

Effect of STP on knowledge, attitude and practice of menopausal women regarding the prevention of cardiac disease and osteoporosis in selected health center of Kannur district

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ABSTRACT

Menopause is described as a period of psychological difficulties that changes the life style of women in multiple ways. Menopausal women require more information about their physical and psychological needs. Women who constitute half of world population. Identification of awareness and practice of menopausal women about menopausal complications is important factor which realized the investigators to conduct a study to assess the effect of structured teaching programme on knowledge, attitude and practice of menopausal women regarding the prevention of cardiac disease and osteoporosis in selected health center of Kannur was given and data was analyzed by using descriptive and inferential statistics.

The major findings include 23(54%) samples were attained menopause belong to 45-49 years, 13(30%) belongs to 50-54 and 7(16%) belongs to 40-44 years. 20(46.51%) samples scored average marks in pre test knowledge, 23(53.48%) samples secured poor pre test knowledge scores, and 14(32.38%) attained good knowledge score in post test, 27(62.79%) scored average knowledge, 2(4.65%) scored poor knowledge. 7(16.27%) had favorable pre test attitude, and 16(37.2%) had poor attitude, while on post test 23(53.43%) attained favorable attitude. 38(88.37%) had poor practice on pre test, on post test 3(6.97%) had good practice, 22(51.16%) showed average practice. Correlation between knowledge, attitude and practice reveals that there is a mild positive correlation between knowledge and practice, no correlation exist between knowledge and attitude also attitude and practice among menopausal women regarding the prevention of cardiac disease and osteoporosis. Difference between pre test score on knowledge, attitude and practice on post test score shows that there is a significant difference between knowledge, attitude and practice and no association between knowledge ,attitude and practice with selected demographic variables.

Introduction

Menarche and menopause are the turning point in the life

of a woman. "Menopause is a stage of life not a disease." The menopause is the time of women's life when reproductive capacity ceases. The post menopause period

is the time following menopause and peri menopausal is the term used to denote the period during which menopausal changes are occurring. The age range at which natural menopause occur is wide, between the age of 40-45 years. The women during the transition to menopause may experience vasomotor, urogenital, psychosomatic, psychological symptoms, physical symptoms like hot flushes and emotional changes such as mood swings, increased tendency to obesity, as well as sexual dysfunction. The prevalence of each of these symptoms related to menopause varies across ethnic, socio economic group between rural and urban women. These changes are due to fall in the production of oestrogen because the ovaries are no longer able to respond to pituitary gonadotrophins.

Cardiovascular disease and osteoporosis are major causes of morbidity in post menopausal women. Both diseases were considered as unrelated diseases concomitantly occurring to ageing process. Menopause is universal female experience, but way of reacting to it varies from each others. As the reproductive role ceases, women may take on new social role and in culture where fertility is high valued, menopause may have social and psychological ramification. Women often refer to this period as “change of life” because it marks the end of their ability to bear children and beginning of a new phase of life.

BACKGROUND OF THE STUDY

Menopause marks the close of a women’s reproductive life and is normal part of ageing. The average age of natural menopause is around age 51 and is defined one full year without menstrual cycle. Cardiovascular disease is one of the main reason for death in developed as well as developing countries. The WHO predicts that by 2020 CAD will become the world’s most important cause of death and disability.

Abedi P, Husseini M, Shojarezaded. D conducted a cross sectional study to determine the belief and CVD risk factors of post menopausal Iranian women. The data was collected from 147 post menopausal women through a questionnaire. The study findings revealed that 87.8% had good knowledge but had poor attitude toward cardiovascular risk factors, that is 59%. This study highlights the need to strengthen the nurses role in providing patient education about CVD.(1)

Rupal Dosi, Nikita Bhatt 2014, at medical college hospital, Baroda Gujarat, conducted a crossectional comparative study in 100 sample. The sample consist of both premenopausal and post menopausal Indian women of same age. Premenopausal women is taken as control group (50 sample). The evaluation revealed the CAD prevalence was 38%(19/50) among post menopausal women and 4%(2/50) in control population.(2)Osteoporosis possess a huge challenge in developing countries. It is estimated that over 200 million people worldwide have osteoporosis. It is projected that more than about 50% of all osteoporosis hip fracture will occur in Asia by the year 2050.

