

A Study to Assess the Effectiveness of Structured Teaching Programme Regarding Knowledge on Geriatric Care Among the Gerontological Nurses Working in Selected Old Age Homes in Kanyakumari District

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Abstract: The purpose of this research article is to assess the effectiveness of a structured teaching program on knowledge regarding geriatric care among the gerontological nurses working in selected old age homes in Kanyakumari district. The author conducted a literature search on geriatric care followed by a quasi-experimental study among 60 gerontological nurses and thoroughly scrutinized the effectiveness of structured teaching programme regarding knowledge on geriatric care. The study also assessed the level of knowledge regarding geriatric care among gerontological nurses and determined the association between pre - test knowledge score on geriatric care with selected baseline characteristics. Analysis was made using various tolls like frequency and percentage, mean, standard deviation, paired 't' test, and chi- square test. The result showed that there is a significant difference with a (paired) 't' value of 23.413 at ($p < 0.001$) levels and it reveals a significant gain in knowledge among gerontological nurses following the structured teaching programme on geriatric care . The study reveals that if the structured teaching program given effectively it would improve the skills of gerontological nurses in geriatric care.

Keywords: Geriatric Nursing, Gerontological Nurses, Geriatrics Care, Care of Elderly; Effectiveness of Structured Teaching Programme on Geriatric Care; Knowledge of Gerontological Nurses.

I. INTRODUCTION

Geriatrics is best described as the branch of medicine that focuses on health of elderly client. It focuses to prevent and treat diseases and disabilities, as well as it promotes general health of seniors. There is no specific age at which a client is prescribed geriatric treatments, as this is generally determined by the clients' profile, and the symptoms that the client suffers from.

Ageing or aging is the process of becoming older. In the narrow sense, the term refers to biological ageing of human beings, animals and other organisms. In the broader sense, ageing can refer to single cells within an organism (cellular senescence) or to the population of a species. In humans, ageing represents the accumulation of changes in a human being over time, encompassing physical, psychological, and social change. Ageing also refers to decline in the functional capacity of the organs of the human body which occurs mostly due to physiological transformation.

According to the word of Seneca ageing is a natural process and an incurable disease. James Sterling Ross argue that, growing old is not a time of dismay and withdrawal from everything around, rather it is a time to be enjoyed. Dates on the calendar denote only the passing of time but ageing denotes the declining level of physical activity and response to it. As a result physical change occur and diseases affects ageing parents, some or all of their independent function may be lost; even with the best resource in terms of health care facilities, financial support, social support and emotional support. The

change in ageing process, the loss of adaptability leads the organism to increase vulnerability to internal and external environmental change. This is distressing for the family members as well as for elderly themselves.

Ageing population have serious implication both as the macro and the household level especially, the transition has been accompanied by changes in society and economy, the proportion of elderly persons in India has risen from 5.6% in 1961 to 7.1% in 2001.

In absolute terms in the year 1991 saw 55 million elderly persons in India and it will reach 76 million by 2025, 40% of elderly live below the poverty line, 90% of them are from the unrecognized sector with no benefits at all, 55% of all women over 60 are widows many without any support, 80% of them are from rural areas and 73% of them are illiterates and have to depend on labor to sustain themselves.

Ageing process is a universal phenomenon inevitable in the life cycle and it brings about certain anatomical, physiological and psychological changes in life. Medical treatment and socio economic factors such as education, income, better nutrition and living condition as well as technological advancement extend the lifespan.

The human needs motivate one to acts for the fulfillment of the physical needs to nurture our human body in a state of health, the psychosocial ones which promotes stable personality and maintain harmonious relationship with our brethren, spiritual one which contribute to vertical and horizontal peace and love. Dissatisfaction of the basic needs treated tensions and frustrations in old age people that needs to be protected from accident, infection and disabilities as the oblige advance certain changes take place skin gets wrinkled, memory is impaired, cessation of menstruation in women, in men sexual activity diminishes, emotion, irritability, jealousy and dependency can be noticed.

