2=5.68 P=0.46

	Never Married	6	85.71%	1	14.29%	0	0.00%	7	
	Widow / widower	24	63.16%	11	28.95%	3	7.89%	38	
	Divorced / Separated	5	100.00%	0	0.00%	0	0.00%	5	
Number of children	None	4	66.67%	2	33.33%	0	0.00%	6	$\chi2=5.25$ P=0.87(NS)
	One	39	63.93%	17	27.87%	5	8.20%	61	
	Two	32	60.38%	19	35.85%	2	3.77%	53	
	Three	11	68.75%	4	25.00%	1	6.25%	16	
	Four	5	45.45%	4	36.36%	2	18.18%	11	
	Five or More	2	66.67%	1	33.33%	0	0.00%	3	
Educational status of caregiver	Illiterate	8	26.67%	19	63.33%	3	10.00%	30	$\chi2=10.86$ P=0.14
	High school	35	72.92%	11	22.92%	2	4.17%	48	
	Higher secondary	37	64.91%	15	26.32%	5	8.77%	57	
	Bachelor degree	6	75.00%	2	25.00%	0	0.00%	8	
	Master degree	0	0.00%	0	0.00%	0	0.00%	0	
	Doctorate in philosophy	0	0.00%	0	0.00%	0	0.00%	0	
	Others	7	100.00%	0	0.00%	0	0.00%	7	
Religion	Hindu	73	66.97%	30	27.52%	6	5.50%	109	$\chi2=11.13$ P=0.09
	Christianity	13	50.00%	11	42.31%	2	7.69%	26	
	Islam	6	75.00%	1	12.50%	1	12.50%	8	
	Others	1	14.29%	5	71.43%	1	14.29%	7	
Means of Livelihood	Working / part time	19	85.71%	2	9.52%	0	0.00%	21	**$\chi2=39.33$ P=0.01****
	Retired with Pension	7	20.59%	21	61.76%	6	17.64%	34	
	Retired without pension	65	73.03%	20	22.47%	4	4.49%	89	
	Income generating activities	2	33.33%	4	66.67%	0	0.00%	6	
Monthly income	High Income	0	0.00%	0	0.00%	0	0.00%	0	**$\chi2=28.91$ P=0.01****
	Medium Income	0	0.00%	4	66.67%	2	33.33%	6	
	Low Income	21	41.17%	22	43.13%	8	15.69%	51	
	Below poverty line	12	57.14%	9	42.86%	0	0.00%	21	
	Financially dependent	58	80.55%	14	19.45%	0	0.00%	72	
Living arrangement	Own home /Apartment	19	73.08%	5	19.23%	2	7.69%	26	$\chi2=12.33$ P=0.12
	Daughter's home	39	78.00%	9	18.00%	2	4.00%	50	
	Son's home	23	57.50%	15	37.50%	2	5.00%	40	
	Old age home	11	52.38%	8	38.09%	2	0.00%	21	
	Home of other relatives	1	7.69%	10	76.92%	2	15.38%	13	

Table 6 A chi square analysis was done to find out the association and the analysis revealed that there was a significant association between knowledge and sex (**$\chi2=7.06$ P=0.03***) there was an association

between **knowledge and age, (χ2=11.38 P=0.02*)** there was an association between knowledge and

income.(χ2=28.91 P=0.01**), and there was an association between knowledge and **means of livelihood**

(χ2=39.33P=0.01**).

The males elderly who were who were between 60 to 70 years age, who were retired pensioners and

who earned more income, had more knowledge regarding health challenges when compared with others.

Table 7.ASSOCIATION BETWEEN PRETEST LEVEL OF COPING IN MANAGING HEATH CHALLENGES AND SELECTED SOCIO DEMOGRAPHIC VARIABLES IN THE EXPERIMENTAL GROUP.   **N = 300**

