

Effects of Using Filters on indoor air quality for asthma patients under arid conditions of United Arab Emirates

Amina Khalil¹, Dr Syed Arshad Hussain²

¹KSMA Bishkek, Kyrgyzstan.

²Kings College Hospital London. Dubai, United Arab Emirates

Corresponding Authors:

¹Amina Khalil

KSMA , Kyrgystan

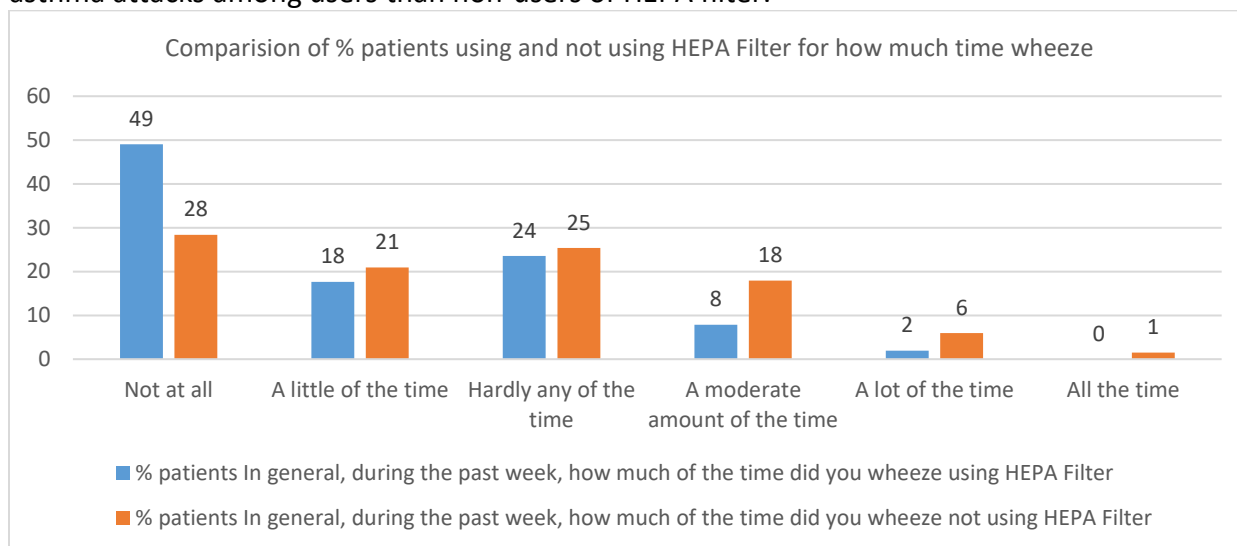
Phone: +971506623001

E-mail: aminakhalil39@gmail.com

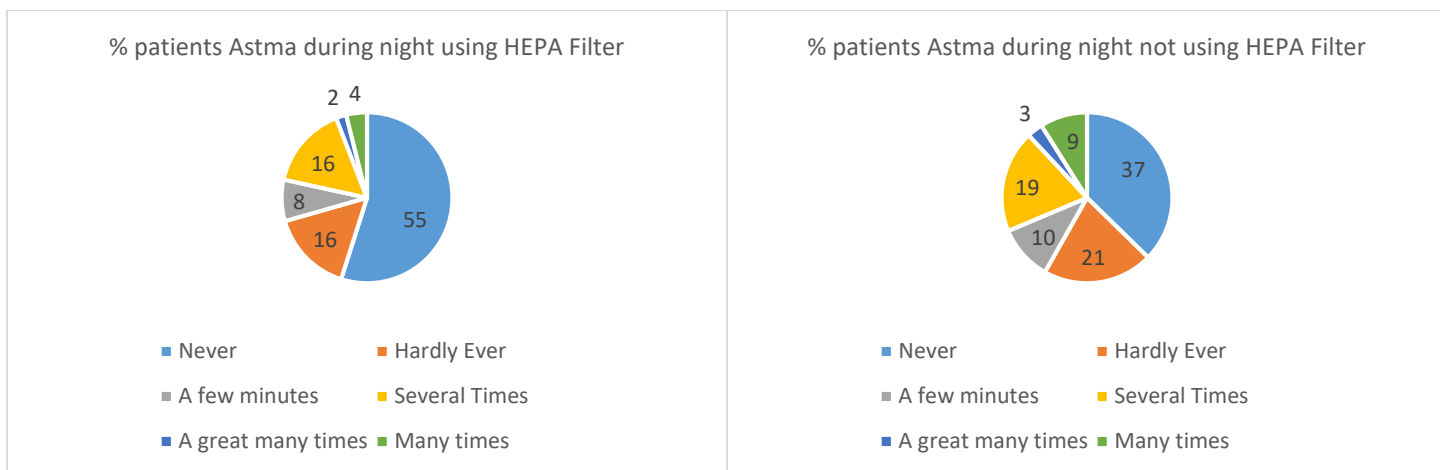
Background: The regulation of the indoor air quality with HEPA filters is critical for reducing allergic reactions and maintaining clean breathing air for asthma patients. Similar studies in the United Arab Emirates (UAE) remains elusive. We investigated the effects of HEPA filter on the signs and symptoms of asthma patients.

