



ORIGINAL RESEARCH PAPER

Physiotherapy

THE EFFECT OF PREVENTIVE EDUCATION AND EXERCISE ON QUALITY OF LIFE ON PERIMENOPAUSAL WOMEN

KEY WORDS: Perimenopausal, Quality of life, SF-36, Menopausal rating scale (MRS) , VAS.

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ABSTRACT

Background: Quality of life is often compromised in menopausal females but how exercises and awareness education at perimenopause affects the pain as well as other parameters is still to be researched.

Objective: To study the effect of awareness education and exercise on health & quality of life in perimenopausal women. Study Design: Experimental Study. Source of Data

Collection: Private physiotherapy clinic, Yamunanagar. Methods: Total of 44 subjects was selected according to inclusion criteria having menopausal symptoms in 40-50 years age group. After taking the informed consent Health awareness educational sessions are given along with the exercises program at home and in department also for 4 weeks. Pre & Post evaluation of outcome measures i.e. SF-36, MRS and VAS was done. Results: Present study shows a significant improvement in QOL of perimenopausal females by exercise and education

Conclusion: The study concludes that preventive education and exercise has a positive effect on quality of life in perimenopausal females.

INTRODUCTION

The word "menopause" that is 'end of monthly cycle' was used for the first time in 1816 by Gardanne. The transition from reproductive to non-reproductive is normally not abrupt but tends to occur over a period of years, and is a natural consequence of aging.

Menopause can be seen as three phases

- "Premenopause" refers to the time up to the beginning of the perimenopause, but is also used to define the time up to the last menstrual period.
- "Perimenopause" refers to the time around menopause during which menstrual cycle and endocrine changes are occurring, menses start to become irregular and FSH levels have increased, but 12 months of amenorrhea has not yet occurred.
- "Post menopause" begins at the time of the last menstrual period, although not recognized until after 12 months of amenorrhea.

PHYSIOLOGY-Natural menopause occurs when the ovaries begin to fail to respond to the Leutenizing and Follicle Stimulating Hormones that are produced in the anterior pituitary, which is under the control of Hypothalamus. Although hormones are still secreted into the blood stream, the ovaries do not produce estrogen, progesterone in response.

During perimenopause, the ovarian production of the estrogens and progesterone becomes more irregular. The decrease in estrogen levels takes part in many physiologic and metabolic changes, affecting not only the reproductive tissues but other systems of women's bodies.

Menopause typically (but not always) occurs in women in midlife, during their late 40s or early 50s, and signals the end of the fertile phase of a woman's life.

SIGN AND SYMPTOMS : Signs and effects of the menopause transition can begin as early as age 35, although most women become aware of the transition in their mid to late 40s, often many years after the actual beginning of the perimenopausal window. The hormonal changes occurring at this stage of life alter the health-risk profile of women and manifest acutely in the form of somatic symptoms (aches and pains, myalgia, fatigue), physiologic symptoms (vasomotor symptoms [VMS] of hot flashes and nighttime awakenings), other symptoms (sleep disturbances,

sexual arousal disorders, and urogenital complaints), and psychological symptoms (irritability, anxiety, mental stress, mood disturbances, panic attacks, depression, crying spells, concentration difficulties, feeling of stress, confusion, lowered judgment, lowered motor coordination, forgetfulness, distractibility, restlessness, tension and loneliness)

Behavioral changes of menopause women include avoiding social activities, lowered work performance, staying at home and in bed. Besides the symptoms, menopause is later also associated with an increased risk of developing cardiovascular diseases and osteoporosis, both well-known leading causes of death in women, mainly after menopause. Progressive atrophic changes can cause sagging of the pelvic organs, muscles and ligaments. Urinary "stress" or "cough incontinence" may begin during this period of time, as bladder and sphincter tone decrease.

Collectively, these adverse physical and mental health changes may negatively impact quality of life (QOL) as women transition through menopause.

Thus, the evaluation of quality of life as well as the possible benefits of different treatments and therapies is an important component.

AIMS AND OBJECTIVES

- To evaluate and educate women about changes during menopause, prevention and management of problems related to menopause and to teach women exercises to improve QOL.
- To study the effect of this education and exercise on health related quality of life of perimenopausal women.

METHODOLOGY

DESIGN OF THE STUDY: Experimental study.

SAMPLING: Convenient sampling.

