

“Multi-Modal Intervention On Health Promotional Outcomes Among Geriatric Clients Seeking Medical Services At Selected Hospitals, Kolar, Karnataka, INDIA”

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Abstract

Background: Ageing is a natural phenomenon with opportunities and challenges. Ideal way is to create the awareness to achieve greater health & lead a healthy life to enhance a higher quality of life. This was evidently felt by the Investigator; hence a study was conducted to find out the effectiveness of Multimodal Intervention on Perception & QOL on Health promotion outcomes among geriatric clients.

Methodology: A quantitative quasi experimental non-randomized with Pretest Posttest & Control group design was conducted in two hospital settings of ETCM & Hope Health Care Hospital, Kolar. The study has been registered under **CTRI/2021/07/034632** and Sample size was 60, 30 in each group. The pretest data was collected from experimental & control group, using validated Perception questionnaire & WHOQOL standardised tool to assess QOL consisting of 24 items through interview method on one to one basis.

After the pre-test, Multimodal educational Intervention on health promotion outcomes consists of Information pamphlet, Snake & Ladder game and Educational video was given to the Experimental group and routine care to Control group. On **30th day** (Post-test-I) and **60th day** (Post-test-II), data was analysed by descriptive & inferential statistics such as Paired t test, Independent t test, RMANOVA, Post hoc analysis & Chi-square.

Results:

The findings of the study showed that the level of Perception & QOL was higher & positive on Health promotion outcome after Intervention in experimental group when compared with control group with the Mean scores of QOL increased in experimental group during Pretest, Postest I, Postest II from **9.23± 2.29**, **11.8 ±2.8**, **12.5 ± 2.71**.

Conclusion: Multimodal Intervention was evidently effective in enhancing the level of Perception & Quality of Life and positive Health promotion outcomes among Geriatric clients by ensuring a holistic approach.

Key words: Multimodal Intervention, Geriatric, Health Promotion outcome, Perception level, Quality of Life.

Introduction:

Ageing is a natural phenomenon with opportunities and challenges. Ageing cannot be prevented, but we can learn how to deal with arising conditions to achieve greater health among geriatric to lead a healthy life by understanding their needs and concerns, lending an emotional support & to keep them jovial, which is inevitably the ideal way to enhance a higher quality of life. Elders desires to lead a life with good health, dignity, economic independence and finally a peaceful death.

International Day for Elderly (UN) is celebrated every year on 1st October.

Theme for 2022- “Resilience of older persons in a changing world”.

Based on evidence of literature the lacunae focused on the following

Key facts on Aging, Currently–As per the **WHO** report (4 October 2021)

- ✓ Between 2015 and 2050, the proportion of the world's population over 60 years will nearly double from 12% to 22%.
- ✓ By 2020, the number of people aged 60 years and older will outnumber children younger than 5 years.
- ✓ In 2050, 80% of older people will be living in low- and middle-income countries.
- ✓ 15.7 per cent of people 60 years and older are subjected to abuse.

India's elderly population (aged 60 and above) is projected to touch 194 million in 2031 from 138 million in 2021- National Statistical Office (NSO)'s Elderly in India 2021.

However, most of the literatures lack interventions focusing on Holistic health promotion outcomes among geriatric. Hence, it's the need of hour –to promote the holistic health promotion by Multimodal Intervention in improving the perception & Quality of Life among geriatric clients to create global opportunities to foster healthy aging.

Objectives of the study:

1. To assess the Perception and Quality of life regarding health promotional outcomes among Geriatric clients by using structured tools.
2. To evaluate the effectiveness of Multi-Modal Intervention on Perception and Quality of life of geriatric clients regarding Health promotional outcomes by comparing pre and post test scores between experimental & control group.
3. To find out the correlation between perception & Quality of life among geriatric clients on Health promotional outcomes.
4. To determine the association of Perception and Quality of life scores on Health promotional outcomes with the selected demographic variables of geriatric clients.