N. Malhotra, A. Mithal in 2014 conducted a descriptive study to assess women’s knowledge and practice regarding prevention and treatment of osteoporosis. 185 women sample are selected to measure the knowledge and practice were obtained with a hand delivered questionnaire. The result shows that women are receiving inadequate information about osteoporosis possess limited knowledge about disease and are not taking adequate measure to prevent or treat osteoporosis.(3)

NEED FOR THE STUDY

➤ Cardiovascular disease and osteoporosis are the major causes of morbidity in menopausal women. The co-relation studies between low bone mass and cardiovascular mortality demonstrated that the increased risk of cardiovascular mortality is in menopausal women. Vonder Recke 2013 conducted a study in menopausal women shows that bone loss is related to the prevalence of hypertension, prevalence of vertebral compression, increased congestive heart disease and death. According to Indian statistics 2014 there are 43 million menopausal women have cardiac disease.

OBJECTIVES OF THE STUDY

- Assess the knowledge, Attitude and Practice of menopausal women regarding the prevention of cardiac disease and osteoporosis.
- Assess the effect of structured teaching programme on knowledge, attitude and practice of menopausal women, regarding the prevention of cardiac disease and osteoporosis.
- Find the association of pre-test knowledge, attitude and practice scores with selected demographic variables.
- Find the relationship between knowledge, attitude and practice with selected demographic variables.

REVIEW OF LITERATURE

Baig L.A, Karim S.A conducted a cross sectional study to identify the average age at menopause, and to assess knowledge, and attitude toward menopause among women in Karachi. A sample of 925 women aged over 35 years was taken and interviews are analyzed. The result shows that there were 287 menopausal women, whose mean age of menopause was 47 years. Out of these 135(47%) wanted their menses to continue and 235(82%) had consulted a physician after menopause. 58% women know the definition of menopause and 53% said that women should consult a physician during premenopausal period. Source of knowledge about the menopause includes relatives (35%), television (18%) neighbours (17%) friends (17%) and health care (14%). Study concluded that

evidence based information about the menopause should be provided for women. (4)

A prospective cohort study was conducted to compare cardiovascular risk among women with high normal blood pressure(130-9/85-9)against those with normal blood pressure (120-9/75-84mmhg) and those with baseline hypertension in Women`s health study. United States in 2007.39322 initially women classified into four categories according to self reported baseline blood pressure and followed for a median of 10.2 years.982(2.5%) women developed a major cardiovascular event,and8686(30.1)women without baseline hypertension progressed to hypertension. The age adjusted event rate for the primary end point was 1.6/1000 person years among women with normal blood pressure,and4.3/1000 person years among those with baseline hypertension. In conclusion they state that the cardiovascular risk of women with high normal blood pressure is higher than that of women with normal blood pressure. The cardiovascular risk of women who progress to hypertension is increased shortly after a diagnosis of hypertension has been made.(12)

A study was conducted to find the relation of serum oestrogen level with severity of atherosclerotic lesion and number of risk in factors in CAD among postmenopausal women in Bangalore in 2009.one hundred postmenopausal women undergoing coronary angiography (CAG) was studied. Among them 50 patient with oestrogen level <25pg/ml constituted study Group 1 and another 50 postmenopausal women with >25pg/ml constituted study Group 2.Other important risk factors like dyslipidemia, diabetes mellitus, hypertension ,family history of CAD, smoking and waist circumference were evaluated between the 2 group of patients.CAD findings were analyzed by eye estimation and by Gens score.Result showed that all the risk factors were significantly higher in Group1 patient than that of Group 2.Among the risk factors hypertension was most prevalent (64%) in Group 1 and dyslipidemia (40%) in Group 2.Multivariate regression analysis showed that serum estrogen level is a strong and an independent predictor of CAD. It is also found that low estrogen group of postmenopausal women with CAD have more severe atherosclerotic lesions in comparison to the ground with normal estrogen level.(13)

