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EFFECTIVENESS OF VIDEO ASSISTED TEACHING MODULE ON KNOWLEDGE OF POSTMENOPAUSAL WOMEN REGARDING OSTEOARTHRITIS AND ITS PREVENTION IN SELECTED COMMUNITIES, ANKOLI, BERHAMPUR, GANJAM, ODISHA

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Abstract : A pre-experimental research design with one group pre-test and post-test with and evaluative approach was undertaken with the objective to assess the effectiveness of Video assisted teaching module on the knowledge of post-menopausal women regarding osteoarthritis and its prevention. Data were collected from 50 post-menopausal women, selected by using convenient sampling technique by using structured questionnaire.

Findings revealed that, highest (30%) of post-menopausal women were belonged to the age group of above 65 years, all women were from Hindu family, majority 70% of women were married, almost all (90%) of women belonged to nuclear family, highest percentages (40 %) of post-menopausal women had no formal education, highest 44% of women had a per capita income between 1001-2000, highest percentages (54 %) of post-menopausal women were housewives, majority 62% of women were sedentary workers, highest percentages (84 %) of post-menopausal women were non-vegetarians, almost all (92%) of post-menopausal women were suffering from osteoarthritis & half of them (50%) had a duration of 2-5yrs of suffering with osteoarthritis, maximum (86%) of post-menopausal women had a family history of osteoarthritis & almost half (46%) post-menopausal women's mother were suffering from osteoarthritis, highest percentages (68%) of post-menopausal women had no previous knowledge regarding osteoarthritis & those who had previous knowledge from them highest percentages (24%) of post-menopausal women had got information from their friends and family members. During pre-test the post-menopausal women had very poor knowledge (42%) regarding osteoarthritis and its prevention whereas during post-test the number increased to (62%) revealing average knowledge and the difference in mean percentage was 30% which shows effectiveness of VATM.

Further highly significant ($P< 0.01$) difference was found between pre and post-tests knowledge scores. No significant association was found between pre-test knowledge scores when compared with demographic variables except age, educational status & previous knowledge.

Index Terms **– postmenopausal women, osteoarthritis, VATM.**

I. INTRODUCTION

Osteoarthritis is the most common form of arthritis, accounting for more disability among the elderly than any other disease. Symptomatic osteoarthritis generally affects from 10 percent to 15 percent of populations worldwide, with 27 million affected in the United States, and 8.5 million affected in the United Kingdom. Data from the European Health Interview Surveys in seven

countries demonstrated a wide variation in prevalence of doctor-diagnosed osteoarthritis, ranging from 5 percent to 25 percent (age-standardized range 3 percent to 18 percent). The knee, hand, and hip are common sites of osteoarthritis.

Globally approximately 250 million people have osteoarthritis of the knee (3.6% of the population). It is estimated that 80% of the population have radiographic evidence of osteoarthritis by age 65, although only 60% of those will have symptoms. In the United States, there were approximately 964,000 hospitalizations for osteoarthritis in 2011, a rate of 31 stays per 10,000 populations.

Menopause is the point when a woman no longer has menstrual periods. At this stage, the ovaries have stopped releasing eggs and producing most of their estrogen. Postmenopausal women are at increased risk for a number of health conditions, among which osteoporosis and osteoarthritis account the most. **(*National Center for Complementary and Alternative Medicine, 2015).***

The prevalence of osteoarthritis is greater in women than men and a clear increase in osteoarthritis prevalence is associated with the peak age of menopause. Indeed, a nationwide population survey showed that radiographic generalized osteoarthritis is three times more common in women aged 45 to 64 years compared to their male counterparts, and a hospital-based study found a high female to male ratio of 10:1 for osteoarthritis, with a peak at 50 years of age. In addition, 64% of females with knee osteoarthritis suffered the onset of symptoms either perimenopausally or within 5 years of natural menopause or hysterectomy. In fact, the onset of symptoms of knee osteoarthritis occurred before 50 years of age in 58% of females as opposed to only 20% of males. (*Castaneda Santos, 2011)*

I. RESEARCH METHODOLOGY

3.1Population and Sample

All the post-menopausal women residing in Berhampur, Ganjam will be the population for the present study. The samples consist of 50 post-menopausal women residing in Bauri Sahi, Ankoli, Berhampur, Ganjam selected using convenient sampling technique.

3.2 Data and Sources of Data

Data was collected using structured knowledge questionnaire using interview method. Data was collected one to one basis from the samples individually.

3.3 Theoretical framework

The proposed study was aimed to evaluate the effectiveness of video assisted teaching models on knowledge of post menopausal women regarding osteoarthritis and its prevention in the selected communities of Ankoli, Berhampur. The conceptual framework used for this study was based on Nola J Pender's Health Promotional Model. The Health Promotion Model was designed by Nola J. Pender to be a "complementary counterpart to models of health protection." It defines health as a positive dynamic state rather than simply the absence of disease. Health promotion is directed at increasing a patient's level of well-being. The health promotion model describes the multidimensional nature of persons as they interact within their environment to pursue health. The Health Promotion Model makes four assumptions:
Individuals seek to actively regulate their own behavior. The major concepts of the Health Promotion Model are individual characteristics and experiences, prior behavior, and the frequency of the similar behavior in the past. Direct and indirect effects on the likelihood of engaging in health-promoting behaviors.

Personal factors: in this study the personal factors are age, religion, marital status, family type and other factors.

