

A study to assess the effectiveness of structured teaching programme on knowledge regarding osteoporosis among women in selected community of New Delhi.

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Abstract: Osteoporosis is a multifactorial and slowly emerging global health problem. The lifetime risk of dying from hip fracture is same as that from breast cancer. Indian women have an early age of onset of osteoporosis. Osteoporosis is a multifactorial and slowly emerging global health problem. The lifetime risk of dying from hip fracture is same as that from breast cancer. Indian women have an early age of onset of osteoporosis. National Osteoporosis Foundation has stated that “Osteoporosis as a disease that threatens more than 61 million women in India. More than 28 million women in America. It is major public health problem in many parts of the world. There is need for early diagnosis, identification of high-risk groups and prevention and treatment of osteoporosis in the community. The aim of this study was to assess the knowledge regarding osteoporosis in women of age group 35-50 years. The methodology used was pre-test and post test research design. Sample selected was women of the age group 35-50 years of age. Pre-test was taken, structured teaching was given and post-test was taken which showed there was significant increase in the knowledge of women regarding osteoporosis.

Key Words: Osteoporosis, awareness of women

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I. Introduction

“Osteoporosis is not an inevitable part of ageing; it is preventable. So, it is vital that all of us, of all ages, start taking care of our bones now, before it is too late.”

-Camilla Parker Bowles

As said by Joyce M. Black, Osteoporosis is a term which helps to define the disease characterized by low bone mass and deterioration of bone tissue. This leads to increase bone fragility and risk of fracture particularly of the hip, spine, wrist and shoulder. Osteoporosis is often known as “the silent thief” because bone loss occurs without symptoms and occurs most common in women.¹

According to the International Osteoporosis Foundation, one in two women and one in four men over age 50 will have an osteoporosis related fracture in her/his lifetime. It is estimated that osteoporosis accounts for more than 1.5 million fracture each year. Before a woman reaches 30 her body gains more bone than its losses. Around age 30, this process balances out. If bone loss becomes severe, a woman may develop osteoporosis. Women may protect themselves from sever bone loss by maintaining a balanced diet rich in calcium, performing regular weight bearing exercise, limiting alcohol intake not smoking and considering hormone replacement therapy. International Osteoporosis Foundation has stated that sources estimate that 50 million people in India are either osteoporosis or have low bone mass. Studies indicate that osteoporosis and osteopenia or low bone mass may occur at a relatively younger age in Indian population.²

According to the National Osteoporosis Foundation, osteoporosis is estimated to affect 200 million women worldwide – approximately one – tenth of woman aged 60, one- fifth of woman aged 70, two – fifth of women aged 80, two – third of women aged 90. Osteoporosis affects an estimated 75 million people in Europe, USA, and Japan.³

A study in prevalence of osteoporosis in apparently healthy adults above 40 years of age in Pune City, India was done. The aim of the study was to assess the prevalence of osteoporosis and changes in bone mass with increasing age and compare bone health status of apparently healthy, pre-menopausal and post-menopausal women. Therefore, Indian post-menopausal women require adequate measures to prevent osteoporosis in later years of life. So, this research study showed that there is a need to enhance the knowledge in women to prevent osteoporosis.⁴

The objectives of this study were to assess the knowledge regarding osteoporosis among women, to administer structured teaching programme and to assess the effectiveness of structure teaching programme regarding knowledge on osteoporosis among women. The hypothesis was StructuredTeaching Programme will increase the knowledge level of women regarding osteoporosis.