Nisha M Varghese, Vinay kumara,Mercy Madanlal was conducted a study at selected institution of MM University,Mullana,Ambala,Haryana.100 female teaching faculties were selected using convenience sampling. Structured knowledge questionnaire, attitude scale and expressed practices scale was used to assess the knowledge, attitude, and expressed practice of working women regarding prevention of osteoporosis. Descriptive and inferential statistics were used to analyze the data. The finding of the study indicated that the mean post test knowledge, attitude and expressed score of working women in experiment group (29.44+/-3.52,100.16+/-6,78,52.20+/-4.5)was significantly higher than the mean post test knowledge, attitude and expressed practice

score917.48+/-4.47,84.10+/-5.85,46.14+/-7.48)in comparison group. Positive significant relationship ($r=0.59$) was found between post test knowledge and attitude of working women in experimental group. A significant association was found between level of post test knowledge with religion ($t=7.550$), post test attitude with religion ($t=10.04$) and source of knowledge ($t=5.25$) in experimental group. Informational booklet is an effective strategy in enhancing knowledge developing favorable attitude and improving practices of working women regarding prevention of osteoporosis.(16)

H.M.M.Kulik, A Van, et.al conducted a study on prevention of coronary heart disease and osteoporosis in women aged 45 to 49 years. The objective is part of the risk for CHD and osteoporosis in women are established by their lifestyle in the premenopausal period. There- fore assessed the risk of women aged 45 to 49 years for CHD and osteoporosis and its relation with socioeconomic status (SES) and access to general practitioners (GPS) to provide clues for prevention. The health interview data used for this study originated from the second Dutch National Survey of general practice, a study with a response rate of 64.5%.We studied SES, risk factors for CHD and osteoporosis, and access to GPs in women aged 45 to 49 years. The data of 571 women aged 45 to 49 years were included. A total of 39% had an increased risk for developing CHD in 10years, and 3% had high risk. A total of 22% had an increased risk of osteoporosis. The study concluded that there is no significant relationship between SES and GP consultation frequency.(17)

RESEARCH METHODS

Research approach: Quantitative research.

Research setting: Selected health centre of Kannur district

Population of the study comprises of menopausal women who are attending the NCD clinic of CHC Mayyil.

Sample:The study comprises of menopausal women who are attending the NCD clinic of CHC Mayyil, who are satisfying the inclusion criteria.

Sample size:43 menopausal women who are attending the NCD clinic of CHC Mayyil.

Sampling technique: Non probability Purposive sampling technique

Data collection process:Pre test was conducted on 43 menopausal women who were attended the NCD clinic of CHC Mayyil by using structured questionnaire for assessing knowledge, attitude and self report of practice. After the pre test, structured teaching programme on prevention of cardiac disease and osteoporosis among menopausal women was given. Post test to assess the effect of structured teaching programme was conducted 7 days after the pre test. Data analysis was done by using descriptive and inferential statistics.

Major Findings

This study deals with analysis and interpretation of pre-test and post-test data about knowledge, attitude and

practice collected from 43 menopausal women using structured questionnaire regarding the prevention of cardiac disease and osteoporosis .Keeping in view the objective of the study ,non experimental co relational research design parametric statistical measures were adopted to evaluate the relationship between knowledge ,attitude and practice of pre-test score and post test score of menopausal women regarding the prevention of cardiac disease and osteoporosis. The gathered data

then organized, tabulated, analysed and interpreted using paired T-test.

Description of pre test knowledge and post test knowledge of menopausal women regarding the prevention of cardiac disease and osteoporosis.

Section A: Description of pre test knowledge and post test knowledge of menopausal women regarding the prevention of cardiac disease and osteoporosis.

Table 1 Frequency percentage distribution of pre -test knowledge of menopausal women

| Class | Grade | Frequency | Percentage (%) |
|---------------|---------|-----------|----------------|
| 5 to9 | Average | 20 | 46.51 |
| 4 and below 4 | Poor | 23 | 53.48 |

Table 1 shows that 46.51% of menopausal women has average knowledge, 53.48 % has poor knowledge and no

one had good knowledge regarding the prevention of cardiac disease and osteoporosis.