Ageing is among the greatest known risk factors for most human diseases. Specifically, age is a major risk factor for most common neurodegenerative diseases. Dementia becomes more common with age and about 3% of people between the ages of 65-74 have dementia, 19% between 75 and 84 or nearly half of those over 85 years of age. The spectrum includes mild cognitive impairment, Alzheimer's disease, cerebrovascular disease, Parkinson's diseases and Lou Gehrig's disease. Research has focused in particular on memory in ageing and it has found decline in many types of memory with ageing. Age can result in communication barriers, such as due to hearing loss and visual impairment. Sensory impairments include hearing and vision deficits. Changes in cognition, hearing, and vision are associated with healthy ageing and can cause problems when diagnosing dementia and aphasia due to the similarities. Older people often suffer from illness such as bronchitis, arthritis A-vitaminosis, gastro intestinal disorder and depression restricting their social activity, one feels isolated and a liability on many others, doubts God's love and worries about death and life after death.

Many of the aged are being sent to the institutions for the care thus family case is minimized. The knowledge is directed inwards primary care is provided for prevention of disease or injury and promotion of positive health. Elders are encouraged to participate in the activities is to avoid injuries, early detection of signs of ill health, timely intervention care etc. encourage individual to return to independent existence as for as possible.

Care of the aged is very important for the care givers since it needs knowledge, nursing skills and right attitude in order to give skilled nursing care to the elderly people. The staff nurses should assess the immediate and long term needs or problems of the aged and their families such as supporting, advising, guiding and planning with family in providing the total care including rehabilitation. Suggestions given by care givers to elderly clients will enhance them to decide where and how to lead the remaining life, continue to have supportive, close, warm relationship with families, relative and friends.

The world population prospectus released by united nation in 1998 reveals the population of the aged as global level is 9%, in under developed countries is 6.7% and 15% in developed countries. Recent studies reveal that by the year 2020 the world population of the people would be about 1000 million of which about 700 million (70%) would be living in developing countries resulting in increased number of disease associated with old age.

Today the largest percentages of elderly people (65 or older) are in Europe and over 19% of the population of Italy is elderly. This figure is expected to reach 28% by 2030. Japan, Europe, Asia, China and Latin America are slowly creeping up in elderly population. According to the ageing world report of 2008, India and China have one third of world's population over 65 years and older population of 166 million.

The availability of improved medical services, better awareness regarding health and nutrition, standard of living have resulted in the delayed onset of ageing and associated problems with an ultimate increase in life expectancy consequently the population of the elderly has been increasing over the years.

There has been a progressive increase in both the number and proportion of the aged in India over time, particularly after 1951. Between 1901 and 1951, the proportion of population over age 60 increased marginally from 5 percent to 5.4 percent, while by 2001 this had increased to 7.0 percent. When changes in the decadal growth rate in the general population are compared with those for the elderly population, it is noted that the latter grew at a relatively much faster rate than the general population, since 1951. Furthermore, the decadal percent increase in the elderly population for the period between 2001- 2011 is likely to be more than double rate that increases the general population. The size of the elderly increased during the last century from 12 million in 1901 to approximately 71 million in 2001 and is likely to reach 113 million in 2016. Yet another feature of ageing in India is the fact that the proportion of elderly is much higher in the rural areas than in the urban areas. The sex-wise pattern of growth of elderly population reveals that the increase is greater among women in the recent past, which indicates that elderly women will outnumber elderly men in the future.

Therefore there is an urgent need to provide educational programme to gerontological nurses on the various aspects of this new and fast growing population to ensure the appropriate care to meet the varied needs of this vulnerable and dependent group. India, like many traditional societies, today faces a unique situation in providing care for its elderly as the existing old-age support structures in the form of family, kith and kin, are fast eroding and the elderly are ill-equipped to cope alone with their lives in the face of infirmity and disability. The onus of caring for the elderly is therefore now much more on the state than the family and will necessitate the creation of adequate institutional support. The western countries have fairly well trained gerontological nurses for the care of the elderly. In India care of elderly began as early as 1901, however it lacks the well trained geriatric staffs. As per recent statistic, there are 1018 old age homes in India today. However many of these old age homes do not have well trained geriatric staffs to provide systematic and scientific care to the elderly.

