

Effectiveness of Osteoporosis Specific Education Intervention on Knowledge and Health Belief of Premenopausal Women

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ABSTRACT

This study has been undertaken to identify the effect of osteoporosis specific education intervention on knowledge and health belief of premenopausal women. It was a quantitative experimental research study conducted among 30 women of age between 38-48 years. The tools used for the study was self-structured questionnaire regarding osteoporosis and osteoporosis health belief scale (OHBS). After 7 days of specific education intervention posttest was done. The theoretical framework for the study was Health Belief model. In pretest about 70% of women had average knowledge, 26.66% had poor knowledge and remaining 3.33% had good knowledge on the topic and related health belief result shows that 43.33% are moderately susceptible, 63.33% are moderately serious, 63.33% are highly benefit to exercise, 56.66% are highly benefit to calcium intake, 53.33% having barrier to exercise, 46.66% having barrier to calcium intake and 73.33% have moderate health motivation. Posttest shows that about 80% of sample had good knowledge and 20% had average knowledge. 50% are moderately susceptible, 70% are moderately serious, 80% are highly benefit to exercise, 80% are highly benefit to calcium intake, 56.66% are moderatly barrier to exercise, 63.33% are mild barrier to calcium intake and 76.66% have moderate health motivation The paired “t” test shows that the specific education intervention was effective in enhancing the knowledge and belief of premenopausal women about osteoporosis.

Index Terms- osteoporosis health belief scale, premenopausal women, Osteoporosis specific education intervention

INTRODUCTION

Our bone support us, and allow us to move. Our bone stores minerals such as calcium and phosphorous which make our bone strong and release to the body, when we need them. Osteoporosis is a disease, characterized by weak and fragile bone tissue, leading to an increased risk of bone fracture. Osteoporosis, which means porous bone in which bone gradually become weak and brittle. They may lose as much as 15% of their total mass during the premenopausal period after which the rate above 1% per year. According to world health organization. Osteoporosis is second only to cardiovascular disease as a global health care problem and medical studies show 50 year old women has a similar life time risk of dying from hip fracture as from breast cancer. Females are eight times more at risk of osteoporosis than males. Bone mass in females is significantly less than that of males of the same age and race. In both sexes, the peak bone mass is achieved by the age of 30 years and then, the bone mass gradually decrease with the age increases^{1,7,11,16}.

Osteoporosis affects many millions worldwide and it has become a silent epidemic. It is termed the “silent thief” because there are often no symptoms until a fragility fracture occurs. In Asian population, osteoporosis is more prevalent than the western countries because Asian population have lower body mass index and shorter height. Furthermore, a lack of physical activity and low dietary calcium intake are common risk factor for osteoporosis in the Asian population. Current research suggests that many individuals with fragility fracture do not undergo appropriate screening or treatment and do not engage in preventive health behavior is important in order to better understand and manage the disease¹⁷.

PROBLEM STATEMENT

A study to assess the effectiveness of osteoporosis specific educational intervention on knowledge and health belief of perimenopausal women in Vazhayoor Panchayath.

OBJECTIVES

1. To assess the level of knowledge of perimeopausal women on Osteoporosis before administering the osteoporosis specific education intervention

2. To assess the health belief of perimenopausal women on osteoporosis before administering the osteoporosis specific education intervention.
3. To evaluate the effectiveness of specific education intervention on osteoporosis and health belief.
4. To find out the association between knowledge and health belief regarding osteoporosis.
5. To find out association between knowledge on osteoporosis with selected demographic variables.

MATERIALS AND METHODS

The methodology of research indicates the general pattern for organizing the procedure of gathering the reliable and valued data for research. Present study aims to find out the level of knowledge regarding osteoporosis and health belief among perimenopausal women and also check the effectiveness of specific education intervention on osteoporosis.

RESEARCH DESIGN

Research design used for the study was experimental pretest posttest design.

SETTING OF THE STUDY

Selected communities of Vazhyoor Panchayath, Malappuram

POPULATION

The selected population for the study was perimenopausal women in between the age of 38-48 years.

SAMPLE

The sample selected for our study are perimenopausal women in between the age of 38-48 years who meet the inclusion and exclusion criteria.

SAMPLE SIZE

Sample size was 30 perimenopausal women in between the age of 38-48 years in Vazhayoor panchayath.

SAMPLING TECHNIQUE

Convenience sampling technique was used to select subjects.

SAMPLING CRITERIA

1. INCLUSION CRITERIA

- Women who are able to read and write Malayalam.
- Women who are willing to participate in the study.
- Women who are in the age group of 38-48 year of age.