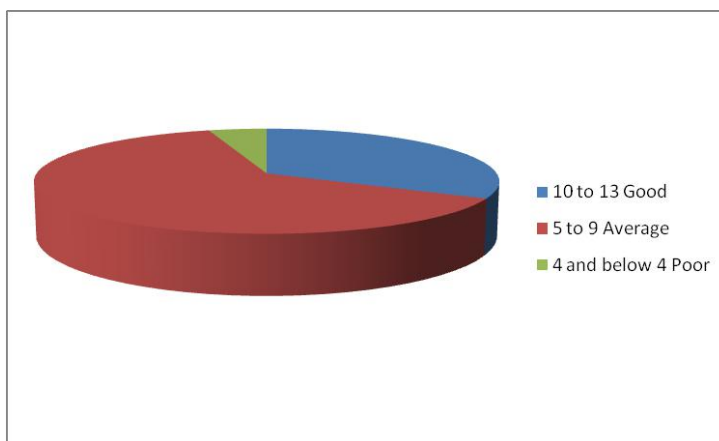


Figure 1 Frequency percentage distribution of post test knowledge of menopausal women

Figure 2.2 shows that 32.55% has good post test knowledge, 62.79 % has average post test knowledge and 4.65% has poor post test knowledge regarding the prevention of cardiac disease and osteoporosis.

Section B: Description of pre test attitude and post test attitude of menopausal women regarding the prevention of cardiac disease and osteoporosis.

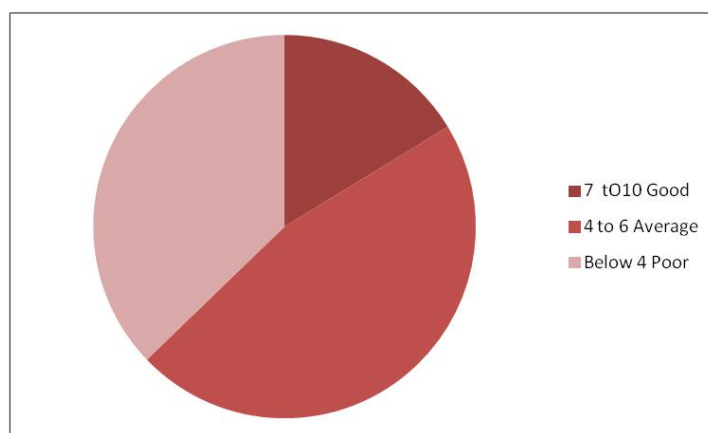


Figure 2 Frequency percentage distribution of pre test attitude of menopausal women

Figure 2 shows that 16.27 % had good attitude, 46.51% had average attitude and 37.2 % poor attitude regarding

the prevention of cardiac disease and osteoporosis.

Table 2 Frequency percentage distribution of post test attitude of menopausal women

| Class | Grade | Frequency | Percentage(%) |
|---------|---------|-----------|---------------|
| 7 to 10 | Good | 23 | 53.48 |
| 4 to 6 | Average | 20 | 46.51 |

Table 2 shows that 53.48% had good post test attitude, 46.51 % has average attitude and no one have poor attitude regarding the prevention of cardiac disease and osteoporosis.

Section C: Description of pre test practice and post test practice of menopausal women regarding the prevention of cardiac disease and osteoporosis.

Table 3 Frequency percentage distribution of pre test self reported practice of menopausal women

| Class | Grade | Frequency | Percentage(%) |
|---------|---------|-----------|---------------|
| 4 to 6 | Average | 5 | 11.62 |
| Below 4 | Poor | 38 | 88.37 |

Table 3 Shows that 11.62% has average practice, 88.37 % has poor practice and no one had good practice regarding

the prevention of cardiac disease and osteoporosis.