Hypotheses:

H₁: There will be a significant difference in the mean pre and posttests scores of perception among geriatric clients between Groups.

H₂: There will be a significant difference in the mean pre and posttests scores of Quality of Life on health promotion outcomes among geriatric clients between Groups.

H₃: There will be a significant difference in the mean post test scores of perception between the experimental and control group.

H₄: There will be a significant difference in the mean post test scores of Quality of Life between experimental group and control group

H₅: There will be a significant correlation between the perception and Quality of Life among geriatric clients

H₆: There will be a significant association of perception scores & Quality of Life with selected demographic variables.

Methodology:

A quantitative quasi experimental non-randomized with Pre-test Post-test & Control group design was conducted in two hospital settings of ETCM & Hope Health Care Hospital, Kolar. The study has been registered under Clinical trials registry of India, **CTRI/2021/07/034632** and Sample size was 60, 30 in each group. The pre-test data was collected from experimental & control group, using validated Perception questionnaire.

Data Collection: Tools comprised of

Sec A. Part 1. Socio demographic proforma (10 items)

Sec A Part 2: Bio physiological parameters (10 items)

Sec B. Assessment of **Perception** among Geriatric clients by Likert scale (15 items)

Sec C. Assessment of **Quality of Life** by modified WHO QOL questionnaire (24)

Formal permission was obtained from the Institutional Central ethics committee and concerned approval was taken from the authority of hospital, the investigator has explained the purpose of the study to the participants and written informed consent was obtained and signatures from patient care takers as witnesses. The pre-test data was collected from experimental and control group using modified Five-point likert scale consists of Perception questionnaire & WHOQOL standardised tool to assess QOL consisting of 24 items through interview method on one to one basis.

After the pre-test, Multimodal educational Intervention on health promotion outcomes consists of Information pamphlet, Snake & Ladder game and Educational video was given to the Experimental group and routine care to Control group. Level of Perception & Quality of Life was assessed on **30th day (Post-test-I)** and **60th day (Post-test-II)**, in experimental group and routine care for Control group. The data was analysed by descriptive & inferential statistics such as Paired t test, Independent t test, RMANOVA, Post hoc analysis & Chi-square.

Results:

With regard to Sociodemographic variables: Majority 70% of the sample in experimental group were between the age group of 61-65 years & in control group majority 60% of the sample were between the age of 61-65 years. On gender, the majority of the samples were females in both experimental 20 (66.6%) and control 14(46.6%) group.

With regard to Educational Status, the majority of the sample were belongs to no formal education in both experimental (86.6 %) and control (76.6 %) group.

With regard to Religion, majority belongs to Hindu religion in the experimental group & control group.

Majority of participants were married. In terms of type of Family most of participants belongs to Joint family 24 (80%) & 22(73.3%) in experimental & Control group. With regard to history of comorbid conditions 86.6% & 73.3% was suffering from comorbid conditions. Majority of participants has not undergone health checkup during 6months duration (Table 1).

Biophysiological parameters:

With respect to biophysiological parameters, Majority of participants Nutritional status assed through checking weight & height and found to be under nourished in experimental group 18(60%) of participants & control group (63.3%).

Vision acuity found to be normal in experimental group 26(86.6%) & 14(46.6%) in control group. Hearing acuity through whisper test conducted and found to be Normal in both groups, With regard to activities of daily living Majority of participants were Independent. Sleeping pattern disturbance found in experimental group 22(73.3%), Bowel & bladder pattern was regular and Normal in both the groups. Majority of participants was not performing physical activity as per WHO guidelines.

I. Level of Perception among Geriatric clients in Experimental and Control groups before Intervention, after Intervention and Comparison.

Findings related to Perception Scores, in Experimental group: showed that mean scores of Pretest (24.90 ± 4.6), Posttest I (38.56 ± 7.87) Posttest II (47.3 ± 9.62) Table 2

Findings related to Perception Scores, in Control group: showed that mean scores of Pretest (30.7 ± 3.49), Posttest I (21.00 ± 3.83) Posttest II (22.8 ± 3.24) Table 2

The mean difference found to 5.8 to 24.5 t value 13.20 at .000 level of significance.

