



## Sleep Quality and Obstructive Sleep Apnea in Pregnant Women

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### DEAR EDITOR,

One of the common disorders during pregnancy is sleep-disordered breathing (SDB).<sup>[1]</sup> SDB includes snoring, upper airway resistance syndrome, and obstructive sleep apnea (OSA)-hypopnea syndrome.<sup>[1]</sup>

Snoring is considered as a risk factor for adverse pregnancy outcomes, including fetal heart rate abnormalities, fetal demise, fetal growth restriction, gestational diabetes, and preeclampsia.<sup>[2,3]</sup>

Eighty-two pregnant women with gestational age more than 28 weeks were enrolled.

All cases were asked to fill valid and reliable Persian versions of Pittsburg Sleep Questionnaire (PSQI) and Berlin questionnaire (BQ).<sup>[4-5]</sup>

Mean age and mean gestational age  $28 \pm 4.6$  years and  $33.5 \pm 2.7$  weeks.

According to BQ, 36 (43.9%) were classified as high risk for OSA and 46 (56.1%) classified as low risk [Table 1].

Mean PSQI score was  $8 \pm 2.9$  in all cases and it was significantly different between high- and low-risk group (mean PSQI in high-risk group was  $9.3 \pm 2.4$  and in low-risk group was  $7.1 \pm 2.9$ ,  $P = 0.001$ ) [Table 2].

Frederick *et al.* evaluated 1303 pregnant women and found that habitual snoring was present in 7%.<sup>[3]</sup>

Facco *et al.* found that 34% of enrolled pregnant women are at high risk for OSA and age, body mass index (BMI), and chronic hypertension were significant predictors of OSA.<sup>[6]</sup>

**Table 1: High-risk cases in women with and without diabetes and preeclampsia**

	High risk	Low risk	P
Age	28.3±4.4	27.7±4.8	0.6
BMI (kg/m <sup>2</sup> )	32.3±2	29.3±3.3	<0.001
Diabetes			
Yes	23	13	0.001
No	13	33	
Preeclampsia			
Yes	15	9	0.02
No	21	37	

BMI=Body mass index

**Table 2: Regression analysis regarding OSA as a dependent variable**

	OR	P
Age	1	0.7
Diabetes	3.3	0.03
Preeclampsia	3.1	0.05
BMI	0.66	0.001

BMI=Body mass index, OR=Odds ratio, OSA=Obstructive sleep apnea

Increase BMI and obesity are considered to be a risk factor for sleep disorders during pregnancy as the mass of the upper airway of the neck increases.<sup>[7]</sup>

These evidences may suggest that OSA is a problem during pregnancy which is associated with some maternal factors such as GDM and preeclampsia and it is associated with some neonatal adverse effects.

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