

## Effectiveness of deep breathing exercise on level of stress among elderly in selected old-age homes of Pune city



Nursing

KEYWORDS:

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### ABSTRACT

*Stress is part of life, everyone feels stressed from time to time. It is just a simple reaction to a stimulus that disturbs our physical or mental equilibrium. Without stress our lives would be boring and would probably feel pointless. A certain amount of stress energizes people, improving performance and efficiency. Not all stress is bad, but chronic stress can cause both physical and mental harm. Young and old alike have to face difficult situations and overcome obstacles. While young adults struggle to establish a career, achieve financial security, or juggle work and family demands, older people may face failing health or dwindling finances or simply the challenges of retaining their independence. Unfortunately, the body's natural defenses against stress gradually break down with age. The number of persons above the age of 60 years is fast growing, especially in India. India as the second most populous country in the world has 76.6 million people at or over the age of 60, constituting above 7.7% of total population.*

*The present study highlights the effectiveness of deep breathing exercise on level of stress among elderly in selected old age homes of Pune city. This study depicting that deep breathing exercise is very effective in reducing the level of stress among elderly in selected old age homes of Pune city. The study was conducted as a partial fulfilment for the degree of masters in nursing.*

### Objectives

- To assess the level of stress among elderly in both experimental and control group.
- To find out the effectiveness of deep breathing exercise on level of stress of elderly in experimental group.
- To find out the association between level of stress and demographic variables.

### Methodology

Nonrandomized control group design is adopted for the present study. The present study was aimed at describing the effectiveness of deep breathing exercise on level of stress among elderly in selected old age homes of Pune city. Non- probability Convenience sampling technique was used for the selection of the samples for the study.

### Settings and Sample

The study was conducted in selected old age home of Pune city. And sample of 100 elderly was selected by Non- probability convenience sampling.

### Tool

Perceived stress scale was administered to assess the level of stress among elderly in selected old age home of Pune city.

Section I : Demographic variables.

Section II: Perceived stress scale.

### Validity and Reliability

The content validity was obtained from the experts in the field and pilot study was conducted from 12<sup>th</sup> march to 19th march. The reliability was assessed using split-half method. Chronbach's alpha was found to be 0.95. This was considered to be highly reliable.

### Data Gathering Process

Study was conducted from 12th march to 20th April 2015. Before the data collection the investigator obtained the formal permission from the Administrator of selected old age of Pune city.

### Major Finding

Major findings are as follows:-

#### Section I: Distribution of demographic variable of elderly

- 44% were from 60-65 years of age both in experimental and control group.
- 56% & 50% were females both in experimental and control group.

- 62% & 52% were married both in experimental and control group.
- 50% of them had two children in experimental and 32% of them had no child in control group.
- 62% & 56% of them were from nuclear families both in experimental and control group.
- 60% & 34% were had higher secondary education both in experimental and control group.
- 54% & 72% were not liable to get pension in both experimental and control group.
- 36% & 64 % didn't have any history of health problem both in experimental and control group.
- 76% & 72% of them did not had any history of addiction both in experimental and control group
- 40% & 48% of them had history of family problems in recent past both in experimental and control group.
- 60% of them met their family members twice in the period of six months in experimental and 38% of them had met only once in control group.
- 58% of them had 2-4 years of stay in old age home in experimental and 30% of them had only one year stay in control group.

#### Section B: Assessment level of stress among elderly in both experimental and control group

In pretest, 48% of the experimental samples had moderate stress (21-30), another 48% of them had severe stress (score 31-40) and 4% of them had mild stress (Score 11-20).

In pretest, 38% of the control samples had moderate stress (21-30), another 36% of them had severe stress (score 31-40) and 26% of them had mild stress (Score 11-20).

#### Section C: To find out the effectiveness of deep breathing exercise on level in experimental group

##### a) Pre-test and post-test stress of elderly in experimental group

- In pre-test, 48% of the experimental samples had severe stress (31-40), another 48% of them had moderate stress (score 21-30) and 4% of them had mild stress (Score 11-20).
- In post-test, majority of 70% of them had mild stress (Score 11-20), 22% of them had moderate stress (Score 21-30) and 2% of them had severe stress (score 31-40).
- Finding indicates that there is a marked reduction in stress of elderly people in old age homes after deep breathing exercise.

##### b) Paired t-test for effectiveness of deep breathing exercise on stress of elderly people:

- Researcher applied paired t-test for of elderly people staying in old age homes. t-value corresponding to this comparison was 27.5 at 49 degrees of freedom.
- Corresponding p-value was found to be 0.000 which is small (less than 0.05). The null hypothesis is rejected.
- Mean value at pre-test was 30.2 which decreased to 16.8 in post-test.
- Deep breathing exercise is significantly effective in decreasing the level of stress among elderly people staying in old age homes.

**C) Two sample z-test for comparison of experimental and control group:**

- Researcher applied two sample z-test for comparison of experimental and control group.
- z--value corresponding to this comparison was 13.2 at 98 degrees of freedom. Corresponding p-value was found to be 0.000 which is small (less than 0.05). The null hypothesis is rejected.
- Average change in stress score of experimental group was 13.3 which were - 0.8 for control group.

- Deep breathing exercise is significantly effective in reducing the stress of elderly people staying in old age homes.

**Section D: To find out the association between level of stress and demographic variables**

- The association between level of stress and selected demographic variables was done by using Fisher's exact test.
- Since p-values corresponding to number of meeting with family members in periods of sixth month and length of stay in old-age home are small (less than 0.05).
- Demographic variables number of meeting with family members in periods of sixth month and length of stay in old-age home were found to have significant association with stress.

**Conclusion**

Thus the deep breathing exercise was very effective in reducing stress of elderly in old age home. The statistical analyses were found that there is a positive relationship between deep breathing exercise and stress level.