



A STUDY TO ASSESS THE EFFECTIVENESS OF NURSE LED INTERVENTION ON PHYSICAL PROBLEMS AMONG INSTITUTIONALIZED ELDERLY AT ERNAKULAM DISTRICT IN KERALA.

Dr.Soney.M.Varghese

Associate Professor & H.O.D Dept.of community health nursing M.O.S.C.College of Nursing, Kolenchery, Ernakulam, Kerala

ABSTRACT Ageing is a biological process and not a disease. Physical health does decline with age, this does not mean that older adults are incapacitated. Nurse Led Intervention is a simplest and cost effective method which helps in physical problems and enhances health. The present study aimed to evaluate the effect of Nurse Led Interventions on Physical Problems among Institutionalized Elderly at Ernakulam District in Kerala. A quantitative approach with experimental pretest, posttest design was used. Fifty samples were collected as per inclusion criteria. Nurse Led Intervention was administered as a Structured teaching programme on management of physical problems which can be corrected through modification in diet, exercise and counseling to the experimental group by the investigator from Monday to Friday in the morning and in the evening for eight weeks. Post test result indicated that the mean post test scores were significantly reduced than the mean pre- test score ($p < 0.001$). The findings of the present study highlight the fact that the Nurse Led Intervention was highly significant to reduce physical problems among institutionalized elderly.

KEYWORDS : Elderly, Physical problems, Nurse led intervention

Old age is an inevitable part of the healthy human life and in many ways charming too. Ageing refers to the process of growing old, or developing qualities of old or maturing, changes that occur as a result of passing of time. Physical health does decline with age, this does not mean that older adults are incapacitated.

Residents may become more dependent on caregivers if the caregivers perform the activities for them, rather than allowing the residents to do for themselves (Fuller, Yu, Jeter, Gralink and Minkler, 2000).

A demographic revolution is underway throughout the world. Today, world-wide, there are around 600 million persons aged 60 years and over; this total will double by 2025 and will reach virtually two billion by 2050. It was predicted that by 2015 AD, the world will witness "A Senior Boom" or "Geromatic Boom". India is expected to have 700 million persons above 60 years of age by turn of the century (United Nation, 2002).

It is the primary responsibility of the nurse to solve the physical problems of the institutionalized elderly and minimize disability. So the researcher took up this present study to assess the effect of Nurse Led Intervention on physical problems for the institutionalized elderly.

Statement of the Problem

A Study to Assess the Effectiveness of Nurse Led Intervention on Physical Problems Among Institutionalized Elderly at Ernakulam District in Kerala.

Objectives

1. To assess the physical problems among elderly.
2. To evaluate the effect of Nurse Led Intervention on physical problems among elderly.

Hypotheses

1. There will be a significant difference in the physical problems among the elderly those who receive Nurse Led Intervention.

Operational Definitions.

Physical Problem: Physical problems refers to the minor complaints reported by the elderly in each system and which can be corrected by simple modification in their diet, exercise and counseling.

Effectiveness: Effectiveness refers to decreased level of physical problems experienced by elderly after intervention and as measured by physical problems assessment tool.

Nurse Led Intervention: It refers to Structured teaching programme on management of physical problems which can be corrected through modification in diet, exercise and counseling.

Institutionalized elderly: It refers to the elderly persons living in the old age homes with the age between sixty to eighty.

Assumptions The study assumes that:

1. The elderly persons experience some physical problems.
2. The elderly adopt various coping strategies to help themselves to resolve uncomfortable feelings.
3. The physical problems are influenced by various demographic factors.
4. The physical problems experienced by the elderly can be improved by practicing Nurse Led Intervention.

Delimitations

1. The study was delimited only to the selected old age homes.

Research Approach: In this study, quantitative approach was adopted. Quantitative approach was used to evaluate the effectiveness of Nurse Led Intervention.

Research Design: Research design used in this study was pretest posttest experimental design.

Variables

Independent Variables: In this study the independent variable was; Nurse Led Intervention

Dependent Variable: The dependent variable in this study were: Physical problems experienced by the institutionalized elderly.

Setting of the Study: The study was conducted in selected old age homes at Ernakulam District in Kerala.

Sample

Institutionalized elderly male and female in the age group of 60-85 years with physical problems residing at selected old age homes at Ernakulam district in Kerala.

Criteria for Selection of Sample

Inclusion criteria

Elderly person

- Residing in old age homes
- In the age group of 60-80 years.
- Able to verbalize their feelings.
- Able to follow the commands and instructions.
- With physical problems.
- Both male and female.
- Willing to participate.
- Period of stay between less than 5 years.

