JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Effectiveness of progressive muscle relaxation on level of Stress and Assertiveness among elderly residing in selected areas.

[1]Mr. Mallikarjun Gurushantappa Patil, [2]Mr. Vishal Naikare

[1]Nurse Educator, [2]HOD (Mental Health Nursing)

[1] Bharati Hospital Pune, India,

[2]Sinhgd College of Nursing Pune, India

Abstract: Stress is necessary for life. We need stress for creativity, learning, and for our very survival. Stress is only harmful when it becomes overwhelming and interrupts the healthy state of equilibrium that our nervous system needs to remain in balance. Evidences indicate that most of the human successes are created in stressful conditions; but high rate of stress would followed by numerous consequences, including mental and physical illnesses, dysfunction and adjustment disorder and ultimately reduction of individuals, quality of life. Objective-To Assess the Effectiveness of Progressive Muscle Relaxation on level of stress and Assertiveness among elderly residing in selected areas. To assess pre-existing level of stress among elderly residing in selected areas. To assess pre-existing level of assertiveness among elderly residing in selected areas. To assess effectiveness of progressive muscle relaxation on level of stress among elderly residing in selected areas. To assess effectiveness of progressive muscle relaxation on level of assertiveness among elderly residing in selected areas. To find association between the pre-test study finding and selected Demographic variables. In the assessment of Effectiveness of progressive Muscle Relaxation on 60 samples divided in two group that is 30 experimental group and 30 control group. Evaluation of level of stress and assertiveness was done before and after the intervention among experimental groups and control group. The level of stress and assertiveness among elderly was improved in experimental group, P value < 0.05.

INTRODUCTION

Old age is part of the life cycle of an organism. Every human being passes though each phase of the life cycle starting from infancy and ends in old age unless and until life is curbed or cut short by death in an early phase. The experience of aging is unique to every individual because of the individual differences in personalities, varying social support networks and differing according to the culture to which one belongs. A pioneer in working with the elderly population and recipient of many awards for his leadership work rightly puts it there is a definite lag between the acceptance of the facts (concerning the aged) and any understanding of their implication. The term old age conjure up images of frustration and pity, sickness and poverty, despair and senility or maturity and serenity, warmth and responsibility. When we look at the Greek mythology we find that the risk associated with it. Many older people reach the end of life without ever having been physical or mentally infirm.[1] There are many factors that cause stress among elderly in daily life. In that daily workload, financial problem, death of loved one, loss of job, chronic illness those factors are they are effect on person physical and mental health. That leads to elderly have suffer from headache, fatigue, difficulty sleeping, upset stomach, irritability and when stress become a long time that leads to depression, high blood pressure, abnormal heartbeat, heart disease so management of stress is very important in elderly.[2] Assertiveness is very help full for maintaining good relation with others. Assertiveness is the ability to express yourself and your rights without violating the rights of others. It is appropriately direct, open, and honest communication which is self-enhancing and expressive. Behaving assertively is important for express your thoughts, feelings, and beliefs in direct, honest ways that do not violate another person's integrity. If you can become more assertive it is likely to lead you to feel better about yourself, feel more confident, and feel more relaxed and self-motivated. [3]

There are various methods to control or reduce stress. Stress management practices include yoga, relaxation, and progressive muscle relaxation, breathing exercises, meditation and mental imagery. Relaxation techniques is more effective or help full to cope with everyday stress and with stress related to various health problems. Progressive muscle relaxation can be used as a natural muscle relaxant and is especially helpful since its effective in achieving the relaxation response, a deep conscious state of calming the mind. Progressive muscle relaxation is a systematic technique for managing stress and achieving a deep state of relaxation. It was developed by Dr. Edmund Jacobson in 1930.[4]

Primary Objectives:-

To Assess the Effectiveness of Progressive Muscle Relaxation on level of Stress and Assertiveness among elderly residing in selected areas.

Secondary Objectives:

1.To assess pre-existing level of stress among elderly residing in selected areas.
2.To assess pre-existing level of assertiveness among elderly residing in selected areas.
3.To assess effectiveness of progressive muscle relaxation on level of stress among elderly residing in selected areas.
4.To assess effectiveness of progressive muscle relaxation on level of assertiveness among elderly residing in selected areas.
5.To find association between the pre-test study finding and selected Demographic variables.