The concern for the elderly in India is reflected in the adoption of a recent National Policy on Older Persons in 1999, which has identified principle areas of intervention and action strategies. These include financial security for the elderly in the formal and informal sector, health care and nutrition, shelter and housing and development of trained manpower to meet the special health needs of the elderly. The construction of old age homes and multi-service centers for the elderly through special financial assistance to non-governmental organizations has also been articulated in the policy. However, few studies have been undertaken to examine the care and condition of the elderly in India and those living in old age homes (Dandekar, 1993, Das and Shah; 2001; GOI, 1991; 1998; 2000; Ranjan et al., 1999; Rao et al., 1982; Sharma, 1999; Sharma and Xenos, 1992; United Nations, 1987).

Gerontological nurses spend more time with elderly client by being involved in direct care. Having adequate knowledge on geriatric care with skills will enhance them to provide a better geriatric care to the elderly in the old aged homes. Researcher had an experience while working as a nurse in geriatric ward, the researcher met many adult & elderly clients in the hospital with many complications and diseases that have arisen due to the ignorance of common geriatric care given by gerontological nurses. So, the researcher felt the need to prepare a structured teaching programme to assess the knowledge of gerontological nurses working in selected old age homes with a view to improve the knowledge.

In this context, there is a strong need to assess the effectiveness of structured teaching programme on knowledge regarding geriatric care among the gerontological nurses with overall goal of improving the knowledge of the gerontological nurses working in selected old age homes in Kanyakumari district.

II. REVIEW OF LITERATURE

Anu, et.al (2001) conducted a descriptive study on rural area of Bangalore adopted 150 samples; the study signifies that the percentage of stairs safety (50.7%) was found to be in an average level only. The findings of this study alerts and drag the health care professionals to have more attention to modify the environment in order to prevent the fall percentage of both the bedroom safety (81%) and bathroom safety (88%). This study result indicated that most of the senior citizens were 58.7% had impairment of vision and about 89.3% had impaired hearing acuity of these factors possess threat to fall. It concluded that an insight to derive additional nursing intervention to care the senior citizen and to be titled specifically as senior focused care.

Divya Dolphins (2001) conducted a descriptive study to determine the perceived depressive feelings experienced in Udupi district in which 100 clients participated. The study results showed that majority of clients had moderate depression (58%) and about 19% of them had severe depression. It was a subjective feeling of depression and represents that there is a significant relationship between family, friends, relationship and depressive feeling of aged person. The study findings suggest that care of all health professionals to go deeper into society to bring about issues and problems faced by older population and to bring about changes that can fulfill the needs of the elderly.

Dr. Rejanikant (2009) conducted a comparative co-relational study on health motivating self-rated health status and health behaviour of male and female elderly Indirapuram. A total of hundred elderly clients were selected and the result showed that 82% were female elderly and 68% were male elderly. 50% of female elderly suffered from long term illness whereas only 32% male elderly suffered from long term of illness. The health motivation self-rated health status and health behaviour scores of male elderly clients were higher than female elderly clients. The result of this study revealed that there was significant relationship between health motivation and health behavior, health promotion, disease, disability and prevention.

ELSG Sanatombi, et.al conducted a study to assess the emotional well-being of senior citizens staying in old age home VS senior citizens staying with family of Pune city. The sample study consisted of 120 male and female senior citizens, out of which 60 from old age home and 60 residing in family, the result showed the differences in senior citizens staying with family and senior citizen staying in old age home under borderline well-being was 61.80%, 5% had negative emotional well-being, 92% positive emotional well-being, 8% are under borderline emotional well-being. The result of this study revealed that there is no association of emotional well-being with any demographic variable.

Geron, Yvonne, Fossely, Kulkarni (2010) conducted a study on old age and its related problem considered from an elderly perspective in a group of elderly in Turkish with participants of 1261. The study result revealed that the majority of elderly health status was not bad but satisfactory with place of residence 72.8%, remaining with family members 64.4% and 42.3% residential care homes. The frequent reported problem was hypertension (26.1%), hence the study concluded that ageing population all over the country have become a national and international health matter to be dealt with as in our country.

