



## Introduction

Women's health refers to a holistic view of women and their health-related issues within the context of their everyday lives. It is based on the awareness that a woman's physical, mental and social statuses are interdependent and determine her state of health or illness (*Davidson et al., 2008*). Several chronic conditions are major causes of disability for women today. Chronic diseases, in contrast to acute diseases or conditions that are not short lived. These conditions generally last longer than several weeks, often for the length of a person's life. Although chronic diseases are generally thought of as afflictions of the elderly, the reality is that chronic diseases are not limited to any age group. Some chronic diseases have a greater prevalence in women such as osteoporosis that has a dramatic impact on the health of women in the world today (*Alexander et al., 2007*).

Osteoporosis is defined as a systemic skeletal disease characterized by low bone mass and micro-architectural deterioration of bone tissue, with consequent increase in bone fragility and susceptibility to fracture risk. Fractures are the hallmark of osteoporosis. These commonly affect the distal radius, vertebral bodies and the hips (*Liza et al., 2009*). Vertebral fractures are commonly associated with back pain, kyphosis, and height loss. Therefore, they can lead to a reduced mobility and may be very painful, which can limit everyday activities (*Haczynski and Jakimiuk, 2001*).

Osteoporosis is categorized as primary or secondary. Primary osteoporosis usually is the result of the bone mass loss related to postmenopausal estrogen deficiency and aging process without any other chronic illness. Secondary osteoporosis is caused by medications, certain



medical conditions, and diseases that adversely affect skeletal health (*Kaplan et al., 2005*). Several risk factors for developing osteoporosis have been identified. These factors are classified as modifiable and non-modifiable. Modifiable risk factors include sedentary lifestyle, inadequate dietary calcium and vitamin D intake, smoking, high intake of caffeine and tea, high protein intake and estrogen deficiency. On the other hand, non-modifiable risk factors include being female, menopause before forty years, low body weight, family history of osteoporosis (*Delmas et al., 2005*).

The management of women with postmenopausal osteoporosis incorporates multiple modes of both pharmacologic and nonpharmacologic therapy. Particularly successful nonpharmacologic management is a program that includes comprehensive health education (*Murphy et al., 2003*). Medications are available to slow the loss of bone and even rebuild bone, complementary self-management behaviors have gained in importance. The combination of these modes (e.g., medicine, calcium intake, exercise, and fall prevention) can maintain, and possibly improve, bone mass with potential outcomes of reducing fracture risk and prolonging independent function (*Mauck and Clark, 2006*).

Osteoporosis is a growing public health concern among the elderly population, particularly in postmenopausal women. It's a debilitating chronic disease that can reduce the quality of life in a variety of ways, including diminished physical and emotional functioning (*Haczynski and Jakimiuk, 2001*). Moreover, osteoporosis is included as a focus area in healthy people 2010. One objective of healthy people 2010 is to reduce the percentage of the population with osteoporosis 20% by the year 2010. Healthy people 2010 guidelines for



meeting this objective are aimed at the development of interventions that educate perimenopausal women about osteoporotic fracture risks, healthy bone habits, fall prevention, osteoporosis screening, supplement use, dietary vitamin D intake, and dietary calcium intake (*U.S. Department of Health and Human Services, 2004*).

Hence, health education is an essential component of nursing care and is directed toward promoting, maintaining and restoring health, preventing illness and assisting women to deal with the residual effect of illness. Women education has demonstrated its potential to improve quality of life, ensure continuity of care, effectively reduce the incidence of complications of illness, promote adherence to health care treatment plans, decrease woman anxiety and maximize independence in the performance of activities of daily living. In addition, it empowers woman to become involved in the planning of teaching session that increase woman satisfaction (*Black and Hawks, 2009*).

Nurses can play an important role in the care of women with osteoporosis by counseling women about the need for a nutritious, well-balanced diet that high in calcium and vitamin D, as well as lifestyle factors that contribute to bone loss, such as cigarette smoking, excessive caffeine intake, and the importance of following the recommended medical regimen. Nurses are also concerned about how to prevent falls and thus reduce the risk of fractures. Suggestions to increase safety in the home include adequate lightening and voiding objects that might increase falls, such as loose electrical cords or rugs with nonskid backing (*McKinney et al., 2009; Timby and Smith, 2007*).



## **Significance of the study**

As osteoporosis becomes more prevalent, this debilitating disease brings women to clinics and hospitals, and in some cases, deadly chronic disease. A statistics in Egypt proved that about 4.7 millions of women at age of 45 years or more have osteoporosis. This number is expected to increase to 7.7 millions by year 2010 and to 13 millions by the year 2030 (*Abd El Rahman et al., 2003*). There are previous studies investigated the problem of osteoporosis, such as the study of *Ibrahim (1998)*, who assessed the relative size of the osteoprotic fractures in middle aged and older women and the lifestyle of women is a risk factor for development of osteoporosis. The results revealed all participants in the study did not practice proper lifestyle for prevention or reduction of osteoporosis and recommended education programs focusing on the importance of proper life style which would contribute to maintain bone mass.

Osteoporosis is a “silent killer” that millions of people around the world suffer from its morbidity, mortality, adverse effects on the quality of life and the extra costs imposed to the woman and the society. The increase of life expectancy and so the old age of the society in developing countries such as Middle East has led to an increase in the prevalence of osteoporosis and its following fractures in the area, seventy percent of the cases with hip fracture will happen in these countries in 2050 (*Jalili et al., 2007*). Hence, the quality of life for postmenopausal women with osteoporosis should be investigated even before fractures, in order to develop appropriate counseling, support and care interventions to help women develop efficient strategies for accepting the disease and coping with it (*Bianchi et al., 2005*). Therefore, the proposed research will be conducted to improve the quality of life.