RESEARCH METHODOLOGY

The research approach was selected as Quantitative approach to see the 'Effectiveness of progressive muscle relaxation on level of Stress and Assertiveness among elderly residing in selected areas.

A Quantitative approach is more appropriate to assess level of stress, and assertiveness effect of progressive muscle relaxation

Research design

A Quasi experimental non randomized control group design was chosen for the study.[5]

Group	Pre test	Intervention	Post test
Experimental group	0_1	X	0_2
Control group	0_1	--	0_2

Setting of the study

The study is conducted in the selected areas. The rationales of selection of this setting is adequate samples, cooperation feasibility of conducting the study and also old age people residing in selected areas might have stress and assertiveness due deprivation from home environment.

Population

In this study population is the old age people in between the age 60-75 residing in selected areas. The target population for the present study was includes old age people residing in selected areas all over Maharashtra state.

sampling technique

Sample is the chosen to the represent of population containing all the characteristics of the population which has been selected to participate in the study. The samples were selected by probability cluster sampling technique. The samples that fulfil the inclusion criteria were admitted in study. The sampling technique used in this study is Non probability purposive sampling technique was used.

Sample size

Sample size for the study consists of 60 (30 experimental and 30 control group) old age people were selected as per availability and fulfilment of the present criteria. The sampling technique select for present study is Non probability purposive sampling technique.

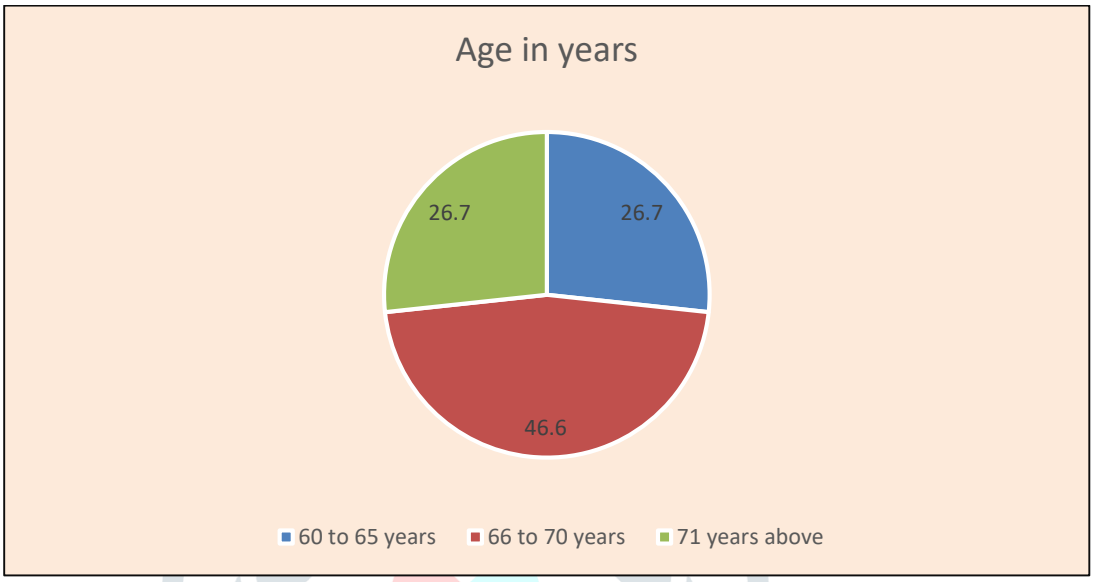
ANALYSIS AND INTERPRETATION OF THE DATA

The collected data is tabulated, analyzed, organized and presented under the following headings:

Section-1
Deals with the analysis of the demographic variables of the elderly people.
Section-2
Deals with the analysis of the data related to pre-existing level of stress.
Section-3
Deals with the analysis of the data related to pre-existing level assertiveness.
Section-4
Deals with the analysis of the data related to effectiveness of progressive muscle relaxation on level of stress.
Section-5
Deals with the analysis of the data related to effectiveness of progressive muscle relaxation level of assertiveness.
Section-6
To find association between pre-test study levels of stress with selected background variables.
Section-7
To find association between pre-test study levels of assertiveness with selected background variables.