Jeffrey M, Lyness MD (2001) conducted a comparative study on depression in elderly by using center for epidemiologic studies, depression scale and geriatric depression scale in primary care institution and the depression is screened for 130 patients by using scales. The results showed that CESD- 21% in which 92% sensitivity and 87% specificity and GDS shows sensitivity 100% specificity 84% both scales have excellent properties for use of screening.

Jonathan J, et. al conducted a comparative study regarding melatonin in older people with age related sleep problem maintenance in New Zealand. A metabolite of plasma melatonin, 6 sulphoxycine was measured in urine of 57 normal sleeper and 53 people with age related problem order 24 hours. The study result revealed that older people with age related sleep problems do not have lower melatonin levels than older people reported normal sleep.

Lalour J, et. al conducted on short term geriatric assessments in general hospital in Cuba. 64 managers enrolled for study, they did assessment in hospital admission 9% focused geriatric assessment and audit care management, 23% offered rehabilitation care, it concluded that the standardized geriatric assessment on prevention of functional decline must be applied throughout all hospital wards.

Malu, et.al (2010) carried out a study on Parkinson disease in elderly states the role of common genetic risk variants in recent identification is associated with two fold increase in risk of Parkinson disease. It facilitates the development of clinical, bio imaging, genetic, biological, biomarker useful in monitoring and neutron protect therapy assisting individuals.

Rahul Prakash, SK Chodharu (20014) conducted a cross sectional study on morbidity pattern among geriatric population in an urban area of Udaipur, the sample of 310 elderly participated in the study and it's result showed that 29.3% belong to socio-economic class V and 14.6% belong to II and I class, 48% had hypertension, 63% chronic bronchitis, 11.5% bronchial asthma, 18.6% neurological problem, 60% cataract feeling of loneliness 21.85%. The study concluded the recognition of the importance of care of elderly problems.

Sruthi (2010) conducted a descriptive and comparative nature of study on well-being among elderly couple living in the joint family in Chinerkuppam. 40 elderly couples participated in the study, the results showed that there was a significant

difference between the level of well-being (0.001) even there was significant association between the level of well-being and the number of children at ($p < 0.01$) level, it revealed that among elderly men (20%) had low level of well-being when compared with the women (50%) had low level of well-being, in men (60%) had moderate level of well-being and in women (50%) had moderate level of well-being and men (20%) of them had high level of well-being and none of the women had high level of well-being. Hence, it concluded that the well-being of men was more than the women.

III. RESEARCH METHODOLOGY

The respondents were asked to select the best possible option and tick for the most appropriate answers for the structured questionnaire. The questionnaire included eight items of demographic variables such as age, gender, religion, years of experience and their previous knowledge of the topic and forty six items regarding geriatric care. It was scored as one mark for each correct answer.

Objectives of the Study:

The main purpose of this study is to assess the effectiveness of structured teaching programme regarding knowledge on geriatric care among the gerontological nurses. The other objectives are:

- To assess the level of knowledge regarding geriatric care among the gerontological nurses.
- To assess the effectiveness of a structured teaching program among the gerontological nurses regarding geriatric care.
- To determine the association between pre-test and post-test knowledge score on geriatric care with selected baseline characteristics.

Scope of the Study:

- This research focuses the effectiveness of structured teaching program regarding knowledge on geriatric care among the gerontological nurses.
- This study also involves in identifying and analyzing the various factors that determine the geriatric care in Kanyakumari district.

Delimitation of the Study:

- This study is limited to sixty gerontological nurses working in the selected old age homes in Kanyakumari district.
- This study is limited to the gerontological nurses who are qualified and registered as registered nurse in the nursing council.
- The duration of the study is only for a period of twelve weeks.

Problem Statement:

The quasi experimental study to assess the effectiveness of a structured teaching programme on knowledge regarding geriatric care among the gerontological nurses working in selected old age homes in Kanyakumari district.

Research Approach:

Research approach is systematic, controlled empirical and critical investigation of natural phenomena guided by the theory and hypothesis about the presumed relations among the phenomena. The research approach used for the study was an explorative approach.