II. Material and Methods

The study was conducted in January 2020. Apre-experimentalresearch approach with pre-test and post-test research design was used to assess the knowledge regarding osteoporosis among women of age group 35-50years in Badarpur community area, in New Delhi. Permission from the CHO Badarpur, Principal and ethical clearance from Organizational Review Board was taken before starting the study. Total of 60 samples was taken. Purposive sampling technique was used for data collection. The subjects were given structured questionnaires form to fill and give the responses. Before the questionnaire was given to the participants, consent was taken, aims and objectives were explained to them. The Structured Questionnaire to assess the knowledge regarding osteoporosis comprised of two section. Section 1 consists of Demography Proforma including 10 items to collect information on subject’s demography characteristics (age, education, occupation, type of family, family income, type of diet, marital status, number of children, history of Osteoporosis). Section 2 consist of structured knowledge questionnaire including 15 multiple choice items to assess the knowledge regarding osteoporosis. The maximum score was 1 each correct answer and no score was awarded for incorrect answer or question not attempted.Pre-test was taken and then structured teaching was given with the help of lesson plan and av aids, and then post-test was taken. The knowledge level grading criteria considered appropriate as follows:

Score	Knowledge level
1-5	Poor
6-10	Average
11-15	Good

III. Results

Figure 1 to figure 4 depict the important demographic variables about the women like age, diet etc. Figure5 and figure 6 depicts the student nurses giving teaching programme to the women in community.

Figure 7 depicts the frequency and percentage distribution of the pre-test and post test knowledge score of the women. The data presented in figure shows that no women had good knowledge, half (55%) women had average knowledge and half (45%) women had poor knowledge in the pre-test regarding knowledge on osteoporosis, and most (63%) women had good knowledge, some (37%) women had average knowledge and no women had poor knowledge in the post-test regarding knowledge on osteoporosis.

Table 1 depicts the mean, standard deviation and Z score of structured knowledge questionaries. The calculated “z” value (1.25) is more than the table value of (0.205) at 0.05 level of significance which indicates that the structured teaching programme on osteoporosis is effective. The significant increase in the knowledge is not by chance. So the research hypothesis (H1) is accepted and null hypothesis (H0) is rejected.

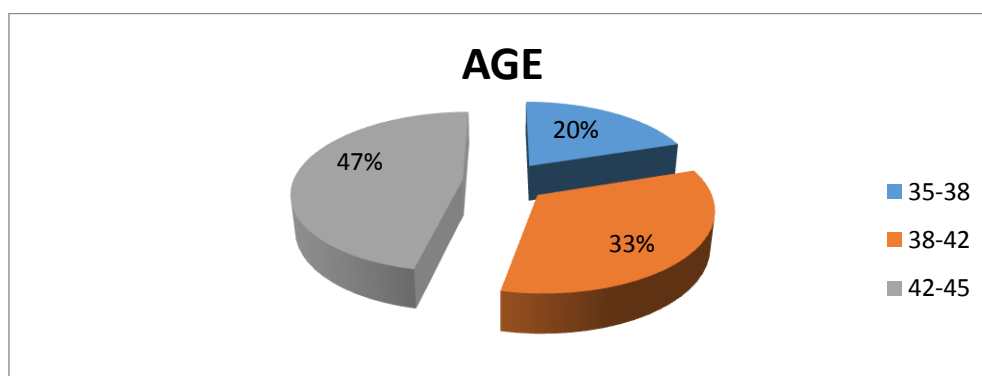


Figure1: Different age group of women

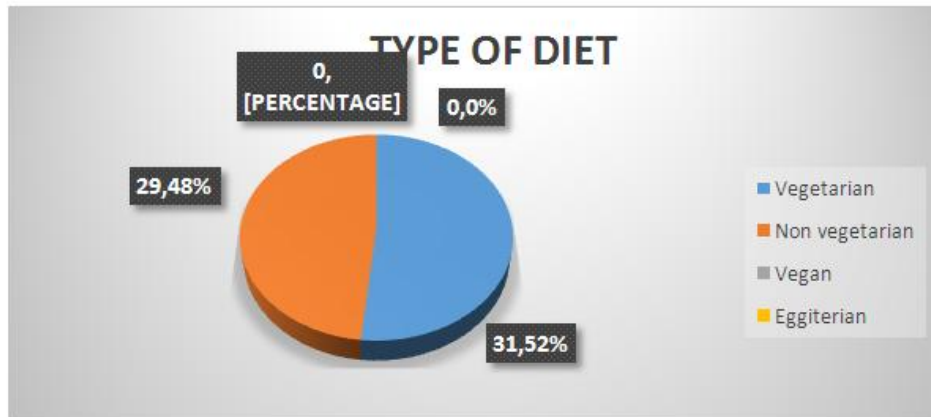


Figure2: Type of diet consumed by the women.