Section 1: Description of samples based on their demographic variables (n=60).
Table 1- Distribution of samples according to Age of respondents. n= (E= 30, C= 30)

SN	Variable	Frequency	%
a	60 to 65 years	16	26.7
b	66 to 70 years	28	46.6
c	71 years above	16	26.7



Pie diagram showing percentage wise distribution according to the Age of the respondents
Percentage wise distribution of respondents according to their Age depicts that highest percentage 28 (46.6%) of respondents were in the age group of 66 to 70 years and equal number 16 (26.7%) of the respondents were in the age group of 60-65 years and 71 years and above. It can be interpreted that most of the respondents were in the age group of 66 to 70 years.

Table 2- Distribution of samples according to Gender of respondents. n= (E= 30, C= 30)

SN	Variable	Frequency	%
a	Male	33	55.0
b	Female	27	45.0
c	Prefer not to specify	00	00

Percentage wise distribution of respondents according to their gender depicts that highest percentage (55%) of respondents were male and 45% of the respondents were female. It can be interpreted that most of the respondents were male.

Table 3- Distribution of samples according to Education of respondents. n= (E= 30, C= 30)

SN	Variable	Frequency	%
a	Primary	09	15.0
b	Secondary	24	40.0
c	Higher Education	17	28.3
d	Degree and above	10	16.7

Percentage wise distribution of respondents according to their Education depicts that highest percentage (40%) of respondents had secondary education, 28.3% of the respondents had higher secondary education, (16.7%) of the respondents had degree and above and (15%) of respondents had primary education. It can be interpreted that most of the respondents had secondary education.

Table 4- Distribution of samples according to Type of family respondents. n= (E= 30, C= 30)

SN	Variable	Frequency	%
a	Joint	21	35
b	Nuclear	27	45
c	Extended	12	20

Percentage wise distribution of respondents according to their Type of Family depicts that highest percentage (45%) of respondents were from nuclear family, 35 % of the respondents were from joint family and (20%) of respondents were from Extended family. It can be interpreted that most of the respondents were from nuclear family.

Section-2

Effectiveness of progressive muscle relaxation on level of Stress from Experimental and control group (n=60)

Table No: 5

Frequency and percentage wise distribution of pre-test and post-test stress scores of Elderlies from Experimental group. (n=30)

Sr. no.	Score	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
1	Severe stress (25 – 30)	07	23.33	00	00
2	Moderate stress (15 – 25)	23	76.67	00	00
3	Mild stress (0 – 13)	00	00	30	100
4	No stress (0 – 5)	00	00	00	00

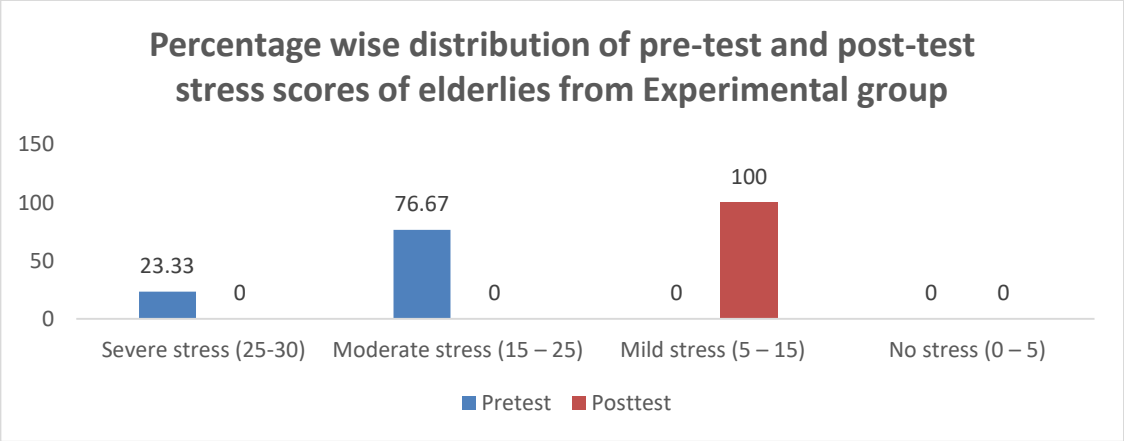


Fig no: 2 Bar diagram showing percentage wise distribution of pre-test and post-test stress scores of elderlies from Experimental group

Percentage wise distribution of pre-test and post-test stress scores of elderlies from experimental group depicts that highest percentage in pre-test (76.67%) of them had moderate stress and 23.33% of them had severe stress. In post-test all (100%) of the respondents had mild stress. Hence it can be interpreted that progressive muscle relaxation was effective in reducing level of Stress in Experimental group.