Research Design:

The research design is the overall plan for obtaining answers to the research questions or for testing research hypothesis. Quasi experimental design is adopted for the present study. One group pre-test and post-test quasi experimental design was used to evaluate the effectiveness of structured teaching programme regarding knowledge on geriatric care among the gerontological nurses working in selected old age homes in Kanyakumari district.

Setting of the Study:

The present study was conducted at selected old age homes in Kanyakumari district.

Variables:

Independent Variable:- In this study, the structured teaching programme on geriatric care is the independent variable.

Dependent variable:- In the present study, the dependent variable is the knowledge of gerontological nurses on geriatric care.

Demographic Variables:- In this study the demographic variable are age, gender, profession, total years of experience, area of experience and previous exposure to geriatric care of the gerontological nurses.

Population:

The population selected for the present study comprised of sixty (60) gerontological nurses working in the selected old age homes in Kanyakumari district.

Sampling Technique:

Random sampling is a probability sampling which involves a selection process in which each element in the population has an equal and independent chance of being selected. In the present study, convenient sampling technique is adopted to collect the samples.

Sampling Size:

The researcher has taken sixty (60) samples from the gerontological nurses working in selected old age homes in Kanyakumari district.

Sampling criteria:

Sampling criteria has listed the characteristics essential for membership in the target population. The samples were collected from the population that met the sampling criteria. They are as follows:

Inclusion Criteria:

- Gerontological nurses registered in the nursing council and willing to participate in the study.
- Gerontological nurses working in selected old age homes in Kanyakumari district.
- Gerontological nurses available at the time of data collection.

Exclusion Criteria:

- Gerontological nurses not available at the time of data collection.
- Gerontological nurses who had attended educational programme on geriatric care within six months.
- Gerontological nurses not willing to participate in the study.

Conceptual Frame Work:

A conceptual framework is a tool researchers use to guide their inquiry; it is a set of ideas used to structure the research, a sort of map that may include the research question, the literature review, methods and data analysis. The conceptual frame selected for this study was based on Ernestine Wiedenbach "The Helping Art of Clinical Nursing". Wiedenbach's prescriptive theory may be described as a system of conceptualizing for a purpose. Prescriptive theory may be described as one that conceptualizes both the desired situations and the perception by which it is to be brought about as an outcome.

Content Validity of the Tool:

Content validity of tool was ascertained in consultation with five experts of which four experts had responded. Of the five experts, three experts were from the field of gerontological nursing, and other expert was from the statistics department. The experts were requested to judge the items for accuracy, relevance, and appropriateness. As per the experts' advice changes were made related to the knowledge questions. The content validity index was 0.85.

Testing the Reliability of the Tool:

Reliability of a research instrument is defined as the extent to which the instrument yields the same result of repeated measure. In order to establish reliability of the tool the test retest method was used, the tool was administered to nine

samples. The reliability co-efficient of the tool was calculated by using the Karl Pearson's correlation co-efficient formula, the calculated value of 'r' was 0.80. The developed tool was found to be highly reliable.

Administration of Pre-test:

Keeping in mind the ethical aspects, prior permission was obtained from the head of selected old age homes. In addition to this informed consent was obtained from all the respondents. Pre- test was conducted prior to structure teaching programme.

Structured Teaching Programme:

The investigator conducted forty five minutes of teaching programme regarding geriatric care according to the lesson plan. A power point slide show was prepared as an audio visual aid. The structured teaching programme consisted of all aspects of geriatric care and gerontological nursing.

Tools Used:

Data was analyzed by using descriptive and inferential statistics in the following steps:

- Data was arranged in master sheet.
- Description of subject with respect to baseline characteristics was presented in the terms of frequency and percentage.
- Mean, standard deviation and mean percentage of knowledge score of gerontological nurses were used to determine the effectiveness of structured teaching programme, analyzed by using paired 't' test.
- Association between the knowledge score and selected baseline characteristics were analyzed by using Fisher's exact test or chi square test.
- Analyzed data was presented in tables, graphs and diagrams.

IV. ANALYSIS AND INTERPRETATION OF DATA

The analysis and interpretation of data of this study are based on data collected on knowledge of gerontological nurses working in old age homes in view of the objectives of the study, one group pre-test post- test quasi experimental design was adopted to evaluate the effectiveness of the structured teaching programme. The data were collected from the respondents both before and after administration of structured teaching programme. The gathered data was then organized, tabulated, analyzed and interpreted using descriptive and inferential statistics.

