Summary

Osteoporosis is a major public health problem that faces women in many countries. It becomes a serious health threat for postmenopausal women by predisposing them to an increased risk of fracture. Osteoporotic fractures are associated with substantial morbidity and mortality in postmenopausal women, especially older women. Osteoporosis is a major area of chronic disabling condition that has a progressive impact on functioning, independence and quality of life of women as they age. Therefore, educational programs for women with osteoporosis regarding their disease process and treatment regimen are important to increase their knowledge, improve their compliance, change their behaviors, decrease levels of a variety of disease symptoms, and maintain their quality of life.

The aim of the current study was to evaluate the impact of a designed educational program on the quality of life for postmenopausal women with osteoporosis. This aim achieved through; assessing knowledge of postmenopausal women with osteoporosis regarding osteoporosis, assessing knowledge about health practices of postmenopausal women with osteoporosis regarding osteoporosis, determining quality of life changes among postmenopausal women with osteoporosis, designing, implementing and evaluating the outcome of the educational program.

The main hypothesis of the current study was postmenopausal women with osteoporosis who will receive an educational program will have improved quality of life. As well as this study had two sub hypothesis; postmenopausal women with osteoporosis who will receive the educational program will have better knowledge about their health

practices as indicated by pre, post and follow up test scores, and postmenopausal women with osteoporosis who will receive the educational program will have a better quality of life as indicated by pre, post and follow up test scores.

This study was conducted at two settings; orthopedic clinic at Benha University Hospital, and rheumatoid clinic at Benha Teaching Hospital. A total of (118) postmenopausal woman was included in the current study according to the following criteria: diagnosed as a primary osteoporosis (type I) in absence of fracture, and free from any other diseases or conditions known to affect bone.

Three main tools were used for data collection; *structured interviewing questionnaire* encompassed two major parts: First part included personnel and sociodemographic data, anthropometric measurements, obstetric history, medical and family history. Second part included women's knowledge about osteoporosis, hormonal replacement therapy, nutrition, exercise, and importance of sun exposure. *Health practices of osteoporosis sheet* included women's health practices through asking questions related to nutritional habits, exercise, exposure to sun, smoking, drug intake, periodical checkup, and fall prevention. These previous tools were designed by the researcher and *osteoporosis quality of life questionnaire (The ECOS-16)* was adopted from ***(Badia et al., 2000)*** and was translated into Arabic language by the researcher. It assessed health related quality of life in postmenopausal women with osteoporosis. The questionnaire divided into four dimensions: pain (5 items), physical functioning (5 items), psychosocial functioning (4 items), and illness- related fears (2 items).

The current study passed through four phases to fulfill its aim; assessment phase, planning phase, implementation phase, and follow up and evaluation phase (immediately, after three and six months after the program implementation). These phases took a period of twelve months from the beginning of October, 2008 to the end of September, 2009. Educational program was conducted through five sessions; each session took about 30-45 minutes for individual case. Different methods of teaching were used such as discussion, demonstration and redomenstration. Instructional media included colored posters and osteoporosis booklet was constructed by the researcher in a simple Arabic language after reviewing the related literatures which based on women' knowledge and practice deficit about osteoporosis and its management.

The main findings of this study generally revealed the following:

- More than half of the women (67.8%) were 55 or more years old, with a mean age of 57.77±3.23 years.
- The mean age of menopause between the studied women was 48.28±1.83 years, and the mean of time elapsed since menopause was ٩.٤٨±2.21 years.
- The study reflected that, there was a general improvement in all items of knowledge of the studied women during the different assessment periods as compared to before program. However, a slight mean decline occurred after three and six months of program implementation with highly statistically significant difference observed between four times of assessments at p-values < 0.001.

- The study illustrated that, there was a general improvement in all items of health practices toward osteoporosis of the studied women during different times of assessments as compared to before program except item of periodical checkup, there was no statistically significant difference before and after three months of program implementation ($p > 0.05$).
- There was highly statistically significant difference at different times of assessment in relation to quality of life dimensions (pain, physical functioning and psychosocial functioning) among the studied women except illness-related fears dimension, there was no statistically significant difference before, after three and six months of program implementation ($p > 0.05$)
- There was a positive statistically significant correlation between total knowledge scores and educational level, total practice scores and educational level, as well as quality of life scores and age at different times of assessment. On the other hand, there was negative statistically significant correlation between total practice scores and age at different times of assessment.
- There was a positive statistically significant correlation between total knowledge and practice scores at different times of assessment. Moreover, there was a negative statistically significant correlation between total practice scores and total quality of life scores at different times of assessment.

The study recommended the following:

- Establish educational programs and counseling sessions for postmenopausal women with osteoporosis regarding nutritional aspects, exercises and physical activities, healthy lifestyle behaviors, and coping strategies with it.

- Provision of instructional booklets for postmenopausal women with osteoporosis at settings dealing with those women as gynecological and rheumatoid outpatient clinics to increase their health awareness, improve their level of knowledge, and encourage their practice lifestyle pattern for optimal quality of life.
- Encourage menopausal women to perform periodically physical examination (e.g. bone density) for early detection of osteoporosis, through availability of DEXA at university or teaching hospital.
- Messages directed to middle aged women should emphasize the role of high dietary calcium intake, and vitamin D, weight-bearing exercise, decreased use of caffeine in prevention of osteoporosis and subsequent fractures in their age groups.
- Increase public awareness through mass media regarding importance of healthy lifestyle practices in prevention and management of osteoporosis.