

Sleep Quality and Obstructive Sleep Apnea in Pregnant Women

Mahsa Ghajarzadeh, Fariba Askari¹, Mona Mohseni², Mehdi Mohammadifar³, Behzad Memari³

Department of Neurology, Brain and Spinal Injury Research Center, Tehran University of Medical Sciences, Tehran, Iran, ¹Department of Midwifery, Gonabad University of Medical Sciences, Gonabad, Iran, ²Department of Neurology, Women's Hospital, Tehran University of Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran, ³Department of Radiology, Zanjan University of Medical Sciences, Zanjan, Iran

Correspondence to:

Dr. Mahsa Ghajarzadeh, Department of Neurology, Imam Hospital, Tehran, Iran. E-mail: m.ghajarzadeh@gmail.com

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DEAR EDITOR,

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

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.^[2,3]

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).^[4-5]

Mean age and mean gestational age 28 ± 4.6 years and 33.5 ± 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 ± 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 ± 2.4 and in low-risk group was 7.1 ± 2.9 , $P = 0.001$) [Table 2].

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

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.^[6]

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 ²)	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.^[7]


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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REFERENCES

1. Venkata C, Venkateshiah SB. Sleep-disordered breathing during pregnancy. *J Am Board Fam Med* 2009;22:158-68.
2. Frederick IO, Qiu C, Sorensen TK, Enquobahrie DA, Williams MA. The prevalence and correlates of habitual snoring during pregnancy. *Sleep Breath* 2013;17:541-7.
3. Franklin KA, Holmgren PA, Jönsson F, Poromaa N, Stenlund H, Svanborg E. Snoring, pregnancy-induced hypertension, and growth retardation of the fetus. *Chest* 2000;117:137-41.
4. Amra B, Nouranian E, Golshan M, Fietze I, Penzel T. Validation of the Persian version of Berlin sleep questionnaire for diagnosing obstructive sleep apnea. *Int J Prev Med* 2013;4:334-9.
5. Farrahi Moghaddam J, Nakhaee N, Sheibani V, Garrusi B, Amirkafi A. Reliability and validity of the Persian version of the Pittsburgh Sleep Quality Index (PSQI-P). *Sleep Breath* 2012;16:79-82.
6. Facco FL, Ouyang DW, Zee PC, Grobman WA. Development of a pregnancy-specific screening tool for sleep apnea. *J Clin Sleep Med* 2012;8:389-94.
7. Lindberg E, Gislason T. Epidemiology of sleep-related obstructive breathing. *Sleep Med Rev* 2000;4:411-33.

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