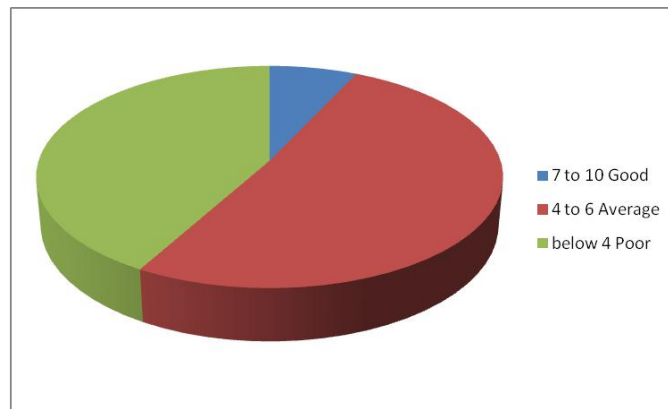


Figure 3 Frequency percentage distribution of post test self reported practice of menopausal women

Figure 3 shows that 6.97 % has good practice, 51.16% has average practice and 41.86% has poor post test practice regarding the prevention of cardiac disease and osteoporosis.

Part II: Parametric statistical measure about pre-test score and post test score on knowledge, attitude and practice of menopausal women regarding the prevention of cardiac disease and osteoporosis.

| Area | Mean | Standard deviation | t value | sig.(2tailed) |
|---|------|--------------------|---------|---------------|
| Pre test knowledge with post test knowledge | 0.81 | 0.7 | 7.63 | 0.00 |
| Pre test attitude with Post test attitude | 0.72 | 1.05 | 4.486 | 0.00 |
| Pre test practice with Post test practice | 0.54 | 0.7 | 4.996 | 0.000 |

To test the difference between pre test score and post test score of knowledge, attitude and practice of menopausal women regarding the prevention of cardiac disease and osteoporosis, Hypothesis was formulated and is tested using paired t test. The calculated value(sig.(2-tailed)=0.00) is less than at 0.05 level of significance. Therefore there is a significant difference in pre test score on knowledge, attitude and practice on post test score.

The **correlation** between knowledge, attitude and practice with selected demographic variables were evaluated. Correlation between knowledge, attitude and practice of menopausal women shows based on the Hypotheses were formulated and is tested using Karl Pearson correlation coefficient test. The calculated value ($r=0.178$) greater than at 0.05 level of significance. Hence it is concluded that there is no relation between knowledge and attitude, therefore the researcher failed to support the research hypothesis (H1). The calculated ($r=0.305$) greater than at 0.05 level of significance. Hence it is concluded that there is no significant correlation between knowledge and practice. Therefore the researcher failed to support the research hypothesis (H2). It is concluded that there is no significant correlation between knowledge and practice because the calculated r value ($r=0.080$) greater than at 0.05 level of significance. Therefore the researcher failed to support the research hypothesis (H3).

Among 43 menopausal women 20(46.51%) has average knowledge and 23(53.48%) has poor knowledge regarding the prevention of cardiac disease and osteoporosis. 62% has average pre test practice and 38(88.37%) has poor pre test practice. . While on post test 14 (32.55%) has good knowledge and, 27(62.79%) has average knowledge and 2(4.65%) has poor post test knowledge regarding the prevention of cardiac disease and osteoporosis. Among this 43 samples 7(16.27%) has good pre test attitude 20(46.51%) has average and 16(37.2%) has poor pre test attitude. In case of post test 23(53.48%) has good attitude and 20(46.51%) has average attitude. In this study 3(6.97%) gained good practice, 22(51.16%) had average practice and 18(41.86%) had poor post test practice.

Nursing Implications

Nursing practice

The findings of the study reveals that the menopausal women lack knowledge, attitude and practice regarding the prevention of cardiac disease and osteoporosis. Nurses can play a vital role in the care of menopausal women. They should routinely conduct health assessment of the menopausal women in menopausal clinics at health centers, and identify their health problems related to cardiac disease and osteoporosis. Instructions and health education regarding the prevention of menopausal complications, management of various menopausal problems and referral to appropriate care centers is also responsibility of the nurse. The community health nurses should conduct periodical classes on prevention of menopausal complications and management of various

menopausal problems, so that their service can be utilized by the public for controlling and managing problems related to menopausal stage.