Exclusion Criteria

Institutionalized elderly person

- Who is completely paralyzed.
- Bed bound for more than 6 months.
- Having severe physical problems.
- With visual and auditory impairment.

- Who are terminally ill

Sampling Technique:Convenient sampling technique was used.

Ethical Considerations:The study has been approved by the ethical committee of Malankara Orthodox Syrian Christian Medical College Hospital, Kolanchery, Ernakulam, Kerala, India. Permission was obtained from the concerned authorities of selected old age homes.

Description of the Tool

The instrument is a written device that a researcher uses to collect data. The final tool used consisted of 2 sections

- Section A :** Demographic variable of the subjects.
- Section B:** Physical problems assessment tool.

Section A : Demographic variable of the subjects
This section assessed the personal demographic characteristics of the institutionalized elderly population like age, gender, educational status, monthly income, marital status, physical health status, duration of stay in old age homes, reason for institutionalization by using 10 structured questions.

Section B: Structured questionnaire to Assess Physical Problems among Elderly

This section assessed the physical problems in musculoskeletal, CNS, respiratory, cardiovascular, gastro intestinal system, elimination pattern, integumentary and sleep pattern by using 3 point rating scale, with 42 items.

Scoring and Score Interpretation

Each items had three options like

- Always - (Score 2)
- Sometimes - (Score 1)
- Never - (Score 0)

Totally there were 42 items with maximum score of 84 and minimum score of 0.

Description of the Intervention

Structured Teaching Programme and minor exercise.

Structured teaching programme included the following topics.

- Management of common physical problems.
- Adopting coping strategies.
- Modulating the process of ageing includes (diet, regular exercises, life style and general management).
- Weekly follow up of interventions

Testing of the Tool and Intervention

Validity & Reliability

Content validity of the tool was obtained from seven experts, five from experts in the field of Nursing and two from experts in community medicine. The suggestions given by the experts were incorporated and the tool was finalized.

Test - retest method was used for physical problem assessment tool and it was found to be $r = 0.86$. The reliability of the tool was found to be $r = 0.80$. The tool was reliable.

Data Collection Procedure

Before starting the study the researcher met the old age home authorities and obtained permission for conducting the study. The researcher visited the old age homes and met the care takers . The subjects were explained about the study and their willingness to participate in the study was sought. Informed consent was obtained and confidentiality of the result was assured.

Phase I :Screening potential subjects and dividing them into sub group (one week)

Phase II :The pretest was done to assess their physical problems.

Phase III : Implementation of intervention

Implemented the intervention.

Researcher ensured that subjects will continue to practice and develop their skills in managing themselves after the completion of the session. Each session took about thirty to forty minutes for each group.

Phase IV

Assessed the effect of the intervention in terms of improvement in the physical problems using the same interview schedule. Posttest was done on 8th week.

Intervention took around one hour to complete.

Plan for Data Analysis

The data analysis plan included both descriptive and inferential statistics.

1. Analysis of elderly socio demographic profile in the form of frequency and percentage distribution.
2. Means and standard deviation was used to identify the physical problems.
3. Paired 't' test was used to evaluate the effectiveness of Nurse Led Intervention on physical problems.

Study findings are organized and presented under following sections:

Section A : Demographic characteristics of institutionalized elderly.

Section B : Assessment of physical problems among the institutionalized elderly before intervention.

Section C : Effectiveness of Nurse Led Intervention on physical problems among institutionalized elderly.

Section –A

Demographic Characteristics of Institutionalized Elderly

Table no. 1 shows the demographic distribution of the institutionalized elderly persons living in old age homes.

Table - 1 Frequency and Percentage Distribution of Selected Demographic Variables of Institutionalized elderly. (n=50)

Sl. No.	Demographic Variables	Group C (n = 50)	
		No.	%
1.	Age (in years)		
	a) 60-65	18	36
	b) 66-70	21	42
	c) 71-75	08	16
	d) 76-80	03	06
2.	Gender		
	a) Male	28	56
	b) Female	22	44
3.	Educational Status		
	a) Can read and write	27	54
	b) <7 years of schooling	17	34
	c) 8-10 years of schooling	03	06
	d) 11-12 years of schooling	03	06
4.	Monthly income in rupees		
	a) No income	26	52
	b) Upto Rs. 2000	13	26
	c) Rs. 2001-5000	11	22
5.	Marital Status		
	b) Unmarried	23	46
	c) Widow/Widower	25	50
	d) Divorced	02	04

With regard to age majority (42%) of the institutionalized elderly persons were between 60 and 70 years. Majority (56%) of the institutionalized elderly persons were male. Majority (54%) could only read and write. Very few (6 to 14%) had completed 8 to 10 years of schooling in all the four groups. Regarding income 52% of the institutionalized elderly had no income and (26%) had Rs. 2000/- as income in all the four groups. Very few (22%) received Rs. 2001-5000 as monthly income in all the four groups. Regarding marital status, (46%) were unmarried, 50% were widow and widowers and only 4% were divorced.