Section-3

Table No: 6 Frequency and percentage wise distribution of pre-test and post-test stress scores of Elderlies from Control group. (n=30)

Sr. no.	Score	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
1	Severe stress (25 – 30)	08	26.67	08	26.67
2	Moderate stress (15 – 25)	22	73.33	22	73.33
3	Mild stress (0 – 13)	00	00	00	00
4	No stress (0 – 5)	00	00	00	00

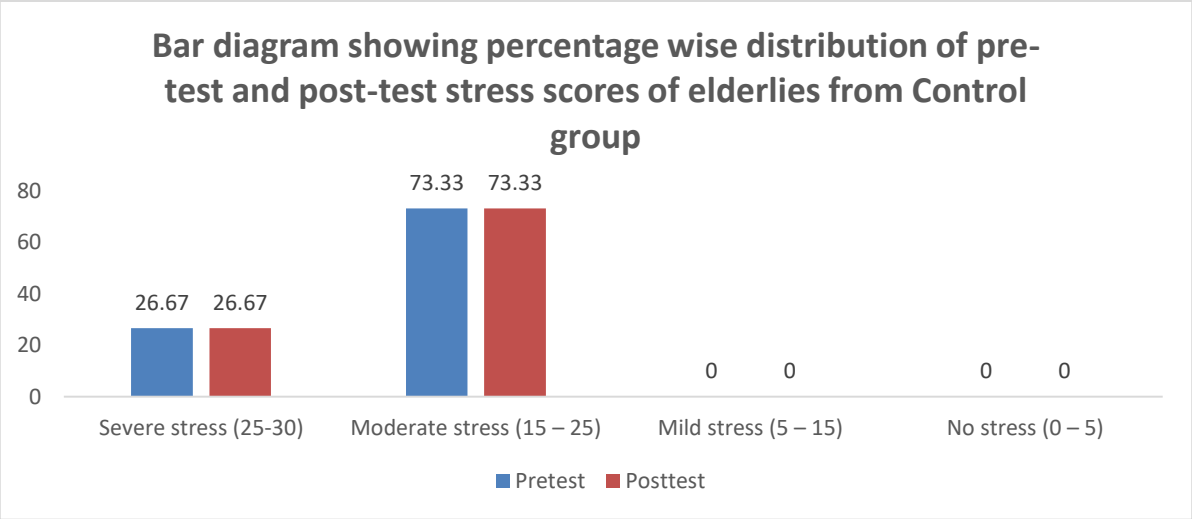


Fig no: 3 Bar diagram showing percentage wise distribution of pre-test and post-test stress scores of elderlies from Control group

Percentage wise distribution of pre-test and post-test stress scores of elderlies from control group depicts that highest percentage in pre-test (73.33%) of them had moderate stress and 26.67% of them had severe stress and in post-test (73.33%) of them had moderate stress and 26.67% of them had severe stress. Hence it can be interpreted that there is no difference in pre and post-test stress score of elderlies from control group.

Table No: 7 Paired't' value of pre and post-test stress score of elderlies from Experimental group. (n=30)

SN	Group	Mean	SD	't' value	P Value	Level of significance
1	Pre-test	22.23	2.944	23.954	0.001	Significant
2	Post-test	8.467	1.502			

table value = 2.045 at p = ⩽ 0.05

t value was calculated to analyze the difference in pre-test and post-test stress score of elderlies before and after giving progressive muscle relaxation from Experimental group. Highly significant difference was found between pre and post-test stress score of elderlies from Experimental group (t = 23.954).

Hence the stated null hypothesis is rejected as it is interpreted that there was significant difference between pre-test and post-test stress score

Table No: 7 Paired 't' value of pre and post-test stress score of elderlies from control group.

SN	Group	Mean	SD	't' value	P Value	Level of significance
1	Pre-test	21.13	3.481	0.783	0.440	Not Significant
2	Post-test	21.33	2.845			

table value = 2.045 at p = ⩽0.05

t value was calculated to analyze the difference in pre-test and post-test stress score of elderlies from control group. No significant difference was found between pre and post-test stress score of elderlies from control group. (t = 0.783).

Hence the stated null hypothesis is accepted as it is interpreted that there was no significant difference between pre-test and post-test stress score.

