A Study to Evaluate the Effect of Yoga on Insomnia among Post Menopausal Women in Selected Rural Areas at Vadodara, Gujarat, India

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Abstract

Introduction: Sleep is a universal behavior that has been demonstrated in every animal species studied, from insects to mammals. It is one of the most significant human behaviors occupying roughly one third of human life. Sleep occupies a greater portion of our life and is considered as one among the three *upasthambhas* of existence. Sleep disturbance have been a major concern of physicians, psychologists and social scientists especially since last few decades because of the rising trend of different sleep disorders. Although the exact functions of sleep are still unknown, it is clearly necessary for survival, because prolonged sleep deprivation leads to physical and cognitive impairment. *Objectives:* (1) To assess the pre test and post test level of insomnia among post menopausal women. (2) To evaluate the effectiveness of yoga among post menopausal women. (3) To associate the post test level of insomnia with selected demographic variables. *Material and method:* The research approach used for the study was the Quantitative research approach. The study was conducted using pre experimental design with one group pre-test and post-test. The independent variable is yoga and dependent variable was insomnia among post menopausal women. The study was conducted on 30 post menopausal women in rural area of Vadodara using non probability convenient technique. The data was collected by using rating scale. The data was tabulated and analyzed in terms of objectives of the study, using descriptive and inferential statistics. *Results:* In the pre-test, post menopausal women having 55. 83% level of insomnia and mean score was 40.20 ±8.24. In the post test post menopausal women having average 35.28% of insomnia and mean score was 25.40±5.73. The post test mean insomnia score is significantly lesser than the pre test mean insomnia score. The *t* calculated value 13.690 is more than tabulated value 2.045 at 0.05 level of significance. So we accept H_1 and conclude that there is significant difference between level of pre test and post test insomnia among post menopausal women exposed to YOGA. In the pre test majority (63.3%) of the post menopausal women had moderate insomnia but in the post test there was marked reduction in the level of insomnia with majority (83.3%). The ANOVA (analysis of variance) was used to determine the association between level of post test insomnia and selected demographic variables. From the entire demographic variables no significant association was found with post test score. *Conclusion:* It can be concluded that post menopausal women can utilize the knowledge regarding yoga and practice the same. The study findings reveal that yoga was highly effective in improving sleep quality of post menopausal women.

Keywords: Evaluate; Effect; Yoga; Insomnia; Post Menopausal Women.

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Introduction

Woman is a precious creature of God. She has many roles in the society to perform being a daughter, sister, wife and a mother. She works easily with the opposite sex at work place but also has responsibilities to perform as a home maker and to rear a child. In order to perform these functions effectively her health needs have to be taken care and requires more attention [1].

Menopause is a complex time in a woman's life leading to both physical and emotional challenges. Menopause currently affects the lives of millions of women globally and will be an issue of increasing concern as the population ages over the next few decades. The word menopause literally means the permanent physiological or natural cessation of menstrual cycle. In other words, menopause means the natural and permanent stopping of monthly reproductive cycles, which is usually manifest as a permanent absence of monthly periods or menstruation. Post menopause refers to the period of life after menopause has occurred. It is generally believed that the postmenopausal phase begins when 12 full months have passed since the last menstrual period. From then on, a woman will be postmenopausal for the rest of her life [3].

During menopausal period women experience both physiological as well as psychological changes. Physiological changes include hot flushes, joint pain, irritable bowel movements, and weight gain and hair loss. Psychological changes include anxiety, depression, sleep disturbance and stress. Women experience stresses in many ways and can be external and internal. It can cause changes in body images, attitude towards ageing and also leads to mood changes [2].

The best management of menopausal problems is accepting it with ease. Lord Krisna in Bhagvadgita says Yoga is nothing but equanimity towards the pairs of opposites like happiness and sorrow, loss and victory etc. Accepting the unavoidable is the best way to counter it. Human life is a continuous process of changes and menopause is one of them. Accepting this fact reduces major fraction of the problems since it induces a psychological strength to combat the same. Thus a psychological adaptability along with a few yogic practices may be sufficiently helpful for a woman in facing menopause, one of the major turning points of her life [4].

Nurses play a vital role in maintaining women's health and to make them aware about menopause and stress related to it. Menopausal stress is usually mild to moderate levels of stress. Some women may go through severe level of stress and this level of stress has to be identified by the nurses. The nurse should advise them to practice some sort of relaxation techniques, yoga or exercise to practice in daily life. As a nurse she should give psychological support to the menopausal women [5].

Material and Method

Research Approach

A quantitative approach was used.

Research Design

A one group pre-test post-test Pre experimental research design was adopted.

Setting of the Study

The study was conducted among post menopausal women in rural area of Vadodara.

Sample

The sample for the present study comprises of 30 post menopausal women in rural area of Vadodara

Sampling technique

Convenient sampling technique was used.

Development of tool for data collection

It consists of 2 sections:

Section I: It consists of selected demographic data of sample.

Section II: A structured insomnia rating scale

Total 24 items were included in the rating scale.

Validity of instrument

To ensure content validity of the tool, the self structured rating scale was sent to 7 experts. The experts were selected based on their clinical expertise, experience and interest in the problem being studied. They were requested to give their opinions on the appropriateness and relevance of the items in the tool. The experts were from the field of nursing, psychiatrists and psychologists. Modifications of items in terms of simplicity and order were made.

Reliability

In this study, the reliability was done in the Piparia village of Waghodia tehsil, Vadodara. After obtaining administrative permission the tool was administered to 4 samples as per the set criteria. The reliability was established by using spearman brown spilt–half method and test retest method. The score was analyzed and the value r = 0.819 was found which indicates the high degree of positive correlation which is statistically significant. This indicates that the tool was reliable.