Table - 2 Frequency and Percentage Distribution of Selected Demographic Variables of Institutionalized Elderly (n=50)

Sl. No.	Demographic Variables	Group (n = 50)	
		No.	%
1.	Physical Health Status		
	a) History of long term illness	31	62
	a) Present		
	b) Absent	19	38
	b) If present mention the disease		
	- Hypertension	9	18
	- Respiratory Disease	13	26
	- Diabetes Mellitus	6	12
	- Arthritis	3	6
2.	Duration of Stay in Old Age House		
	a) Less than one year	26	52
	b) 1-3 years	23	46
	c) 3-5 years	01	02
3.	Reason for Institutionalization		
	a) Lack of care by family members	36	72
	b) Conflicting relationship with family	14	28

Table 2 shows the selected demographic characteristics of the institutionalized elderly persons in old age home .

Regarding physical health status, 62% had complaints of one or the other physical health problem.Majority of institutionalized elderly (52%) were staying for less than a year and 1-3 years in all the four groups. Majority (72%) of them came to old age home due to lack of care by family members. And 28% came to old age home due to conflicting relationship with family.

Table –3 Mean level of Physical Problems during pretest (n = 50)

Psychosocial problems	Maximum Score	Mean
Muskulo skeletal System	06	5.18
Nervous system	06	1.74
Respiratory System	08	4.84
Cadiovascular System	08	4.46
Urinary System	16	11.34
Gastro Intestinal System	26	13.50
Integumentary System	06	3.22
Sleep Pattern System	05	5.80

Table 3 shows the physical problems of the institutionalized elderly persons before interventions.

Muscular system problems had been assessed by three parameters and the average score on musculo skeletal system problem was found to be 5.18. Central nervous system problems had been assessed by three parameters and the average score on central nervous system problems was found to be 1.74.Respiratory problems had been assessed by four parameters and the score was between zero and eight. 4.84.

Cardio vascular problems had been assessed by four parameters the average scores in cardio vascular system problems were, 4.46 .Urinary system problems had been assessed by eight parameters, the average scores on urinary problems were found to be 11.34 .Gastrointestinal problems had been assessed by thirteen parameters, the average scores on gastro intestinal problems were found to be 13.50 .Integumentary problems had been assessed by three parameters, the average scores on integumentary problems were found to be 3.22.Sleep pattern problems had been assessed by four parameters the average scores on sleep problems were found to be, 5.80.

Section C:Effectiveness of Nurse Led Intervention on physical problems among institutionalized elderly

Table 4 Effectiveness of Nurse Led Intervention on Physical Problems Among Institutionalized Elderly (N = 50)

Physical Problems	Pretest		Posttest		Paired 't' test	Level of Significance
	Mean	Standard Deviation	Mean	Standard Deviation		
Musculo Skeletal System	5.18	0.774	3.14	0.700	35.88	.000
Central Nervous System	1.74	.664	0.50	0.580	12.246	.000
Respiratory	4.84	0.548	2.40	0.535	28.21	.000
Cardio Vascular System	4.46	1.199	2.60	0.535	12.76	.000
Urinary	11.34	1.222	7.74	1.259	36.37	.000
Gastro Intestinal	13.50	2.628	9.34	2.628	26.42	.000
Integumentary	3.22	1.345	1.52	0.931	17.000	.000
Sleep Problems	5.80	0.495	3.58	0.883	25.49	.000

Table shows the mean levels of physical problems in pretest and posttest who received Nurse Led Intervention.