II. Quality of Life among Geriatric clients in Experimental and Control groups before Intervention, after Intervention and Comparison.

Experimental group the mean scores of Repeated measures of ANOVA found to be **Pretest (9.23 ± 2.29), Posttest I (11.8 ± 2.8), Posttest II (12.5 ± 2.71).** Table 3

Control group the mean scores of Repeated measures of ANOVA found to be **Pretest (8.0 ± 1.2), Posttest I (8.6 ± 2.5), Posttest II (8.9 ± 2.0).** Table 3

III. Correlation among overall Perception and QOL of geriatric clients on Health Promotion outcomes in the Experimental and the control group

There was a significant perfect positive correlation found to be in experimental group as perception increases the quality of life also increased i.e, posttest I $r=0.660$ posttest II $r=0.806$ at .0001 level of significance. Whereas in Control group Moderately negative correlation was evident. Table 4

IV. Association between Socio demographic variables and Perception on health promotion outcomes among geriatric clients.

According to the objective of the study, finding the suggestion between perception and designated demographic variables was done, and the results revealed that there is a statistically significant association between marital status ($\chi^2=8.5996$, $df=3$, $p=0.35116$) and health checkup done in the past ($\chi^2=9.2597$, $df=3$, $p=.02603$) and no association

Age ($\chi^2=7.6142$, $df=3$, $p=.054697$), Gender ($\chi^2=0.3704$, $df=1$, $p=.542784$), Qualification ($\chi^2=6.188$, $df=5$, $p=0.2883532$) Type of the family ($\chi^2=1.2688$, $df=3$, $p=.736552$), History of Co-Morbid Condition ($\chi^2=0.4841$, $df=1$, $p=.486557$) Physical Activity ($\chi^2=0.0901$, $df=1$, $p=.763994$), Personal Habits ($\chi^2=0.662$, $df=1$, $p=.415853$), Source of information ($\chi^2=7.401$, $df=3$, $p=0.0601575$) thus the assumption is rejected, whereas only with regard to marital status ($\chi^2=8.5996$, $df=3$, $p=0.35116$) and a previous health checkup ($\chi^2=9.2597$, $df=3$, $p=.02603$) is statistically significant because the calculated value was greater than the table value.

Discussion:

The findings the suggested that perception and socio demographic variables of results revealed that there is a statistically significant association between marital status ($\chi^2=8.5996$, $df=3$, $p=0.35116$) and health checkup done in the past ($\chi^2=9.2597$, $df=3$, $p=.02603$) and no association between, Age ($\chi^2=7.6142$, $df=3$, $p=.054697$), Gender ($\chi^2=0.3704$, $df=1$, $p=.542784$), Qualification ($\chi^2=6.188$, $df=5$, $p=0.2883532$) Type of the family ($\chi^2=1.2688$, $df=3$, $p=.736552$), History of Co-Morbid Condition ($\chi^2=0.4841$, $df=1$, $p=.486557$) Physical Activity ($\chi^2=0.0901$, $df=1$, $p=.763994$), Personal Habits ($\chi^2=0.662$, $df=1$, $p=.415853$), Source of information ($\chi^2=7.401$, $df=3$, $p=0.0601575$) thus the assumption is rejected, whereas only with regard to marital status ($\chi^2=8.5996$, $df=3$, $p=0.35116$) and a previous health checkup ($\chi^2=9.2597$, $df=3$, $p=.02603$) is statistically significant because the calculated value was greater than the table value. Similarly the findings of study was found same to in references.

Conclusion

A holistic approach to geriatric population needs to take place in different domains like physical health, psychological wellbeing, social relations, and level of independence, environment and spirituality. Thus Multimodal Intervention is effective in improving the level of perception and improved Quality of Life among geriatric clients. The results also projected that perception and QOL showed strong correlation in the study group and Effectiveness of Multimodal Intervention was effective as per the opinionnaire feedback collected by the participants. It can be implemented in the clinical and community area.