Table No: 8 Unpaired 't' value of post-test stress score of elderlies from Experimental group and Control group. (E = 30 and C =30)

SN	Group	Mean	SD	't' value	P Value	Level of significance
1	Experimental group	8.467	1.502	20.598	0.001	Significant
2	Control Group	21.33	2.845			

table value = 2.042 at p = ⩽0.05

t value was calculated to analyze the difference in post-test stress score of elderlies regarding progressive muscle relaxation from experimental and control group. Highly significant difference was found between post-test stress score of elderlies from Experimental and control group (t = 20.598).
Hence the stated null hypothesis is rejected as it is interpreted that there was significant difference between post-test stress score of Experimental and Control group

Section- 4 Effectiveness of progressive muscle relaxation on assertiveness from Experimental and control group (n=30)
Table No: 9 Frequency and percentage wise distribution of pre-test and post-test assertiveness of Elderlies from Experimental group. (n=30)

Sr. no.	Score	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
1	No assertiveness (00-07)	04	13.33	00	00
2	Mild assertiveness (08 – 15)	24	80	00	00
3	Moderate assertiveness (16 – 23)	02	06.67	25	83.33
4	Positive assertiveness (24– 30)	00	00	05	16.67

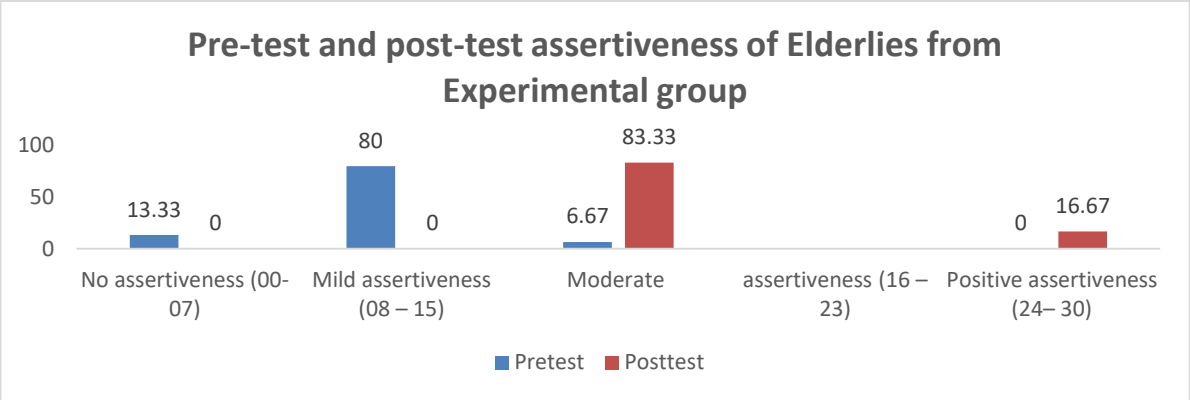


Fig no:4 Bar diagram showing percentage wise distribution of pre-test and post-test assertiveness scores of elderlies from Experimental group
Percentage wise distribution of pre-test and post-test assertiveness scores of elderlies from experimental group depicts that highest percentage in pretest (80%) of them had Mild assertiveness score and in posttest (83.33%) of the respondents had moderate assertiveness score and 16.67% of the respondents had positive

Table No: 10 Frequency and percentage wise distribution of pre-test and post-test assertiveness scores of Elderlies from Control group. (n=30)

Sr. no.	Score	Pretest		Posttest	
		Frequency	Percentage	Frequency	Percentage
1	No assertiveness (00-07)	01	3.33	01	3.33
2	Mild assertiveness (08 – 15)	28	93.34	29	96.67
3	Moderate assertiveness (16 – 23)	01	3.33	00	00
4	Positive assertiveness (24– 30)	00	00	00	00

Fig no: 5 Bar diagram showing percentage wise distribution of pre-test and post-test assertiveness scores of elderlies from Control group
Percentage wise distribution of pre-test and post-test assertiveness scores of elderlies from control group depicts that highest percentage in pretest (93.34%) of them had Mild assertiveness score and in posttest (96.67%) of the respondents had mild assertiveness score.
Table No: 11 Paired 't' value of pre and post-test assertiveness score of elderlies from Experimental group.

