

Assessment of Sleep Quality among Patients who Attended Pulmonary Rehabilitation Department in KAMC

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Background

According to the American thoracic society/European respiratory society pulmonary rehabilitation is defined as “an evidence-based, multidisciplinary, and comprehensive intervention for patients with chronic respiratory diseases who are symptomatic and often have decreased daily life activities. Integrated into the individualized treatment of the patient.” Patients with chronic obstructive lung disease and those with restrictive lung diseases experience sleep disturbance more commonly than others due to changes in breathing patterns during sleep which could decrease oxygen level in the blood.(7) As a result, they may undergo a pulmonary rehabilitation program to deal with this aspect by doing breathing exercises and strengthening the respiratory muscles.(8) The impact of pulmonary rehabilitation on sleep quality is growing, but unclear yet. However, it has a remarkable benefit on enhancing the quality of life and exercise capacity. Therefore, the aim of this study is to assess the quality of sleep among patients who attend pulmonary rehabilitation clinic in KAMC. Moreover, the finding of this study will help to measure sleep quality among patients who attended pulmonary rehabilitation program. Thus, helping clinicians to know that one of the effects of pulmonary rehabilitation is improving sleep quality.

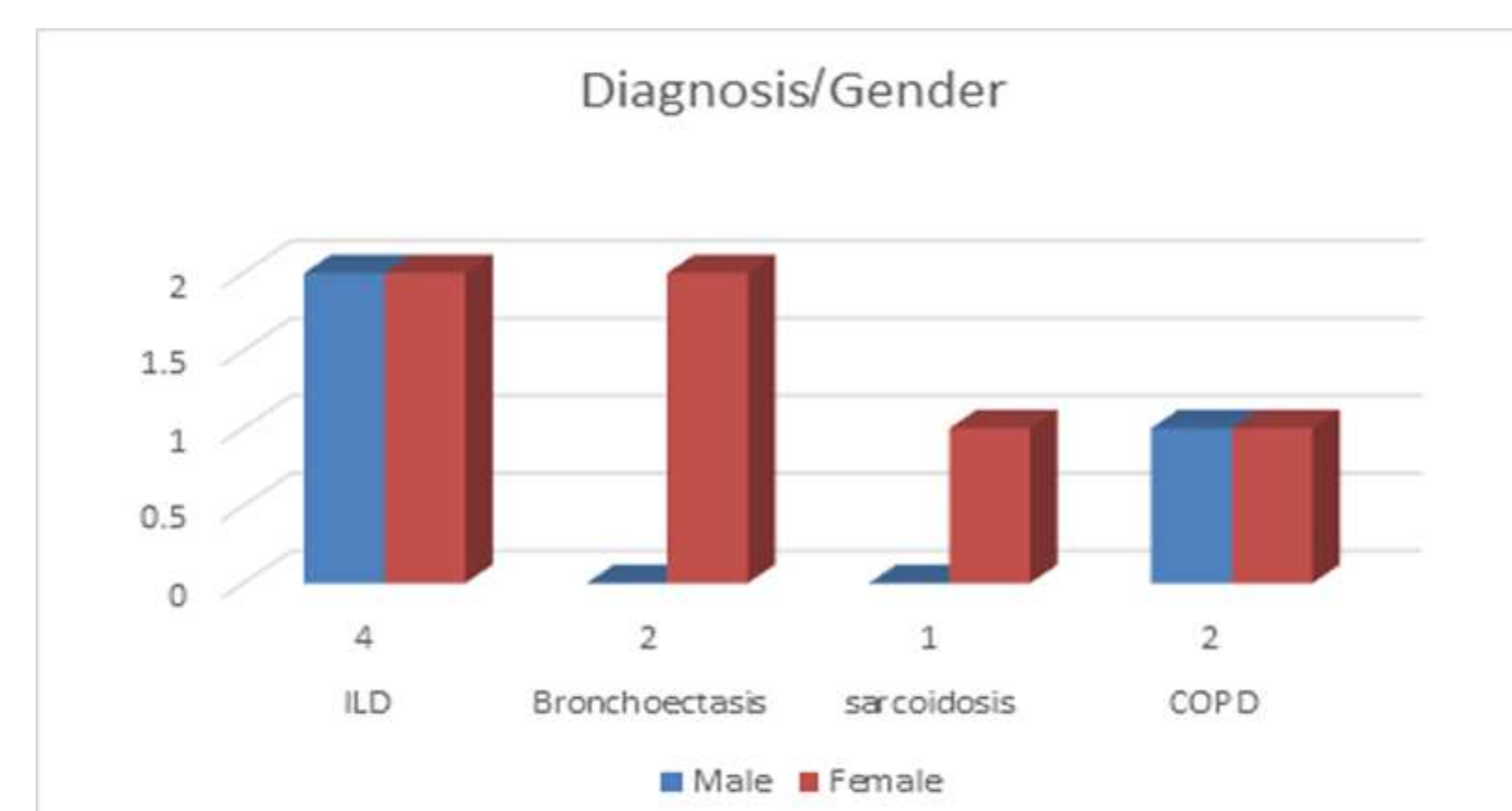
Methods

The study population were adult patients 18 years old and above whom presented to the pulmonary rehabilitation and have obstructive or restrictive pulmonary disease. Among them the more frequent are asthma and chronic obstructive pulmonary disease. Also, we included any inpatient who had referral to the rehabilitation center such as preoperative and post-operative patients. The study design was a descriptive, prospective, case series. The study duration was From September 2019 to September 2020. Sample size was based on the medical files from 21 patients referred to the pulmonary rehabilitation clinic between September 2019 to November 2019 were reviewed. Only 9 patients who showed and answered the questionnaire. Our sampling technique was Non-probability sampling technique (consecutive) sampling that enroll subjects according to their availability and accessibility to our inclusion criteria.