Implications/Outcome of Project:

- **Patient:** Biggest beneficiary which leads to successful ageing, Improves geriatric client quality of life and satisfaction
- **Organization:** Intervention results in positive health promotion outcomes and where rights of geriatric client are respected and protected. Ensure health schemes are applied in enhancing health promotion of geriatric clients.
- **Nursing Education:** Curriculum and value-added benefit
- **Nursing administration:** Restructuring geriatric care standards by identifying health care needs and improving quality of life.

Globally and nationally it can enhance Geriatric care at all health care settings

Limitations:

1. A similar study may be undertaken, using the same tool and teaching plan on a large scale in various settings for longer period for better generalization.
2. A study can be conducted to identify the patients need and expectations to provide quality care.
3. A study may be conducted to assess the knowledge on Health promotion among Geriatric clients and compare it with quality patient outcomes.

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Conflicts of Interest: There is no conflicts of interest.

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Table 1: Frequency & Percentage distribution of Bio physiological parameters among geriatric clients in experimental & Control group.

Sl.no	Socio demographic variables	Experimental group (n=30), %	Control group (n=30), %	χ^2 & p value
1.	Age in Years b) 61-65	21 (70)	18(60)	3.8 0.274 NS
	c) 66-70	7 (23.3)	8(26.6)	
	d) 71-75	2 (6.6)	4 (13.3)	
2.	Gender a) Male	10 (33.4)	16(53.3)	0.013 0.908 NS
	b)Female	20 (66.6)	14 (46.6)	
3.	Educational Qualification a) No formal Education	26 (86.6)	23(76.6)	10.465 0.063 NS
	b)Primary education	3 (10)	5(16.6)	
	c) Secondary Education	1 (3.3)	2(6.6)	
4.	Religion a)Hindu	24 (80)	18 (60)	0.027 0.987 NS
	b) Muslim	5 (16.6)	10(33.3)	
	c) Christian	1(3.3)	2 (6.6)	
5.	Marital status a) Married	25 (83.3)	21(70)	1.939 0.585 NS
	b) Widow/Widower	5 (16.6)	9 (30)	
6.	Place of residence a)Rural	26 (86.6)	22 (73.3)	0.013 0.908 NS
	b) Urban	4 (13.3)	8 (26.6)	
7.	Socio economic status a) BPL	24 (80)	25 (83.3)	91.884 0.000***
	b)APL	6 (20)	5 (16.6)	
8.	Type of Family a)Nuclear	6 (20)	8 (26.6)	0.027 0.869 NS
	b)Joint family	24 (80)	22(73.3)	
9.	History of co-morbid diseases a)Yes	26(86.6)	21(70)	91.884 0.000***

	b) No	4 (13.3)	9 (30)	
10.	History of Health check up undergone a) 1-6months	4(13.3)	6 (20)	0.027 0.987 NS
	b) Not undergone	26(86.6)	24 (80)	

Section A Part 2 : Frequency & Percentage distribution of **Bio physiological parameters among geriatric clients in Experimental and Control Group.**

Sl.no	Socio demographic variables	Experimental group (n=30) , %	Control group (n=30) , %
11.	Nutritional status a) Under	18(60)	8(26.6)
	b) Normal	10(33.3)	19 (63.3)
	c) Over	2 (6.6)	3 (10)
12.	Vision a) Normal	26(86.6)	16 (53.3)
	b)Deficit	4(13.3)	14 (46.6)
13.	Ear Acuity a)Normal	24 (80)	26(86.6)
	b)Deficit	6 (20)	4 (13.3)
14.	Activities of Daily living a)Independent	24 (80)	20 (66.6)
	b)Partially Dependent	6(20)	10(33.3)
15.	Sleeping pattern a) Disturbed	22(73.3)	19 (63.3)
	b) Satisfied/Normal	8(26.6)	11 (36.6)
16.	Bowel pattern a) Regular	27(90)	24 (80)
	b) Irregular	3(10)	6(20)
17.	Bladder Pattern a)Normal	25(83.3)	22(73.3)
	b)Incontinence	5(16.6)	8 (26.6)
18.	Habits a) Smoking/Alcohol/Tobacco chewing	22 (73.3)	24 (80)
	b) No	8 (26.6)	6 (20)
19.	Status of financial dependence a)Independent	4(13.3)	2(6.6)