SN	Group	Mean	SD	't' value	P Value	Level of significance
1	Pre-test	10.03	2.81	15.561	0.001	Significant
2	Post-test	21.13	2.33			

table value = 2.045 at p = ⩽0.05

t value was calculated to analyze the difference in pre-test and post-test assertiveness score of elderlies before and after giving progressive muscle relaxation from Experimental group. Highly significant difference was found between pre and post-test assertiveness score of elderlies from Experimental group (t = 15.561).
Hence the stated null hypothesis is rejected as it is interpreted that there was significant difference between pre-test and post-test assertiveness score.

Table No: 12 Paired 't' value of pre and post-test assertiveness score of elderlies from control group. (n=30)

SN	Group	Mean	SD	't' value	P Value	Level of significance
1	Pre-test	11.9	2.426	0.996	0.327	Not Significant
2	Post-test	11.37	2.189			

table value = 2.262 at p = ≤0.05
t value was calculated to analyze the difference in pre-test and post-test assertiveness score of elderlies from control group. Significant difference was found between pre and post-test assertiveness score of elderlies from control group. (t = 0.996).
Hence the stated null hypothesis is accepted as it is interpreted that there was no significant difference between pre-test and post-test assertiveness score from control group.

Table No: 13 Unpaired 't' value of post-test assertiveness score of elderlies from Experimental group and Control group.

SN	Group	Mean	SD	't' value	P Value	Level of significance
1	Experimental group	21.13	2.33	16.721	0.001	Significant
2	Control Group	11.37	2.189			

table value = 2.262 at p = ≤0.05
t value was calculated to analyze the difference in post-test **assertiveness** score of elderlies. Highly significant difference was found between post-test assertiveness score of elderlies from Experimental and control group **(t = 16.721).**
Hence the stated null hypothesis is rejected as it is interpreted that there was significant difference between post-test assertiveness score.

Section- 5 To find association between pre-test level of stress with selected demographic variables i.e., age, gender, education and type of family

Table No: 14 Contingency table to find out the association between level of stress score and age

SN	Age	Severe stress		Moderate stress		Total	γ^2
		O	E	O	E		
1	60 to 65 years	5	4	11	12	16	0.667
2	66 to 70 years	7	7	21	21	28	
3	71 years above	3	4	13	12	16	
Total		15		45		60	

Table value of $\gamma^2 = 5.99$
The above table shows that calculated value of chi square (0.67) is less than table value (5.99) shows there is no significant difference between age and level of stress.

Table No: 15 Contingency table to find out the association between level of stress score and Gender

SN	Gender	Severe stress		Moderate stress		Total	γ^2
		O	E	O	E		
1	Male	9	8.25	24	24.75	33	0.6530
2	Female	6	6.75	21	20.25	27	
Total		15		45		60	

Table value of $\gamma^2 = 3.841$
The above table shows that calculated value of chi square (0.6530) is less than table value (3.841) shows there is no significant difference between Gender and level of stress.

Table No: 16 Contingency table to find out the association between level of stress score and Education

SN	Education	Severe stress		Moderate stress		Total	γ^2
		O	E	O	E		
1	Primary	2	2.25	7	6.75	09	0.83
2	Secondary	7	6	17	18	24	
3	Higher Education	3	4.25	14	12.75	17	
4	Degree and above	3	2.50	7	7.50	10	
Total		15		45		60	

Table value of $\gamma^2 = 7.815$

The above table shows that calculated value of chi square (0.83) is less than table value (7.815) shows there is no significant difference between Education and level of stress.

Table No: 17 Contingency table to find out the association between level of stress score and Type of family

SN	**Type of family**	**Severe stress**		**Moderate stress**		**Total**	γ^2
		O	E	O	E		
1	Joint	5	8.25	16	15.75	21	0.68
2	Nuclear	8	6.75	19	20.25	27	
3	Extended	2	3	10	9	12	
Total		15		45		60	

Table value of $\gamma^2 = 5.99$

The above table shows that calculated value of chi square (0.68) is less than table value (5.99) shows there is no significant difference between type of family and level of stress.

Section- 6 To find association between pre-test level of assertiveness score with selected demographic variables i.e., age, gender, education and type of family

Table No: 18 Contingency table to find out the association between level of assertiveness score and age

SN	Age	No assertiveness		Mild Assertiveness		Moderate Assertiveness		Total	γ^2
		O	E	O	E	O	E		
1	60 to 65 years	1	1.33	14	13.87	1	0.80	16	0.944
2	66 to 70 years	2	2.33	25	24.27	1	1.40	28	
3	71 years above	2	1.33	13	13.87	1	0.80	16	
Total		05		52		03		60	

Table value of $\gamma 2 = 5.99$

The above table shows that calculated value of chi square (0.944) is less than table value (5.99) shows there is no significant difference between Age and level of assertiveness.