The pretest mean level of musculo skeletal system problems reduced from 5.18 to 3.14 in posttest. The mean level of central nervous system problems was found to be 1.74 in pretest and on posttest the mean level was 0.50. Pretest mean level of respiratory problems was found to be 4.84 and on posttest mean level was 2.40. The pretest mean level of cardio vascular system problems reduced from 4.46 to 2.60 in posttest. The pretest mean level of urinary problems reduced from 11.34 to 7.74 in posttest. The pretest mean level of gastro intestinal problems reduced from 13.5 to 9.34 in posttest. The pretest mean level of integumentary problems reduced from 3.22 to 1.52 in posttest. The pretest mean level of sleep problems reduced from 5.80 to 3.58 in posttest. Paired 't' test had been applied and the 'P' value inferred that there was a significant change in musculo skeletal, respiratory ,cardiovascular,urinary problems,gastrointestinal,integumentary and sleep problems after Nurse Led Intervention.

Nurse led intervention is effective in reducing the physical problems among the elderly.

Conclusion

From the present study, it can be concluded that

1. Elderly are experiencing physical problems.
2. Physical problems are present in musculoskeletal, CNS, respiratory, cardiovascular, gastro intestinal system, elimination pattern, integumentary and sleep pattern .
4. Nurse led intervention is significantly effective in reducing psychosocial problems among the institutionalized elderly.

Limitations

1. The study was conducted among the subjects from the selected old age homes. So generalization must be done with caution.
2. The study was done on a sample size of 50.
3. Posttest was conducted at 8th week after intervention.

Nursing Implications

In the twenty-first century the proportion of population aged 60 or over has increased in all the countries of the world. According to situation analysis of elderly, most of the growth will take place in developing countries and over half of it will be in Asia. So the findings of the present study can be utilized for the welfare of the elderly especially institutionalized elderly.

Implications for Nursing Practice

1. Nurses have to plan and implement appropriate intervention according to the needs.
2. The care takers need to be helped by the nurses to learn how to assess the needs of the elderly and provide appropriate training and assistance.
3. Nurses need to educate the elderly and their family member on the prevention of common physical problems.

Implications for Nursing Education

1. Curriculum for nursing should give more emphasis for geriatric health with special focuses on teaching about prevention of physical problems.
2. Nurses need to be trained to assess physical problems at the earliest and develop skill in carrying out Nurse led interventions.
3. In-service education and continuing nursing education programme should be planned for nurses on geriatric health to update their knowledge and attitude towards elderly care and enhance their skill in dealing with elderly having physical problems.

Implications for Nursing Administration

1. Nurse administrators can provide necessary facilities for administering Nurse led interventions on physical problems.
2. Periodic conference, seminars, symposium, can be conducted for nursing personnel regarding care of geriatric population.
3. The administrator should emphasize and encourage the nurse to use different strategies for care givers education.

Implications for Nursing Research

1. A longitudinal study can be conducted to assess the effectiveness of Nurse led interventions on physical problems.
2. Qualitative study can be done to find out the experience of elderly with physical problems.
3. A similar study can be conducted to compare the level of physical problems among the elderly living at home and old age homes.
4. This study also brings out the fact that more studies need to be done in different settings, using different teaching strategies.
5. The study can be conducted using a larger population to generalize the findings.

Recommendations

1. Nurse led interventions are effective in reducing physical problems. So the government can take initiative to train the nurses and appoint them in old age homes as part of National Population Old Age Policy to promote their health status.
2. Old age homes should provide provision for carrying out all these activities and train the care takers as part of routine work to promote health and reduce complications among the elderly.
3. As the selected nursing intervention was effective, this can be incorporated with curriculum and geriatric health should be given more importance

REFERENCES

1. Audinarayana, N. and Sheela, J. (2002). Physical disability among elderly in Tamil Nadu patterns, differences and determinants. *Health and Population Perspectives and Issues*, 25(1):26-37.
2. Balamurugan, J. and Ramathirthan, G. (2002). Health problems of aged people. *International Journal of Research in Social Sciences*, 2 (3): 139-150. Dunne, E., Wrosch, Carsten, Miller and Grayony, F. (2012). Goal disengagement, functional disability, and depressive symptoms in old age. *American Psychology Association Health Psychology*, 30(6): 763-770.
3. Egede, L.E. (2004). Prevalence and Odds of Functional Disability in Individuals with Diabetes and Comorbid Major Depression. NCBI. US National Library of Medicine, National Institute of Health. 27(2): 421-428.
4. Hirsch, R.D., Junglas, K., Konradt, B., and Jonitz, M.F. (2010). Humor therapy in the depressed elderly results of an empirical study. *Journal of Geriatrics*, 43(1): 42-52. therapy in the depressed elderly results of an empirical study. *Journal of Geriatrics*, 43(1):42-52.