	b) Partially dependent	8(26.6)	4 (13.3)
	c) Totally dependent	18(60)	24 (80)
20.	Physical activity performed/day	25(83.3)	20(66.6)
	a) Not involved		
	b) Low (<30 min/day)	2(6.6)	7 (23.3)
	d) High (>30min/day)	3(10)	3(10)

Table 2: Comparison of Mean scores of Perception among geriatric clients between Experimental and Control group during Pretest, Post test–I, Post test II

Sl.no	Level of Perception	Experimental Group(n=30,%)	Control group (n=30,%)	MD	't' Value	p-Value & Inference
1.	Pretest	Mean±SD		5.8	5.473	.189 NS
		24.90 ± 4.6	30.7 ± 3.49			
2.	Posttest -I	38.56 ±7.87	21.00 ± 3.83	16.7	10.44	.000** SS
3.	Posttest -II	47.3 ± 9.62	22.8 ± 3.24	24.5	13.20	.000** SS

Table 3: Repeated Measures ANOVA of QOL among geriatric clients between Experimental and Control

Table.4: Correlation among overall Perception and QOL of geriatric clients on Health Promotion outcomes in the Experimental and the control group

Sl.no	Variables	Group	Post test 1	Posttest 2	Inference
			r- value & p value	r- value & p value	
1.	Perception & QOL	Experimental Group	r=0.660 0.038** SS	r=0.806 0.009** SS	Positive Correlation p<0.001 SS
		Control Group	r= -1.45 0.709	r=-0.170 0.662	Moderately negative correlation

Association:

According to the objective of the study, finding the suggestion between perception and designated demographic variables was done, and the results revealed that there is a statistically significant association between marital status ($\chi^2=8.5996$, $df =3$, $p=0.35116$) and health checkup done in the past ($\chi^2=9.2597$, $df=3$, $p=.02603$) and no association between other variables.

Sl.no	Variable -QOL	Pretest	Posttest-I	Posttest-II	df	P-Value Inference
1.	Experimental Group	Mean±SD			2	WL= .439 P < .001** SS
		9.23± 2.29	11.8 ±2.8	12.5 ± 2.71		
2.	Control Group	8.0 ± 1.2	8.6 ± 2.5	8.9 ± 2.0		WL= .532 P=.591 NS

According to the objective of the study, finding the suggestion between perception and designated demographic variables was done, and the results revealed that there is a statistically significant association between marital status ($\chi^2=8.5996$, $df =3$, $p=0.35116$) and health checkup done in the past ($\chi^2=9.2597$, $df=3$, $p=.02603$) and no association between Age ($\chi^2=7.6142$, $df=3$, $p=.054697$), Gender ($\chi^2=0.3704$, $df=1$, $p=.542784$), Qualification ($\chi^2=6.188$, $df=5$, $p=0.2883532$) Type of the family ($\chi^2=1.2688$, $df =3$, $p=.736552$), History of Co-Morbid Condition ($\chi^2=0.4841$, $df =1$, $p=.486557$) Physical Activity ($\chi^2= 0.0901$, $df =1$, $p=.763994$), Personal Habits ($\chi^2=0.662$, $df=1$, $p=.415853$), Source of information ($\chi^2=7.401$, $df=3$, $p=0.0601575$) thus the assumption is rejected, whereas only with regard to marital status ($\chi^2=8.5996$, $df =3$, $p=0.35116$) and a previous health checkup ($\chi^2 =9.2597$, $df=3$, $p=.02603$) is statistically significant because the calculated value was greater than the table value.