The study was conducted in the private physiotherapy clinic in Yamunanagar on subjects having menopausal symptoms in 40-50 yrs age group. Total of 50 subjects were selected according to inclusion criteria, out of which 6 subjects dropped out and 44 completed the study.

INCLUSION CRITERIA:

- 40-50 yrs age.
- With a history of perimenopause-related symptoms in last few months
- Subjects who had at least 6 symptoms on Evaluation

Questionnaire

EXCLUSION CRITERIA

- Ongoing birth control pills or hormone therapy.
- History of surgical menopause.
- History of metabolic ,endocrine diseases and cardiovascular problem

INSTRUMENTS AND TOOLS USED

- Pre-formed questionnaire including a checklist of perimenopausal symptoms
- Sf-36 Health Survey form
- Menopause Rating Scale (MRS)
- VAS Scale

PROCEDURE

METHODOLOGY

After taking the inform consent from eligible subjects procedure was explained to them and were asked to fill the questionnaire and the outcome measures on SF-36, MRS and VAS. All subjects were given following sessions.

Education schedule in the department (per week)

- SESSION I-Education about perimenopause, menopause and related symptoms.
- SESSION II-Education about prevention & management of Osteoporosis, incontinence, stress and fall.
- SESSION III-Education about benefits of exercises and relaxation technique.
- A set of exercise regime, specially designed for perimenopausal women, after each session.
- Exercise performed in department with 10R with 10 sec hold 3 days /week for 4 weeks:
- 20 minutes exercise on cycle.
- Spinal extension exercises.
- Bridging exercise
- Shoulder adduction ,abduction ,flexion
- Straight leg raising (supine,side lying, prone)
- Sitting knee extension
- Prone lying knee flexion extension
- Elbow flexion , extension

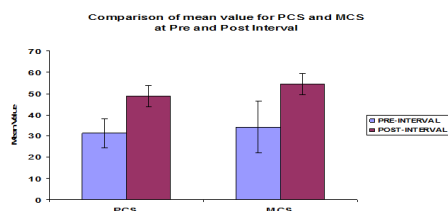
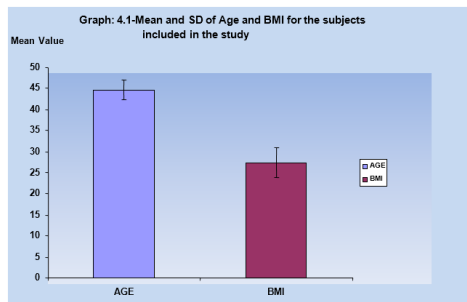
Home Program:

It included 30 min. daily walk and all exercises
On 30th day the outcome measures were again filled by the therapist after asking the response of subjects.

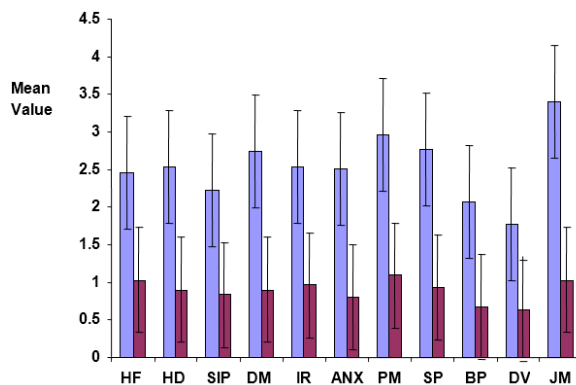
DATA ANALYSIS

Statistics were performed by using SPSS 16.

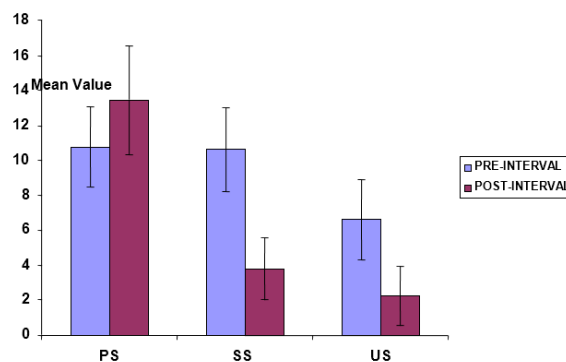
RESULTS



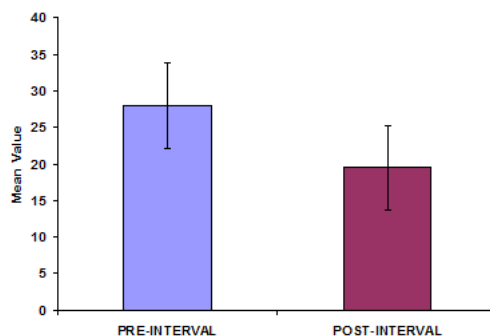
Comparison of mean value for different variables of MRS Scale at Pre and Post Interval