Data collection procedure

To conduct research study at rural area of Dabhoi

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tehsil at Baroda, formal written permission was obtained from the superintendent of Dabhoi Community health center. Data were collected from 30 subjects who met the inclusion criteria as per the study. The questionnaire was distributed for pre test and instructions were given on answering the questionnaire and doubts were clarified. Each post menopausal woman took an average of 15-20 minutes to complete the pre-test. On the 1st and 2nd day the pre test data was obtained using structured rating scale. Then from 3rd day to 18th day 30 minutes planned yoga was administered. On the 18th day and 19th day post test was conducted using the same tool to assess the level of insomnia. The investigator continued this pattern of data gathering process till the completion of data collection.

Analysis of data

It was analyzed by using both descriptive and inferential statistics on the basis of the objectives and hypothesis of the study.

Descriptive statistics

➢ Baseline Proforma containing characteristics of post menopausal women would be analyzed using frequency and percentage. Percentages were worked out for interpretation.

➢ The level of insomnia among post menopausal women before and after administration of yoga would be calculated using mean, median, range and standard deviation.

Inferential statistics

➢ Paired 't' test was used to assess the effectiveness of yoga among post menopausal women.

➢ The ANOVA (analysis of variance) was used to find out the association between post test level of insomnia and selected demographic variables.

Data presented in the form of tables and graphs.

Findings

Section- I: Description of sample characteristics

➢ 14(46.7%) of post menopausal women were in the age group of above 52 years, 11(36.7%) in 45-47 years and only 5(16.7%) were in the 48-51 years.

➢ 24(80.0%) of post menopausal women belongs to the primary education group while 3(10.0%) belonged to the secondary education group, 2(6.7%) illiterate and 1(3.3%) higher secondary group of education.

➢ 28(93.3%) of post menopausal women lived in the joint family while 2(6.7%) of post menopausal women lived in the nuclear family.

➢ 19(63.3%) of post menopausal women were housewives while 4(13.3%) post menopausal women were engaged in the business and 3(10.0%) post menopausal women in the government job.

➢ 21(70.0%) post menopausal women were 1(3.3%) unmarried and rest 8(26.7%) were married but widow.

➢ 14(46.7%) attained menopausal more than 6 years ago, 4(13.3%) attained 5-6 years ago, 7(23.3%) attained 3-4 years ago and rest 5(16.7%) attained 1-2 years ago.

Section-II: Level of insomnia among post menopausal women before and after administration of YOGA.

Table 1: Range, mean, percentage and standard deviation of pre test and post test level of insomnia among post menopausal women

Observation	Range	Mean	Percentage	S.D.
Pre test	0-72	40.20	55.83%	8.24
Post test	0-72	25.40	35.28%	5.73

Table 1 shows range, mean, mean percentage and standard deviation (S.D.) of insomnia score before (Pre-test) and after (post-test) administration of yoga among post menopausal women. Range of maximum score was 0-72.

Pre-test mean score and mean % were 40.20 and 55.83% respectively with S.D. 8.24. Post-test mean score and mean % were 25.40 and 35.28% respectively with S.D. 5.73.

Section- III: Analysis of effectiveness of YOGA on insomnia among post menopausal women.

Table 2: Mean, standard deviation, mean difference and 't' value of pre- test and post test scores.

Parameter	Mean	Standard deviation	Mean difference	't'$_{cal}$ value	P value	't'$_{tab}$ value
Pre test	40.20	8.24	14.8	13.690	.000	2.045
Post test	25.40	5.73				

Table 2 depicts mean, standard deviation of pre test and post test with the mean difference, 't' value and p value of pre test and post test scores. The mean difference of pre and post test score was 14.8. Calculated t-value 13.690 was greater than the table t-value 2.045 at 0.05 level of significance. Hence, it proves that yoga is effective on insomnia among postmenopausal women.

Section-IV Association between level of post test insomnia and selected demographic variables.

So here ANOVA (analysis of variance) has been used. Data have been analyzed with the use of SPSS version 20.0 and there is no significant association between level of post test score and selected demographic variables with 0.05 level of significance.

Conclusion

The overall pre test mean insomnia score of the post menopausal women was 40.20 ±8.24 and post test mean insomnia score of the post menopausal women was 25.40±5.73. The post test mean insomnia score is significantly lesser than the pre test mean insomnia score. So the YOGA was effective.

The ANOVA (analysis of variance) was used to determine the association between level of post test insomnia and selected demographic variables like age, education, type of family, occupation, marital status and years after menopause. There was no significant association between level of post test score and selected demographic variables at 0.05 level of significance.

Conclusively, result of the current study revealed that yoga has marked impact on insomnia among the post menopausal women in rural India. Problems of sleep disturbance among these women can be significantly reduced by the practice of yoga and hence the assumption of the researchers in this regard proved to be true.

Thus nurses can utilize yoga therapy to tackle the problems of insomnia among post menopausal women by means of an information booklet, video or live demonstrations as a teaching tool.

Limitations of the Study
➢ Data collection period was limited to 4 weeks; hence the sample size was relatively very small.

➢ Sample size was selected from only rural areas of Vadodara.

➢ The questionnaire with rating scale has the possibility of getting average or good score which could be chance factor in this study.

➢ The study was confined to 30 subjects, which resulted in reduced power in statistical analysis.

➢ The study is limited to post menopausal women who are willing to participate in the study.

➢ The setting of timing for the yoga is quite difficult for the rural women.

➢ It is difficult for the samples to continue the therapy for continuous 15 days.

Recommendations

Based on the findings of the present study recommendations offered for the future study are:

➢ Similar study can be conducted on a larger sample.

➢ A comparative study can be conducted with control group.

➢ Similar study can be conducted on urban sample.

➢ Similar study can be conducted with different population and setting.

Acknowledgement

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