Methods: 118 asthma patients were observed at the Kings college Hospital, Dubai hills for monitoring of respiratory symptoms, including asthma attacks during night or after waking up, and restrictions in physical activity. The patients were categorized in two groups, including users (n=51) and non-users (n=67) of HEPA filter. The information was collected via questionnaire, which also enquired about the use of HEPA filter

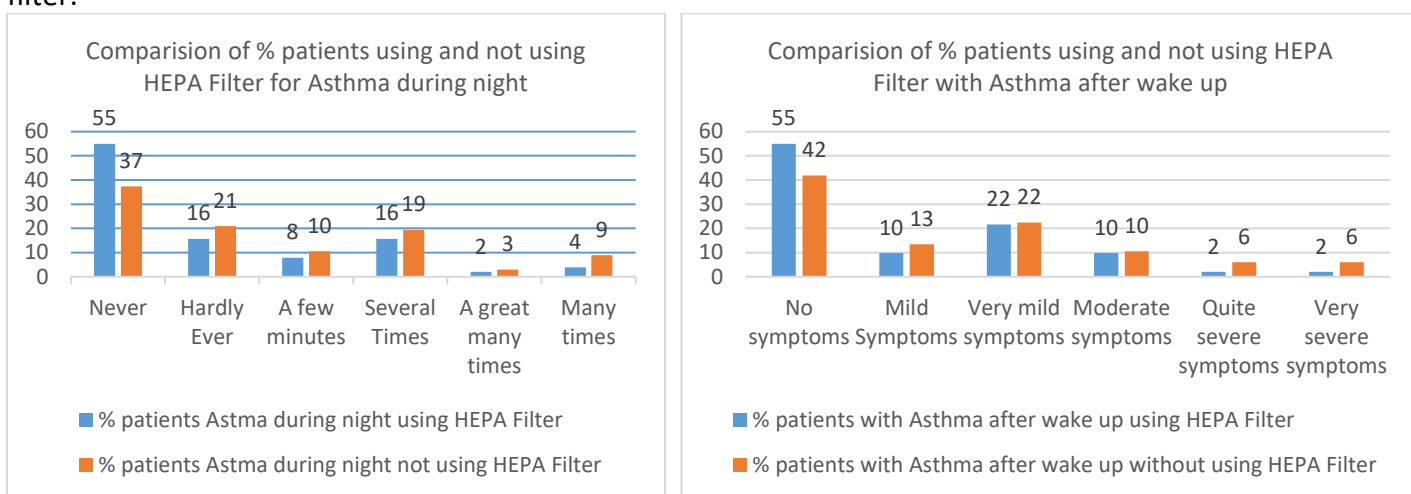
Results: Low occurrence of asthma symptoms was found, including wheezing and waking up at night due to asthma attacks among users than non-users of HEPA filter.



Specifically, the proportions of patients without nocturnal asthma attacks were 55% among users and only 37% among non-users of HEPA filter. Similarly, asthma at night was found in 16% of users and 21% of non-users of HEPA filter.



A significant change was observed in patients using HEPA filters indicating 6% as compared to 2% patients not using HEPA filter. Lastly, the prevalence of daily physical activity was higher among user than non-users of HEPA filter.



Conclusions: Altogether data shows that the use of HEPA filter reduces the asthma symptoms and improve the physical activity in asthma patients. Further investigations are required to validate and extend our findings.

Keywords: Asthma signs and symptoms, Physical activities, HEPA filter