Association between demographic factors and osteoporosis in urban Iranian postmenopausal women

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Abstract

Introduction: Several demographic factors may be considered as barriers to osteoporosis prevention like high rate of illiteracy and low socioeconomic status in developing countries, there is lack of studies that assess the relationship between socioeconomic status and osteoporosis in these countries. In this study we aimed to assess the association between demographic factors and Osteoporosis in urban Iranian postmenopausal women

Materials and Methods: This study was a case-control, case record and interview based study, It was conducted in two bone mineral density centers from Tehran (Bone mineral densitometry center of Shariati hospital as public and Mehrad bone densitometry as private center) during the period Jun 2002 to July 2003. Case group includes 163 Osteoporotic postmenopausal women whose their spine and femoral bone mineral density was measured by DEXA using lunar machine in both centers. Controls were selected from same bone mineral density center and matched to the case patients according to age groups. SPSS (10) was used for statistical analysis. Odds Ratios were calculated to evaluate the relationship between osteoporosisi and its risk factors. Student T-test was used to compare mean values and χ^2 to compare frequency of variables. P-values less than 0.05 were considered significant.

Results: The odds ratios with 95% confidence interval for demographic risk factors of Osteoporosis are as follow: illiteracy (no schooling) 3.4(1.64,7) in both centers, 2.31(1.06,5.06) in public center, 12.18(1.41,105.57) in private center, illiteracy of husband 5.09(1.43,18.12) in both centers, 3.76(1.04,13.69) in public center, occupation (being a housewife)1.56(.97,2.50) in both centers, 2.041(1.19,3.50) in public center, After adjustment for age, weight and height and other important factors like age of menopause, menarche and…. all of the above factors remained significant except the occupation. Other demographic factors that were assessed in this study include: patient occupation in private center, husband's occupation and marital status in both centers, none of these factors found to have significant association with osteoporosis.

Conclusions: No schooling and schooling less than 6 years were the major demographic factors that were associated with Osteoporosis as risk factors in both private and public centers in Tehran. In this study we found that there was not a strong association between occupation and osteoporosis as a risk factor (especially in private center, among rather high socioeconomic group). High education level has been shown as a protective factor of osteoporosis in both centers.

Key Words: Osteoporosis, Risk factors, Demographic factors, and Menopause.

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