Menopausal women require more information about their physical and psychosocial needs.(22) Nurses can identify the unhealthy dietary habits, lack of exercises and sedentary life style of menopausal women which leads to osteoporosis and cardiovascular disease , an important reason of menopausal problems. Nurses can educate them and manage menopausal problems by dietary modification, regular exercise and by proper screening. As the nurses are in close contact with the community and family they can identify the problems in advance and help them to prevent them from morbidities.

Nursing Education

We are living in the era of nuclear in all walks of life and education can be an exception to it. (23) Education about menopausal complications is important for menopausal women. Education of menopausal women requires special attention in fulfilling their healthy life. Nursing education today have resolved around ideas and innervations because it will be extremely essential to learn and put into practice these innervations .In the nursing education physiological and psychological changes of menopause, menopausal complications and its management must be included, more emphasis should be given on major problems faced by the menopausal women. Nurses should be trained to identify the menopausal problems and complications and its management. It has to be ensured that the student nurses conduct teaching programs and give appropriate need based health education to the women in the community setting and also in clinical areas.

Nursing research

Nurses increasingly are expected to adopt an evidenced practice which is defined as the best clinical evidence in making patient care decisions the professional nurse should take the initiative to conduct more researches in their clinical areas so that they can provide an evidence based care in the community also. Even though researches had been conducted on the risk of developing cardiac disease on menopausal women shows that, prevalence of coronary risk factors and number of death is more on menopausal women. In addition isolated systolic hypertension is more prominent among elderly women.(24) Moreover the findings of the study can be utilized for further studies. Researches can be conducted among pre menopausal women as they are anticipating the process of menopause. The studies related to prevention of menopausal complication are more relevant, the findings of these studies can be utilized for better clinical practice in the tertiary care settings.

Nursing administration

Nurse administrators plays a pivotal role in the supervision and management of nursing profession.(25) Nurses are called upon to take part in the management of health care delivery system, as they are the main qualified

human force in the health service management at all level .In health care institutions nurses are today interested not only with the management of individual patients in the ward or unit or department but are also made to shoulder the responsibility and accountability to the concern in the nursing practice.

The nurse administrator should understand the magnitude of the problem and should recognize the need for organizing in continuing nursing education programs and workshops for the staff nurses and community health nurses regarding menopausal complications and its management .Nurses should be encouraged to be more knowledgeable and skill full to manage the health problems experienced by the menopausal women. Nursing professional must take the initiative to formulate health education plan for menopausal women regarding prevention of cardiac diseases and osteoporosis(26) and its management. Nurse administrator can recommned to conduct awareness program regarding prevention of complications of menopausal women and its management. Nurse administrator can organize workshop on menopausal clinics for women as a part of women empowerment.

Conclusion

In this study, among 43 menopausal women (46.51%) has average knowledge and (53.48%) has poor knowledge regarding the prevention of cardiac disease and osteoporosis. While on post test (32.55%) has good knowledge and, (62.79%) has average knowledge and (4.65%) has poor post test knowledge regarding the prevention of cardiac disease and osteoporosis. Among this 43 samples (16.27%) has good pre test attitude (46.51%) has average and (37.2%) has poor pre test attitude. In case of post test (53.48%) has good attitude and (46.51%) has average attitude. In this study (11.62%) has average pre test practice and (88.37%) has poor pre test practice. But in post test (6.97%) gained good practice, (51.16%) has average practice and (41.86%) has poor post test practice.

The study reveals there is a mild positive correlation between knowledge and practice, no correlation between knowledge and attitude also attitude and practice among menopausal women regarding the prevention of cardiac disease and osteoporosis. And this study also found that there is no association between knowledge, attitude and practice with selected demographic variables. Hence it is concluded that there is a positive effect of structured teaching programme on knowledge, attitude and practice of menopausal women regarding the prevention of cardiac disease and osteoporosis.

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