

The importance of screening sleep disorders in outpatient cardiac rehabilitation programs in Iran

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Letter to Editor

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Dear Editor-in-Chief

Sleep is one of the essential needs that have a significant impact on the health of the community.¹ Although proper and comfortable sleep is needed for a healthy life, sleep disorders are among the common health problems that threaten the quality of life of the general and clinical population of various communities.² These disorders include insomnia, sleep-related breathing disorders (obstructive sleep apnea, central sleep apnea syndrome, and snoring), central disorders of hypersomnolence (narcolepsy and hypersomnia), circadian rhythm sleep-wake disorders, parasomnias, and sleep-related movement disorders. The prevalence of these disorders is 0.4-48 percent in the United States,³ and 8.8-59.2 percent in the general population of Iran.^{2,4} Meanwhile, only about 7% of the general population in Iran has good sleep hygiene,¹ and more than 27% of the community is in danger of developing some sleep disorders.⁵

Sleep disturbances are the causes of somatic and fatal illnesses such as cardiovascular diseases (CVDs).⁶ According to recent reports, sleep disturbances are associated with CVDs risk factors,⁷ and significantly increase the chance of developing cardiac events.⁶ In addition, these disorders are common in 30-38 percent of patients with coronary artery disease (CAD), or chronic heart failure (CHF), and can lead to a decrease of 12-10 percent in ejection fraction.⁸ On the other hand, sleep disturbances in patients with established CVDs have several serious consequences.⁶ However, their treatment has a significant role in controlling cardiovascular risk factors such as obesity, diabetes, hypertension, dyslipidemia, metabolic malfunctions, and mortality due to CVDs.⁹

Despite the importance of the aforementioned issue, screening of sleep disorders is not a standard part of the protocol for outpatient cardiac

rehabilitation (CR) programs in Iran. Obviously, timely screening of these problems, along with other physical and psychosocial risk factors, can lead to a significant increase in peak oxygen consumption, maximal workload, and exercise capacity before starting aerobic exercise during CR.¹⁰ Considering the above points and the acceptable effects of CR on physical and mental health,¹¹⁻¹³ we recommend that outpatient CR centers in Iran also add screening of sleep disorders to the routine assessment of the course. It is expected that timely referral of patients with sleep problems to an expert can reduce the potential risk of heart consequences, and increase the health outcomes of CR programs.

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Conflict of Interests

Authors have no conflict of interests.

References

1. Khazaie H, Chehri A, Sadeghi K, Heydarpour F, Soleimani A, Rezaei Z. Sleep Hygiene pattern and behaviors and related factors among general population in west Of Iran. *Glob J Health Sci* 2016; 8(8): 53434.
2. Sepehrmanesh Z, Ahmadvand A, Ghoreishi F. PW01-111-Prevalence of insomnia in general population. *Eur Psychiatry* 2010; 25: 1524.
3. Ram S, Seirawan H, Kumar SK, Clark GT. Prevalence and impact of sleep disorders and sleep habits in the United States. *Sleep Breath* 2010; 14(1): 63-70.
4. Arshi S, Salmani M, Sadeghniaat-Haghighi K, Najafi A, Alavi S, Shamsipour M. Prevalence of

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- obstructive sleep apnea among adults in north-west of Iran. *Sleep Med* 2017; 40: e18.
5. Khazaie H, Najafi F, Rezaie L, Tahmasian M, Sepehry AA, Herth FJ. Prevalence of symptoms and risk of obstructive sleep apnea syndrome in the general population. *Arch Iran Med* 2011; 14(5): 335-8.
 6. Quan SF. Sleep disturbances and their relationship to cardiovascular disease. *Am J Lifestyle Med* 2009; 3(1 Suppl): 55s-9s.
 7. Shirani G, Morovati SP, Shamshiri AR, Nouri M, Givi NE, Farhadi M. Prevalence of cardiovascular disorders in Iranian patients suffering from obstructive sleep apnea. *J Dent (Tehran)* 2016; 13(3): 151-6.
 8. American College of Cardiology. Incidence and prevalence of sleep apnea in cardiovascular patients [Online]. [cited 2012]; Available from: URL: <http://www.acc.org/latest-in-cardiology/articles/2014/07/18/15/41/incidence-and-prevalence-of-sleep-apnea-in-cardiovascular-patients>
 9. Jean-Louis G, Zizi F, Clark LT, Brown CD, McFarlane SI. Obstructive sleep apnea and cardiovascular disease: Role of the metabolic syndrome and its components. *J Clin Sleep Med* 2008; 4(3): 261-72.
 10. Quadri F, Boni E, Pini L, Bottone D, Venturoli N, Corda L, et al. Exercise tolerance in obstructive sleep apnea-hypopnea (OSAH), before and after CPAP treatment: Effects of autonomic dysfunction improvement. *Respir Physiol Neurobiol* 2017; 236: 51-6.
 11. Sadeghi M, Khosravi-Broujeni H, Salehi-Abarghouei A, Heidari R, Masoumi G, Roothafza H. Effect of cardiac rehabilitation on inflammation: A systematic review and meta-analysis of controlled clinical trials. *ARYA Atheroscler* 2018; 14(2): 85-94.
 12. Komasi S, Saeidi M. What is role of sex and age differences in marital conflict and stress of patients under cardiac rehabilitation program? *ARYA Atheroscler* 2016; 12(3): 138-45.
 13. Saeidi M, Mostafavi M, Heidari H, Masoudi S. Effects of a comprehensive cardiac rehabilitation program on quality of life in patients with coronary artery disease. *ARYA Atheroscler* 2013; 9(3): 179-85.

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