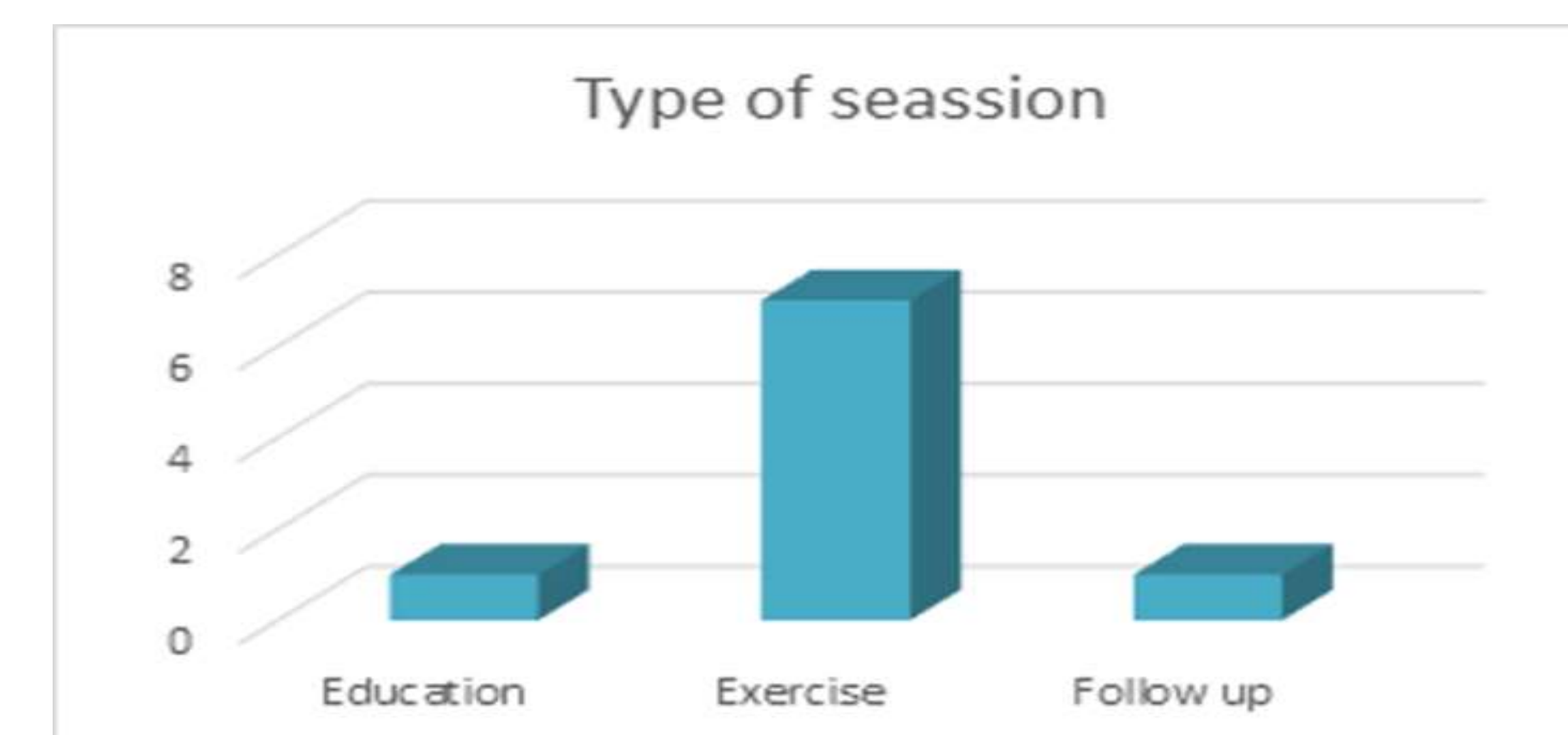
we used in this study sleep quality questionnaire (PSQI) which is an effective instrument used to measure the quality and patterns of sleep in adults. Sleep Borg dyspnea scale which is a system used to document the severity of the patient's shortness of breath using numbers anchored verbal descriptions, and electronic medical files (Best Care) to obtain patients data.

Results

The findings suggested that the median age of the sample was 73 years (IQR 58-79 years), and as for the gender more than half of the study population, 66% of the subject (6 patients) were female. Also, the subjects were categorized according to their underlying respiratory disease, out of the 9 patients who answered the questionnaire, 4 patients (44%) with the diagnosis of interstitial lung disease, 2(22%) patients have COPD, 2 (22%) patients have Bronchiectasis, and only 1(11%) patient with sarcoidosis (figure1).