Demographic variables		Pretest level of coping score						f	Chi square test
		Poor		Moderate		Good			
		f	%	f	%	f	%		
Gender	Male	40	40.40%	53	53.53%	6	6.06%	99	χ2=6.58 P=0.04*
	Female	30	58.82%	21	41.18%	0	0.00%	51	
Age	60-70	26	38.23%	36	52.94%	6	8.82%	68	χ2=9.55 P=0.05*
	70-80	24	52.17%	22	47.83%	0	0.00%	46	
	80 -Above years	20	61.67%	16	44.44%	0	0.00%	36	
Marital status	Married	41	41.00%	54	54.00%	5	5.00%	100	χ2=8.68 P=0.19
	Never Married	3	42.86%	4	57.14%	0	0.00%	7	
	Widow / widower	21	55.26%	16	42.11%	1	2.63%	38	
	Divorced / Separated	5	100.00%	0	0.00%	0	0.00%	5	
Number of children	None	2	33.33%	4	66.67%	0	0.00%	6	χ2=22.77 P=0.01**
	One	34	55.73%	27	44.26%	0	0.00%	61	
	Two	25	47.16%	27	50.95%	1	1.89%	53	
	Three	3	18.75%	11	68.75%	2	12.50%	16	
	Four	6	54.54%	3	27.27%	2	18.18%	11	
	Five or More	0	0.00%	2	66.67%	1	33.33%	3	
Educational status of caregiver	Illiterate	12	40.00%	17	56.67%	1	3.33%	30	χ2=8.86 P=0.35
	High school	28	58.33%	17	35.42%	3	6.25%	48	
	Higher secondary	25	43.86%	30	52.63%	2	3.51%	57	
	Bachelor degree	4	50.00%	4	50.00%	0	0.00%	8	
	Master degree	0	0.00%	0	0.00%	0	0.00%	0	
	Doctorate in philosophy	0	0.00%	0	0.00%	0	0.00%	0	
	Others	1	14.29%	6	85.71%	0	0.00%	7	
Religion	Hindu	49	44.95%	56	51.38%	4	3.67%	109	χ2=6.40 P=0.37
	Christianity	11	42.31%	14	53.85%	1	3.85%	26	
	Islam	4	50.00%	3	37.50%	1	12.50%	8	
	Others	6	85.71%	1	14.29%	0	0.00%	7	

Means of Livelihood	Working / part time	9	42.86%	11	52.38%	1	4.76%	21	$\chi2=3.06$ P=0.80
	Retired with Pension	16	47.06%	17	50.00%	1	2.94%	34	
	Retired without pension	42	47.19%	44	49.44%	3	3.37%	89	
	Income generating activities	3	50.00%	2	33.33%	1	16.67%	6	
Monthly income	High Income	0	0.00%	0	0.00%	0	0.00%	0	**$\chi2=15.95$ P=0.05***
	Medium Income	0	0.00%	4	66.67%	2	33.33%	6	
	Low Income	27	52.94%	22	43.14%	2	3.92%	51	
	Below poverty line	9	42.85%	10	47.61%	2	9.52%	21	
	Financially dependent	34	47.22%	38	52.78%	0	0.00%	72	
Living arrangement	Own home /Apartment	11	42.31%	15	57.69%	0	0.00%	26	$\chi2=6.20$ P=0.63
	Daughter's home	24	48.00%	24	48.00%	2	4.00%	50	
	Son's home	20	50.00%	17	42.50%	3	7.50%	40	
	Old age home	7	33.33%	13	61.90%	1	4.76%	21	
	Home of other relatives	8	61.54%	5	38.46%	0	0.00%	13	

Table 7 Chi square analysis revealed that there was a significant association between pretest coping and gender (**$\chi2=6.58$ P=0.04***), age (**$\chi2=9.55$ P=0.05***), number of children (**$\chi2=22.77$ P=0.01****) and monthly income (**$\chi2=15.95$ P=0.05***) in the experimental group.

The male elderly, who were between 60-70 years, having one more child, and middle income elderly had more coping when compared with other elderly.

CONCLUSION

The following conclusions were drawn from the present study based on the findings.

❖ The results of present study imply that providing a structured teaching program with routine care has contributed to obtain additional benefit in improving the level of knowledge regarding health challenges, and coping in management of health challenges among elderly clients.

❖ Factors that were the best predictors of low coping were physical activity, reduced amount of sleep, heightened financial constraints, feeling of loneliness and worthlessness.

❖ Participants gained a sense of control through regular practice of structured teaching program when in need during stressful conditions to improve the coping levels among elderly.

Recommendations

- A similar study with longer duration can be conducted to assess the long term benefits of teaching strategies.

- A similar study can be conducted with large sample size and in different settings.

- A similar study can be conducted by using different interventional strategies among elderly with various variables.

- A comparative study can be done to assess the knowledge and coping between the elderly residing in old age homes and elderly residing in their own home.

- A longitudinal study can be undertaken to assess for depression among elderly who had poor coping scores and reduced knowledge scores regarding health challenges.

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