Table No: 19 Contingency table to find out the association between level of assertiveness score and Gender

SN	Gender	No assertiveness		Mild Assertiveness		Moderate Assertiveness		Total	γ^2
		O	E	O	E	O	E		
1	Male	3	2.75	28	28.60	2	1.65	33	0.886
2	Female	2	2.75	24	23.40	1	1.35	27	
Total		05		52		03		60	

Table value of $\gamma^2 = 3.84$

The above table shows that calculated value of chi square (0.886) is less than table value (3.84) shows there is no significant difference between Gender and level of assertiveness.

Table No: 20 Contingency table to find out the association between level of assertiveness score and Education

SN	Education	No assertiveness		Mild Assertiveness		Moderate Assertiveness		Total	γ^2
		O	E	O	E	O	E		
1	Primary	1	0.82	8	8.52	1	0.66	09	0.99
2	Secondary	2	1.97	21	20.46	1	1.57	24	
3	Higher Education	1	1.39	15	14.49	1	1.11	17	
4	Degree and above	1	0.82	8	8.52	1	0.66	10	
Total		05		52		03		60	

Table value of $\gamma^2 = 7.815$
The above table shows that calculated value of chi square (0.99) is less than table value (7.815) shows there is no significant difference between Education and level of assertiveness.

Table No: 21 Contingency table to find out the association between level of assertiveness score and Type of family

SN	Type of family	No assertiveness		Mild Assertiveness		Moderate Assertiveness		Total	γ^2
		O	E	O	E	O	E		
1	Joint	2	1.75	18	18.20	1	1.05	21	0.46
2	Nuclear	2	2.25	24	23.40	1	1.35	27	
3	Extended	1	1	10	10.40	1	0.60	12	
Total		05		52		03		60	

Table value of $\gamma^2 = 5.99$
The above table shows that calculated value of chi square (0.46) is less than table value (5.99) shows there is no significant difference between type of family and level of assertiveness.

CONCLUSION

In the assessment of Effectiveness of progressive Muscle Relaxation on 60 samples divided in two group that is 30 experimental group and 30 control group. Evaluation of level of stress and assertiveness was done before and after the intervention among experimental groups and control group. The level of stress and assertiveness among elderly was improved in experimental group, P value < 0.05.

REFERENCES

1. Jolly, K.O (2004). A study to assess the health problems of elderly population in a selected urban area, Bangalore. Dissertation for M.Sc nursing. Rajiv Gandhi University. {Internet} (cited on- 11/ 04/ 2021). Available From URL- https://www.iosrjournals.org/iosr-jnhs/papers/vol6-issue5/Version-5/B0605051221.

2.Jennifer Casarella, MD on March 09, 2020. {Internet} (Cited on- 14/ 04/ 2021). Available from URL- https://www.webmd.com/balance/guide/causes-of-stress.

3.Abosar Prokashana. Essentials of Counseling (pp.247-272) Edition: First Chapter: 8. (March 2017.) Assertiveness And Relaxation Techniques. {Internet} (Cited on- 20/ 04/ 2021). Available from URL- https://www.researchgate.net/publication/325846074_ASSERTIVENESS_AND_RELAXATION_TECHNIQUES

4. The Progressive Muscle Relaxation of Dr Edmund Jacobson (PMR). {Internet} (Cited on- 14/ 04/ 2021). Available from URL- www.hypnos.co.uk/jacobson.htm 29 January, 2014.

5. Sharma S.K. A text book of nursing research and statistics .2nd edition.
6. Dr Edmund Jacobson, Posted on July 26, 2016 "An anxious mind cannot exist in a relaxed body". {Internet} (Cited on- 30/ 03/ 2021).
Available from URL- https://sgpsychology.co.za/progressive-muscle-relaxation/#:~:text=Edmund%20Jacobson.

7. Robinson L, Segal R, et.al. Relaxation Techniques for Stress Relief. HelpGuide.org 2016 March. {Internet} (Cited on- 20/ 04/ 2021). Available from URL- https://osteopathyindulwich.co.uk/2017/07/20/stress-management-breathing