Perceived benefits of action: in this study the perceived benefits are the improvement in knowledge level which may make the women aware of osteoarthritis and decrease the chance of getting affected by the disease.

Perceived barriers to action: in this study the perceived barrier will be the lack of knowledge, lack of attitude, limited resources and lack of interest of post-menopausal women.

Perceived self-efficacy may be the confidence and self-consciousness of the post-menopausal women towards her health.

Activity-related affect: In this study the activity related affect may be the positive feeling of women to gain knowledge and to know the ways to prevent osteoarthritis.

Interpersonal influences: In this study the influences are the perception, belief and attitude towards healthy behaviour and others include the family support and the availability of resources.

Situational influences: in this study it includes perceptions of options available, as well as demand characteristics and features of the environment in which given health promoting is proposed took place.

Behavioral outcome: there is a commitment to a plan of action, which is the concept of intention and identification of a planned strategy that leads to implementation of health behavior.

Health-promoting behavior: Here the health promoting behaviour is the improvement in knowledge level of post-menopausal women regarding osteoarthritis and the improvement in health attitude.

3.4 Statistical tools and econometric models

This section elaborates the proper statistical/econometric/financial models which are being used to forward the study from data towards inferences. The detail of methodology is given as follows.

3.4.1 Descriptive Statistics

Descriptive Statics has been used to find the maximum, minimum, standard deviation, mean and normally distribution of the data of all the variables of the study. The collected data for this study was organized, tabulated, analyzed by using descriptive statistics such as mean, mean percentage, median, standard deviation.

3.4.2 Paired 'T' Test

A **paired samples t-test** is used to compare the means of two samples when each observation in one sample can be paired with an observation in the other sample. Paired 't' test was calculated to assess the significant difference between pre and posttest knowledge score shows that significant difference was found in all areas like concept of osteoarthritis, risk factors of osteoarthritis, sign symptoms & complications of osteoarthritis.

3.4.3 Chi-Square Test

Chi square (χ^2) was calculated to assess the significant association of selected demographic variables of post-menopausal women with their post-test knowledge score regarding osteoarthritis and its prevention reveals that, in case of age, educational status & previous knowledge regarding osteoarthritis, the association was found highly significant with the post- test knowledge score, as the calculated value is more than the tabulated value. But no significant association was found between post- test knowledge score when compared to other demographic variables like marital status, type of family, per capita family income, occupation, level of work, presence of osteoarthritis, family history of osteoarthritis and previous sources of information, as the calculated values are less than the tabulated value. Hence it can be interpreted that, the difference in mean score related to their other demographic variables except age, educational status & previous knowledge were not true difference and only by chance. So, the null hypothesis was accepted.

IV. RESULTS AND DISCUSSION

4.1 Results of Descriptive Statics of Study Variables

Table 4.1: Area wise comparison of pre-test & posttest knowledge score of post-menopausal women regarding osteoarthritis and its prevention.

Area of knowledge	Maximum	Pre-Test			Post-test			Difference in mean %
		Mean	Std. Deviation	Mean (%)	Mean	Std. Deviation	Mean (%)	
Concept of osteoarthritis	6	2.5	1.14	41.67%	4.06	1.18	67.67	26
Risk factors of osteoarthritis	8	2.18	1.33	27.25%	4.64	1.53	58.00	30.75
Sign symptoms and complications of osteoarthritis	5	1.16	0.93	23.2%	3.06	0.97	61.20	38
Prevention and management of osteoarthritis	13	2.86	2.43	22%	6.76	2.20	52.00	32
Overall Total	32	8.7	4.34	27.18%	18.54	4.93	57.93	30.78

Table 4.1 shows that, during post-test the highest mean score (4.06 ± 1.18) which was 67.67% was obtained for the area of concept of osteoarthritis, which was also highest during pre-test. The lowest mean score (6.76 ± 2.20) which is 52% of the total score was obtained for the area "prevention and management of osteoarthritis" which was also lowest during pre-test.
However overall pre-test mean score (8.7 ± 4.34) which was 27.18% of the total score depicts poor knowledge and in post-test it is (18.54 ± 4.93) which is 57.93% of the total score which depicts average knowledge score reveals that VATM was effective. The highest mean difference 38% was seen in the area "sign, symptoms & complications of osteoarthritis" & the lowest 26% was gained in the area "concept of osteoarthritis". In the other two areas like "risk factors of osteoarthritis" & "prevention and management of osteoarthritis" 31% and 32% mean difference was seen respectively. Hence, it can be interpreted that video-assisted teaching module was effective for both area wise and overall.

Table 4.2: paired T test value of pre-test and posttest score of postmenopausal women

Sl.	Area	't' value	Remarks
1	Concept of osteoarthritis	10.67	Highly significant
2	Risk factors of osteoarthritis	10.34	Highly significant
3	Sign, symptoms & complications of osteoarthritis	11.89	Highly significant
4	Prevention and management of osteoarthritis	15.14	Highly significant
5	All total	29.79	Highly significant

The table value: 2.70, DF=49,PVALUE-0.01

CHI SQUARE (χ^2) was calculated to assess the significant association of selected demographic variables of post-menopausal women with their pre-test knowledge score. In case of age, educational status & previous knowledge regarding osteoarthritis, the association was found highly significant with the pre-test knowledge score but no significant association was found with demographic variables like marital status, occupation, level of work & family history of osteoarthritis as the calculated value is less than tabulated value. Hence it can be interpreted that the null hypothesis was accepted.

II. ACKNOWLEDGMENT

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