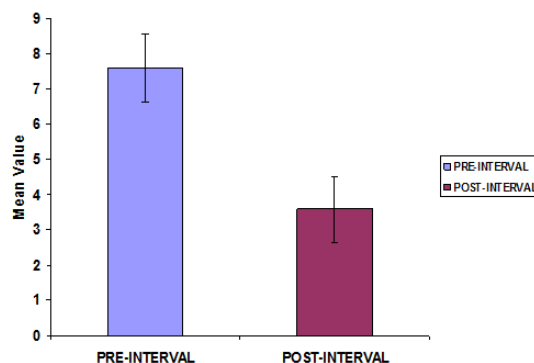
Comparison of mean value for MRS Subscale PS, SS and US at Pre and Post Interval



Comparison of mean value for MRS Evaluation at Pre and Post Interval



Comparison of mean value for VAS at Pre and Post Interval



DISCUSSION

Present study shows that QOL of perimenopausal females improved by exercise and education supported by N.E.Avis et al.

Exercise can improve the QOL, attenuates physiologic changes of aging, ameliorates the decline in fitness, prevent chronic disease promote functional independence, reduce the risk of CVD & osteoporosis. Components of sf-36 of physical and mental problems (PM) were highly significant ($p < 0.05$), these results are supported by studies done by Carolina Kimie Moriyama et al.

The result of this study in Menopause Rating Scale(MRS) showed significant decrease in intensity of total score.

It is emphasized that menopausal symptoms affect the quality of life in connection with their duration and intensity. Ueda et al. obtained significant improvements in the quality of life after 12-week moderate aerobic exercise training also supported by Daley et al. Significant changes in menopause rating scale were found.

Significant decrease was found in Somatic complaints(SS) such as hot flushes(HF), heart discomfort(HD), Sleep problems (SIP), Joint and muscle problems(JM), supported by L. L. Astrand. Among the various behavioral approaches, relaxation and slow, deep abdominal breathing at symptom onset have reduced the severity and frequency of vasomotor symptoms.

Physical activity might reduce the incidence of somatic or vasomotor symptoms because of associated neuroendocrine responses. A release of endogenous opioids, particularly β -endorphins which have physiologic effects of temperature regulation, decreased sensitivity to pain, decreased heart and respiratory rates.

Significant decreases in psychological & Psychosomatic symptoms also found to be highly significant with modification of life style also supported by Li et al.

Asbury et al. reported that QOL and depression level of postmenopausal women improved after 12-week aerobic exercise training. It was found that depression values of subjects who had both aerobic and resistance training decreased significantly as supported by Elavsky et al. A significant decreases in all subscale points of Urogenital symptoms, Sexual Problems(SP), Bladder Problems (BP), Dryness of Vagina(DV).

Sedigheh et al suggested that education program have a positive effect on QOL in menopausal females. In this study the education to all subjects were given through an education booklet and education sessions in the department.

Margaret Burghardt suggest that women may decrease stress and depression with exercise but, inversely, the depressed woman is less likely to initiate or maintain a regular exercise program. The most frequent reason given for not exercising is lack of motivation, which may result from or be preceded by stress or depression. It is important to consider each woman's situation individually and to promote the overall benefits of exercise through proper education and guidance.

The reason for significant results in all the components of physical and psychological health were due to subject's improved knowledge on menopause. Weight bearing & strengthening exercises and relaxation skills improved overall health and promoted psychological benefits too.

CONCLUSION

The study concludes that preventive education and exercise has a positive effect on quality of life in perimenopausal females. Women in the study felt physically and mentally better and were motivated for being more active. They found the program easy to understand and follow.

Relevance To Clinical Practice

Physiotherapists can play a role to help females cope up with

Perimenopause transition by making them

- Understand this Transition Phase, Symptoms related and Future Complications related to Menopause.
- Educating females about osteoporosis, its prevention they can provide measures to maintain good bone health and thus preventing associated complications.

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