Figure3: Women heard about Osteoporosis.

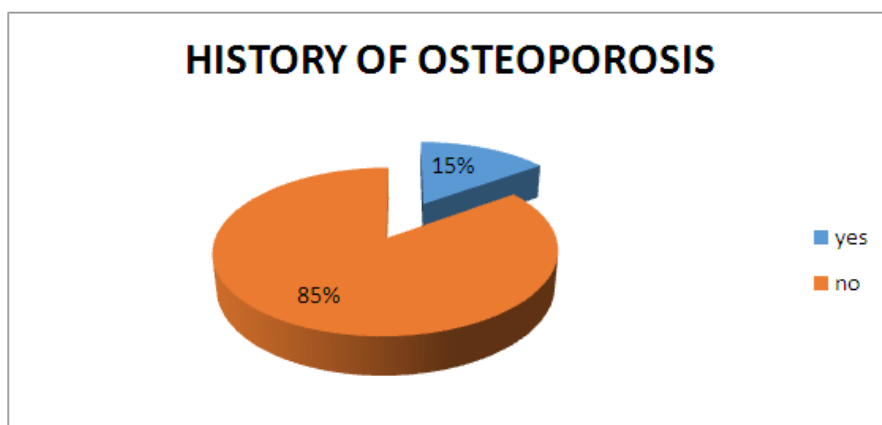


Figure4: Women with history of Osteoporosis.



Figure 5 Student Nurses giving structured teaching programme.

Figure 5

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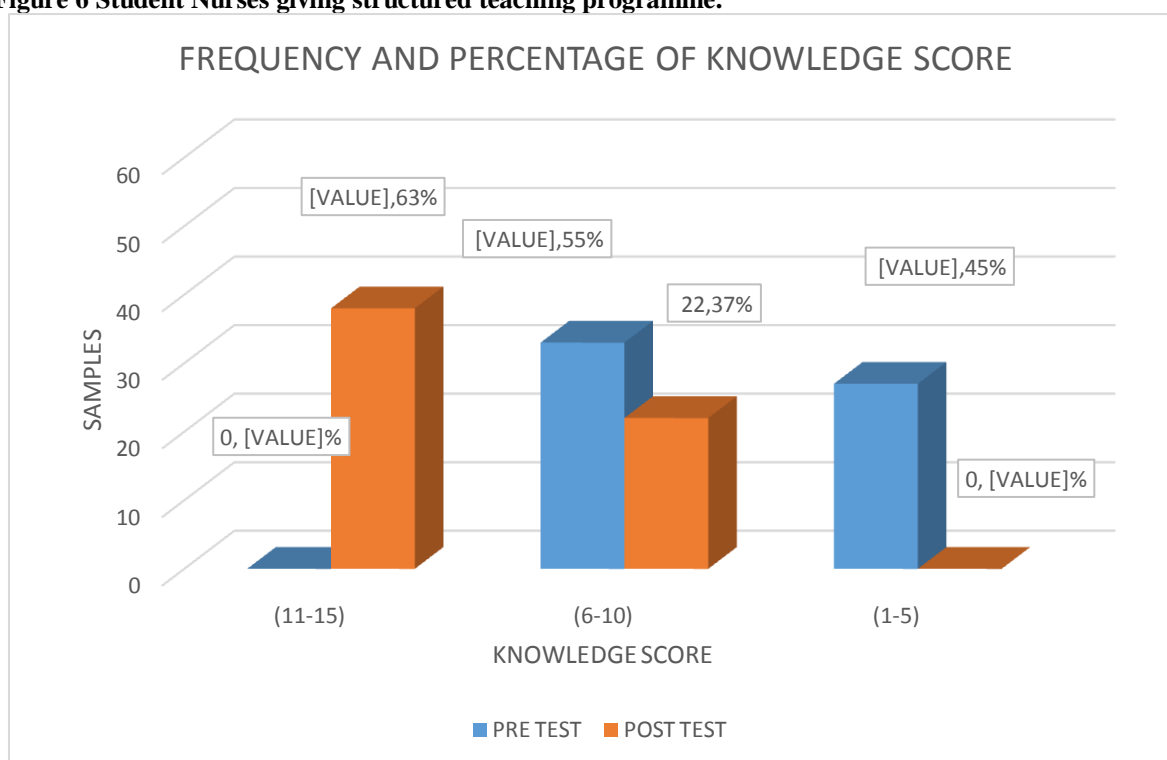