Description of the subject with respect to baseline characteristics was analyzed in term of frequency and percentage. Mean standard deviation and mean percentage of the knowledge score of gerontological nurses was used to determine the effectiveness of structured teaching programme. Further statistical significance of the effectiveness of structured teaching programme was analyzed by using paired 't' test. Association between the pre-test and post-test knowledge score and selected demographic variables were analyzed by chi-square test or fisher's exact test.

Table 1: Description of Baseline Characteristics

N=60

Baseline Characteristics	Frequency	Percentage
Gender		
Male	13	21.67
Female	47	78.33
Age		
21-30 years	13	21.66
31-40 years	11	18.33
41-50 years	19	31.66
Above 50 years	17	28.33
Experience		
0-1 years	09	15
2-5 years	04	6.66
6-10 years	13	21.66

11-15 years	17	28.33
More than 15 years	17	28.33
Previous Knowledge		
Yes	36	60
No	24	40
Sources of Information		
Awareness programme	32	53.33
Mass Media	15	25
Other sources	13	21.67

Out of 60 respondents surveyed 78.33% of the gerontological nurses were females and 21.67% of gerontological nurses were males. 21.66% of gerontological nurses were aged between 21-30 years, 18.33% were aged between 31-40 years, 31.66% were aged between 41- 50 years and remaining 28.33% were aged above 50 years.

Among the experience categories, 15% of the gerontological nurses had 0-1 year of experience, 6.66% had 2-5 years, 21.66% had 6-10 years, 28.33% had 11-15 years and 28.33% had more than 15 years of experience. The knowledge wise classification showed that 60% had previous knowledge on geriatric care and 40% had no knowledge about it.

Source of knowledge wise classification revealed that 53.33% gerontological nurses were attended awareness programme, 21.67% had obtained it from other source like lectures and 25% were from mass media.

Table 2: Level of knowledge score of gerontological nurses

Level of knowledge (Score)	Number of respondents			
	Pre- test		Post- test	
	No.	%	No.	%
Poor ($\leq 24\%$)	4	6.67	0	0
Average (25% - 49%)	24	40	1	1.67
Good (50% - 75%)	32	53.33	20	33.33
V. Good (76%- 100%)	0	0	39	65

The table 2 depicts the pre- test score where, 4 (6.67%) gerontological nurses had poor knowledge, 24 (40%) gerontological nurses had average knowledge, 32 (53.33%) gerontological nurses had good knowledge and none of the gerontological nurses had very good knowledge. In the post- test 39 (65%) gerontological nurses had gained very good level of knowledge, 20 (33.33%) gerontological nurses gained good level of knowledge, 1 (1.67%) gerontological nurses gained average level of knowledge, while none had poor knowledge regarding geriatric care.

Table 3: Area wise pre- test and post- test knowledge score on geriatric care

Sl No.	Knowledge Variables	Maximum possible score (46)	Subject knowledge					
			Mean		Standard Deviation		Mean Percentage Score	
			Pre- test	Post- test	Pre- test	Post- test	Pre- test	Post- test
1	Geriatrics	3	1.622	2.733	.931	.579	54.07	91.11
2	Risk factors of ageing	12	4.611	8.344	1.806	1.538	38.45	74.53
3	Common geriatric problems	6	2.733	4.477	1.169	1.041	45.55	74.63
4	Knowledge regarding geriatric and geriatric care.	24	12.144	18.567	3.255	2.417	46.70	77.36
5	Complication of ageing	1	.488	.744	.502	.438	48.88	74.44

