Reviewer's report

Title: Educational difference in the prevalence of osteoporosis in postmenopausal women: a descriptive study in northern Iran

Version: 1 Date: 23 June 2011

Reviewer: Sharon Brennan

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MAJOR COMPULSORY REVISIONS:
Overall:
The language needs a revision, with many grammatical errors throughout the text.

Methods:
The method of 250HD (radioimmunoassay) must be clarified.
The authors’ state “vitamin D status”, however mean serum 250HD of a population does not indicate Vitamin D status.

Results:
Few results are presented, with the reader needing to rely upon the tables presented to seek the actual results of analysis.
The authors’ have not undertaken a multivariable analysis, despite having available data.

Discussion:
The authors state that “no investigation in Iran has been conducted to quantify the relative impact of different dimension of SES on risk factors for this disease”. Similarly, the authors have not quantified the impact of SES on bone either. This statement should be removed.
The authors’ state “In general Iranian women, as Muslim, have limited sun exposure due to their clothing habits”. Is clothing different between rural and urban women in Guilan?
The text states that the authors had 55 clusters with a total number of 750 subjects, yet later states that the 750 subjects were ‘randomly’ selected from the clusters. Was random selection actually performed?
Subjects for this study were given a diagnosis of osteoporosis based on quantitative ultrasound technology (QUS), and then confirmed by DXA. Given that DXA is the gold standard for diagnosis of osteoporosis (now using the FRAX algorithm, and not merely T-score), how do the authors account for the possibility of misdiagnosis by using QUS measures, which are not measures of bone density? Why was this process of initial diagnosis using QUS, and secondary confirmation using DXA, employed? Also, please define the QUS measures that were employed, for instance broadband ultrasound attenuation, speed of sound,
and/or stiffness index.

What were the criteria for a binary division of education at the level of 12 years, especially given that urban/rural differences are likely in education?

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.