2. EXCLUSION CRITERIA

- People who work in health sector.
- Women who reached menopause.

DATA COLLECTION INSTRUMENTS

1. Demographic proforma of the patient
2. Self-structured questionnaire on osteoporosis
3. Osteoporosis Health Belief Scale

DATA COLLECTION PROCESS

After getting the permission from the principal, MIMS College of Nursing and from the Panchayath office. The study was conducted among 30 samples during 14-5-2018.

Through convenience sampling technique and based on inclusion and exclusion criteria 30 samples were selected. After explain the purpose of the study, informed and written consent were obtained from the entire samples. The structured questionnaire was used to assess their knowledge on osteoporosis, standardized questionnaire was used to assess their health belief on osteoporosis and to assess the effectiveness of specific education intervention.

RESULTS

Section 1: Assessment of knowledge of perimenopausal women between the age Of 38-48 years regarding osteoporosis before administering specific education intervention.

- 26.66% subjects had poor knowledge,
- 70% subject had average knowledge
- 3.33% had good knowledge.

Section 2: Assessment of Health Belief of perimenopausal women between the age of 38-48 years regarding osteoporosis before administering specific education intervention.

- 43.33% are moderately susceptible
- 63.33% are moderately serious
- 63.33% are highly benefit to exercise
- 56.66% are highly benefit to calcium intake
- 53.33% having barrier to exercise
- 46.66% having barrier to calcium intake
- 73.33% have moderate health motivation.

Section 3: To evaluate the effectiveness of specific education intervention on osteoporosis and health belief.

Table 1: Table shows the effectiveness of specific education on osteoporosis

Test Deviation	Mean	Standard deviation	Mean Difference	' t' value
Pretest	12.63636	14.6964		
			9.8	13.05
Posttest	22.48485	12.46215		

Table 1 shows that the post level knowledge of the sample is increased than that of the pretest knowledge score level. The effectiveness is calculated by using the paired 't'test and the 't' value (13.05) is greater than that of the critical 't' value (2.05). Hence the specific education intervention is effective in improving the knowledge level of sample about osteoporosis.

Section 4: Association between knowledge and health belief regarding osteoporosis

Table 2: Association between knowledge and health belief regarding osteoporosis among perimenopausal women between the age of 38-48 years

n=30

Variable Significant	Chi square	df
Susceptibility	1.17	3
Seriousness	3.75	3
Benefits exercise	0.497	3
Benefits calcium intake	0.922	2
Barriers exercise	1.13	2
Barriers calcium intake	0.845	2
Health Motivation	0.495	2

The data presented in table 2 shows that the calculated chi square value is less than the table value at corresponding degree of freedom and hence the null hypothesis is accepted.

Section 5: Association between knowledge on osteoporosis with selected demographic variables.

The data obtained on the samples are presented on the basis of different demographic variables which include

Table 3: Association between knowledge on osteoporosis among perimenopausal women between the age of 38-48 years with selected demographic variables.

Variable significant	Chi square	df
Age	0.1389	3
Religion	0.3835	1
Educational status	1.5826	2
occupation	0.0721	1
Previous knowledge	1.5	1

The data presented in Table 3 shows that the calculated chi square value is less than the table value at corresponding degree of freedom and hence the null hypothesis is accepted. None of the above demographic variables are associated with the knowledge level of perimenopausal women.

DISCUSSION

The present study aims to assess the effectiveness of specific education intervention on knowledge and beliefs of osteoporosis in perimenopausal women between 38-48 years of age. The study result shows that the specific education intervention was effective and there is a significant increase in the knowledge score of the sample. In pretest 26.66% subjects had poor knowledge, 70% subject had average knowledge and remaining 3.33% had good knowledge where as in posttest 20% had average knowledge and 80% had good knowledge. In pretest result of health belief shows that 43.33% are moderately susceptible, 63.33% are moderately serious, 63.33% are highly benefit to exercise, 56.66% are highly benefit to calcium intake, 53.33% having barrier to exercise, 46.66% having barrier to calcium intake and 73.33% have moderate health motivation, posttest result shows that 50% are moderately susceptible, 70% are moderately serious, 80% are highly benefit to exercise, 80% are highly benefit to calcium intake, 56.66% are moderatly barrier to exercise, 63.33% are mild barrier to calcium intake and 76.66% have moderate health motivation

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CONFLICT OF INTEREST

The authors declare no conflict of interest

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