Area wise mean percentage of knowledge score is depicted in the table 3. It shows that in pre-test and post-test the subjects obtained maximum score in the area related geriatric which were about 54.07% and 91.1% respectively. In the area of risk factors of ageing the pre mean percentage was 38.45% with an area wise mean \pm SD of 4.611 ± 1.806 , whereas

in post test 74.53% with area wise mean \pm SD of 10.70 ± 1.216 . Knowledge related to common geriatric problems was 45.55% with an area wise mean \pm SD of 2.733 ± 1.169 , whereas in post-test 74.63% with an area wise mean \pm SD of 4.477 ± 1.041 . In pre-test knowledge related to geriatric and geriatric care was 46.70% with an area wise mean \pm SD of 12.14 ± 3.255 whereas in post- test it was 77.36% with an area wise mean \pm SD of 18.56 ± 2.417 . In the area of knowledge related to complications of ageing, the pre mean percentage was 48.88% with an area wise mean \pm SD of $.488 \pm .502$ whereas the post mean percentage was 74.44% with an area wise mean \pm SD of $.744 \pm .438$.

Table 4: Comparison of knowledge score among the respondents

Knowledge score	Mean	Mean difference	SD of mean difference	Paired 't' test value	df	Level of significance
Pre- test	21.11	-14.366	5.88	-23.413	89	0.000
Post- test	35.47					

Sig. significant

The pre- test means score was 21.11 and the post- test mean was 35.47 with a mean difference of -14.366 with SD of 5.889. The paired 't' test value was -23.413 at df= 89, significant at 0.001 levels.

Table 5: Association of pre- test knowledge score with their demographic variables

No.	Sl.	Demographic variables	Knowledge level		Df	Fisher's exact value	Chi-square value	Inference
			<40% Inadequate	>40% Adequate				
1		Age in years 21- 30 31-40 41-50 Above 50 years	12 3 3 0	12 20 8 2	3	14.341 P=.002	<0.05 *s	
2		Gender Male Female	0 17	2 31	1	.831 P=.362	>0.05 NS	
3		Year of Experience 0-1 year 2-5 years 6-10 year 11-15 year Above 15 year	6 6 2 5 5	14 9 5 4 4	2	1.082 P=.582	>0.05 NS	
3		Previous knowledge Yes No	9 17	23 11	1	11.855 P=.001	<0.05 *S	

*S- significant

NS- non- significant

Table 5 depicts the association of age with pre-test knowledge levels at $df= 3$, $\chi^2= 14.341$ and $p=.002$, which is significant at <0.05 levels. Associating the gender with the pre-test knowledge levels at $df=1$, $\chi^2 = .831$ and $p=.362$, which is not significant at >0.05 levels. Associating course of study with the pre-test knowledge score had a $df=2$, $\chi^2 = 1.082$ and $p=.582$, not significant at >0.05 levels. Associating previous knowledge regarding geriatric care with pre-test knowledge score was $df=1$, $\chi^2 = 11.85$ and $p=.001$, which is significant at <0.05 levels.

V. CONCLUSION

This research article highlights the effectiveness of a structured teaching programme on knowledge regarding geriatric care among the gerontological nurses working in selected old age homes in Kanyakumari district. In the present study sixty gerontological nurses working in old age homes were selected from using simple random sampling technique. The research approach adopted for this study is an explorative approach with a view to measure the knowledge during the pre-

test and the effectiveness of structured teaching program after the pre-test. The data were collected by structured questionnaire; the data was interpreted by suitable and appropriate statistical method. During the pre-test it was found that majority 4 (6.67%) respondent had poor knowledge, 24(40%) respondents had average knowledge, 32(53.33%) respondents had good knowledge and none of the respondent had very good knowledge, whereas in a post-test 39 (65%) respondents had gained very good level of knowledge, 20 (40%) respondents gained good level of knowledge, 1(1.6%) respondents gained average level of knowledge, while none had poor knowledge regarding geriatric care. Paired 't' test shows a significant increase in the knowledge score ($t=-23.413$) at 0.001 level of significance. It can be concluded that the association of demographic variables namely age, previous knowledge regarding geriatric care with pre-test knowledge is significant while variables like gender and course of study showed no significant association as justified statistically using fisher's exact or χ^2 values. It can be inferred that the knowledge score of the respondents regarding geriatric care was inadequate in the pre-test mean (21.11) than in the post-test, mean (35.47). From this it is concluded that the structured teaching programme was considerably effective in increasing their knowledge regarding practical skills related to care of elderly client among gerontological nurses.

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