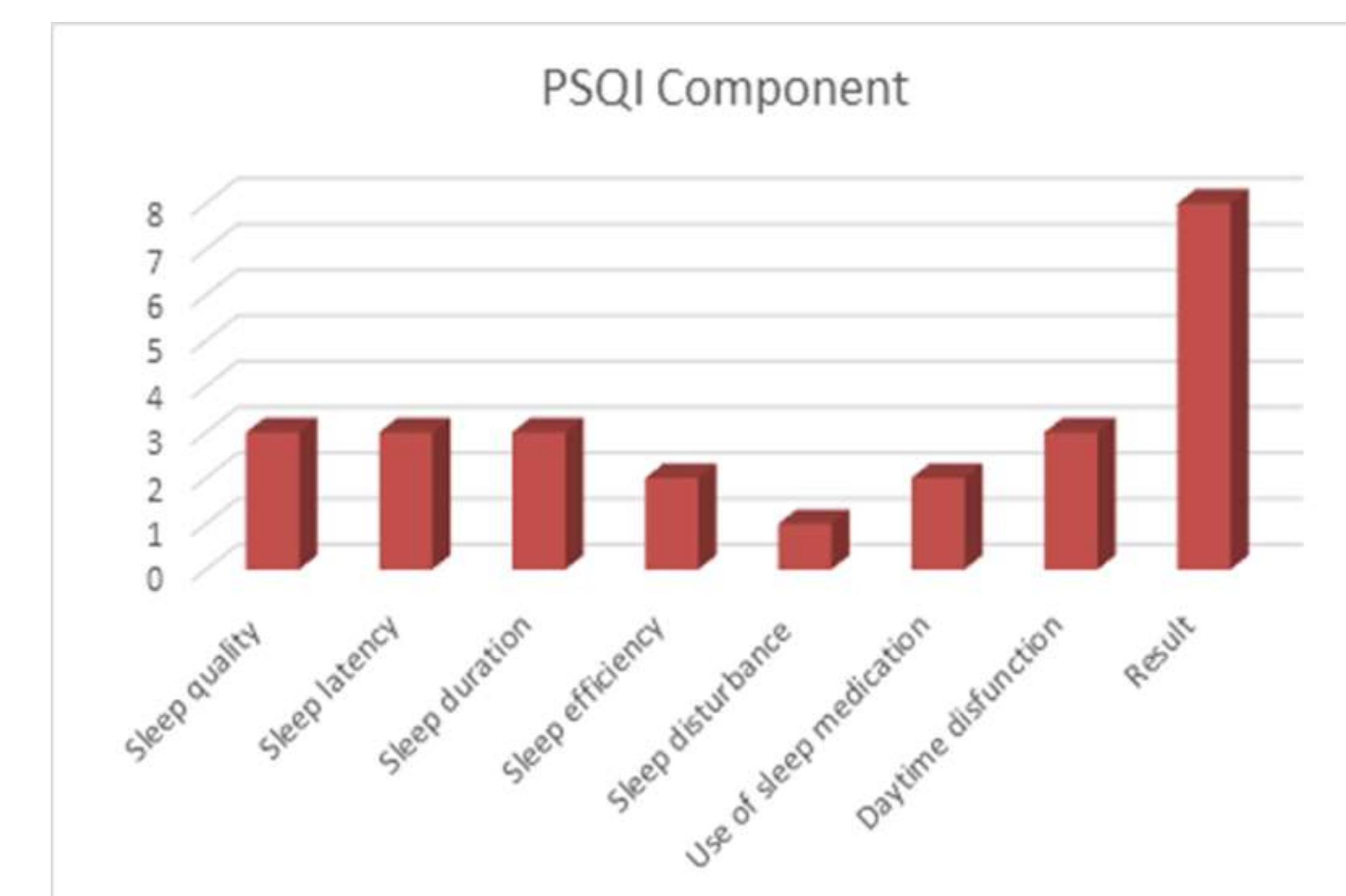


As for the distribution among the type of sessions, 7 out of the 9 patients were enrolled in the Pulmonary rehabilitation clinic for standard exercise sessions, one patient attended only for an education session and one for a follow up session, so majority of the patients attend the pulmonary rehabilitation clinic for exercise sessions (figure2).



Furthermore, Borg dyspnea scale was collected from all the enrolled patients. Then we calculated the median of the dyspnea scale for those patients which was 5 (IQR 3-6).

Also, figure 3 demonstrates the median of the participants' answer to all the seven components of the questioners, which are used to assess multiple aspects of sleep. All those factors are scored from 0-3, where 0 means absence of that problem and 3 is the worst score. Furthermore, we have noticed that most of the participants scored worst on the sleep efficiency factor of the questionnaire with a median of 3, which is interpreted as “very bad”.



Conclusions

As age advances, many people are at risk of developing severe respiratory conditions. While there is no proper cure for most of these conditions, proper management is still useful as It can offer patients quality life as they bear the burden of these conditions. Research shows that most patients who have pulmonary conditions also have problems with sleep. These patients who have severe or developing cases of pulmonary diseases seek help in the form of pulmonary rehabilitation.

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