Figure7: Bar Chart showing the Frequency and Percentage distribution of the pre-test and post knowledge score of women.

Test	Mean	Standard deviation	Mean difference	Standard error of mean difference	Z value
Pre-test	360	0.06	337	0.014	1.25
Post test	697	0.12			

Table 1: Mean, Standard Deviation and Z score of Structured Knowledge Questionaries

IV. Discussion and Conclusion

The present study findings were revealed in terms of the objectives for the study. Most of the woman (37;62%) had not heard about osteoporosis and few of the woman (23;38%) heard about osteoporosis. Maximum woman got information from Health worker (98%) few women got information from family and friend (2%). In pre-test no women had good knowledge, more than half (55%) women had average knowledge and less than half (45%) women had poor knowledge regarding osteoporosis. In post-test mostly (63%) women had good knowledge, few (37%) women had average knowledge and no women had poor knowledge regarding osteoporosis. The calculated z value (1.25) was more than the table value (0.205) which prove that the study was very much effective for the women regarding osteoporosis.

The present study findings reveal that knowledge of women increased after administering structured teaching programme on osteoporosis, this finding was in agreement with the findings of the study conducted by Nancy J (2018), A study was conducted to evaluate the effectiveness of structured teaching programme regarding prevention of osteoporosis among health care personnel working in Rajiv Gandhi Government General Hospital, Chennai. The study results showed that there was a significant difference between the values of pre test 40.71% and posttest 80.07% level of knowledge regarding the prevention of osteoporosis. The computed t - value 19.61 was very highly significant of the p value of $p=0.001$. Regarding effectiveness of STP, the overall mean percentage knowledge score in the pre- test was 12.05 and 24.02 in the post test. On an average, in the post test, after having structured teaching program, health care personnel gained 39.90% more knowledge score than pretest score. The statistical paired 't' test indicates that enhancement in the mean percentage knowledge score was found to be significant at ($P=0.001^{**}$) percent level for all the aspects under study. There was significant association between the gain in knowledge scores and selected demographic variables with age, education status, monthly income and menstrual history at ($P=0.001^{**}$). The results revealed that the structured teaching programme, had a significant improvement in the knowledge of prevention of osteoporosis and it helps to implement the preventive health behaviors among health care personnel working in Rajiv Gandhi Government General Hospital, Chennai.⁵

Another study which supports the findings of current study was conducted by Sinu Mosses, A Study to assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Osteoporosis among the Women Residing in Selected Rural Areas was conducted and the conclusion was that the women residing in the rural areas do not have 100% knowledge regarding osteoporosis. There was a significant increase in the knowledge of subjects in the experimental group after the introduction of planned teaching. To find the effectiveness of planned teaching, 't' test was applied and t value was calculated, post test score of the experimental group was significantly very higher at 0.05 level. And in the control group also posttest was higher at 0.05 level, but very less compared to the post test of experimental group. Thus, it was concluded that planned teaching programme on osteoporosis was found effective as a teaching strategy.⁶

Recommendations

- 1) Ensuring a positive learning environment by giving a learning situation where student are sheltered from harm, harassment, ridicule and negative feelings.
- (2) Developing the policies of attendance that incorporate accepted procedures, conveying attendance approaches, assuring strategies are reliably authorized, and leading attendance strategy assessment.
- (3) Keeping exact records of attendance and computing absenteeism rates at frequent interval to recognize every individual's example of attendance.
- (4) Study of the relationship between teacher attendance, student attendance, accomplishment, and behavior.
- (5) Study of the relationship between academic building conditions and educational achievement.

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