THE RISK FOR OSA INCREASES WITH ADVANCED AGE – A LARGE POPULATION STUDY IN WESTERN HERZEGOVINA

S Demirović, I Pavlinac Dodig, L Lušić Kalcina, M Valić, R Pecotić, Z Đogaš

Department of Neuroscience and Split Sleep Medicine Centerì
University of Split School of Medicine, Split, Croatia

Background

The prevalence of OSA varies among different age groups of the general population, with a strong increase in prevalence in the elderly. Appropriate assessment of the increased risk for OSA is possible with reliable screening tools such as STOP and STOP-Bang questionnaires. The leading symptom of OSA is excessive daytime sleepiness, which may be assessed by the Epworth sleepiness scale (ESS).

Subjects & Methods

A large population sample included 10,108 respondents, 4,748 (47.1%) men and 5,344 (52.9%) women from Western Herzegovina. The participants completed STOP questionnaire and Epworth sleepiness scale (ESS). An increased risk for OSA was considered as ≥2 positive answers to STOP, whereas the score of ESS ESS>9 (range 0-24) indicated excessive daytime sleepiness.

Results

A total of 2ì793 (27.7%) respondents had an increased risk for OSA. The risk for OSA increased with age ($\chi2$=1947.67, P<0.001). Male respondents had a higher risk for OSA compared to female respondents in young and middle ages (<21 years, 21-70 years) ($\chi2$=21.22, P<0.001). However, there was no statistically significant difference in the risk for OSA between male and female respondents in advanced age (>70 years) ($\chi2$=0.47, P=0.493) (Table 1). Participants who had increased risk for OSA had more pronounced daytime sleepiness compared to participants who were not at risk (ESS score 7.99 ± 4.16 vs. 6.75 ± 3.83, P<0.001). However, a negative correlation was found between the age of the respondents and daytime sleepiness evaluated with ESS (r=-0.082, P<0.001 for subjects with increased OSA risk, and r=-0.122, P<0.001 for those with no risk for OSA) (Figure 1).

Table 1. The distribution of respondents (N, %) with increased risk for OSA in different age groups with regard to gender.

Age groups (years)	Total N=10,092	Male N=4,748	Female N=5,344	χ^2	P
<21	285/3098 (9.2)	178/1363 (13.1)	107/1735 (6.2)	43.41	<0.001
21-30	308/2063 (14.9)	206/1070 (19.3)	102/993 (10.3)	32.70	<0.001
31-40	243/1033 (23.5)	159/464 (34.3)	84/569 (14.8)	53.13	<0.001
41-50	595/1539 (38.7)	337/693 (48.6)	258/846 (30.5)	52.82	<0.001
51-60	668/1319 (50.6)	399/683 (58.4)	269/636 (42.3)	34.25	<0.001
61-70	318/501 (63.5)	165/239 (69.0)	153/262 (58.4)	6.10	0.013
>70	376/539 (69.8)	161/236 (68.2)	215/303 (71)	0.47	0.493
Total	2793/10092 (27.7)	1605/4748 (33.8)	1188/5344 (22.2)	26.85	<0.001

χ^2 – Chi-square test

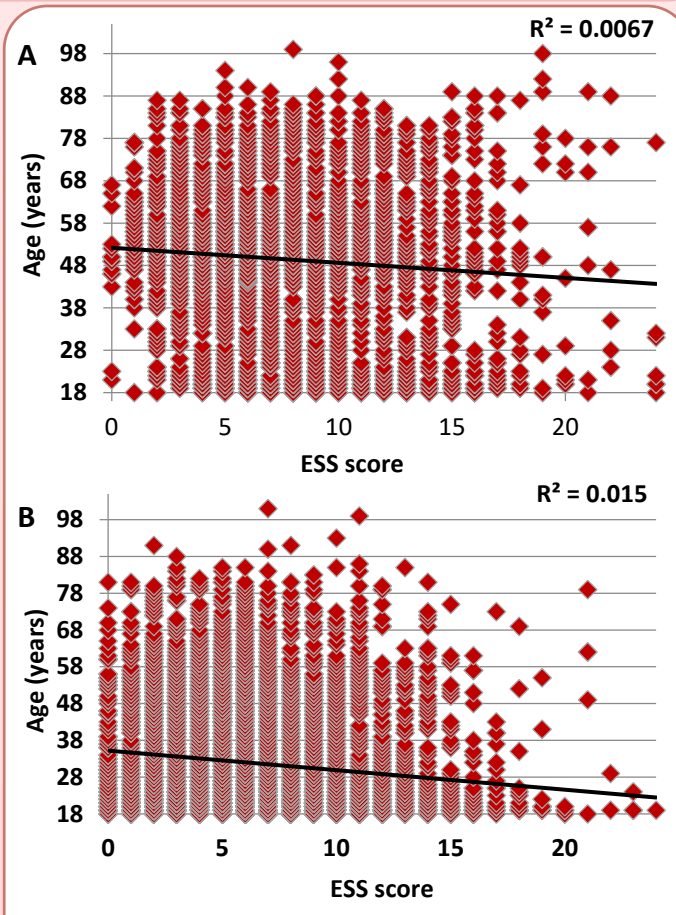

Figure 1. The correlation between age and Epworth sleepiness scale (ESS) score in respondents with increased risk (A) and no risk (B) for OSA.

Conclusion

The results of this study conducted on a large population sample demonstrated that the risk for OSA increases with advanced age. Male respondents had a significantly greater risk than females until the age of >70 where the risk for OSA was not statistically different. The excessive daytime sleepiness, as the major symptom of OSA, was less pronounced among subjects in older age groups, emphasizing the confounding effect of age on typical OSA symptomatology.

BFHA 2020 BETTER FUTURE of HEALTHY AGEING 2020 ZAGREB