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**The relationship between bone mineral density (by DEXA scan) and oral health status in Iranian women older than 30-year-old**

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**Background:** As skeletal bones and teeth are tissues with similar structures and origins, it is possible that both can be affected by similar metabolic disturbances and the same process could lead to bone loss and dental problems. Therefore, we aimed to evaluate dental and periodontal condition in relation to bone mineral density (BMD).

**Methods:** Fifty-nine women older than 30 that had undergone dual-energy X-ray absorptiometry during 2016-2017, in Shiraz, Iran, were given dental (decayed, missing, filled teeth/DMFT) and periodontal examination (periodontal disease index/PDI, oral hygiene index/OHI). Their BMD based on T-score and Z-score was also recorded. Data were statistically analyzed using SPSS (22). Chi-square, independent samples t-test, regression test and ANOVA were used and  $P < 0.05$  was considered significant.

**Result:** There was a negative correlation between DMFT and T-score of spine and femur ( $r = -0.280$ ,  $p = 0.032$  and  $r = -0.284$ ,  $p = 0.029$  respectively). No association was found between PDI and T-scores or Z-scores for BMD ( $p > 0.05$ ). Also, there was a significant negative correlation between number of missing teeth and T-score of both femoral and spinal regions ( $r = -0.277$ ,  $p = 0.034$  &  $r = -0.390$ ,  $p = 0.002$  respectively); however, such an association was not found with Z-scores ( $p = 0.430$  and  $p = 0.081$  respectively). Additionally, a strong positive correlation was observed between OHI and DMFT. ( $r = 0.440$ ,  $p = 0.008$ ).

**Conclusion:** In this investigation, a negative association between BMD and oral health condition was found. It suggests that inadequate bone mass could coexist with a worse oral health condition; nevertheless, further studies are required to confirm that.

### Biography

Sara Emad has completed her MD of Dentistry at Shiraz University of medical sciences. She has been a Member of Shiraz student research committee for more than three years and was a pioneer of Dentistry workshops in Shiraz Dental University. She has more than 3 papers under publication in reputed journals and is working on two proposals.

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