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Research Article

Do Eating Attitudes and Sleeping Quality have an Impact on Snoring?

G Tharani[1]*, B Mugilan[1], Ishwarya Vardhini C[1], Liji Sara Varghese[2] and Jaiganesh G[1]

[1]Faculty of Physiotherapy, Dr. M.G.R. Educational and Research Institute, Chennai, India

[2]Faculty of Nursing, Dr. M.G.R. Educational and Research Institute, Chennai, India

***Corresponding Author:** G Tharani, Assistant professor, Faculty of Physiotherapy, Dr. M.G.R. Educational and Research Institute, Velappanchavadi, Chennai, Tamil Nadu, India.

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Abstract

Snoring is a familiar sleep disorder, which is prevalent among middle aged individuals. Snoring is often loud or harsh sound that can occur at sleep, it can be light, occasional and untroubled or it may be a sign of serious underlying sleep related breathing disorder. About half of people snore at some point in their lives. Snoring is more common in men, though many women snore. About 40 percent of adult men and 24 percent of adult women are habitual snorers and become more common as they get older. Some people are more prone to snoring because of size, shape, tension of muscles, soft tissues near the airway, posterior to the throat. Recent studies have stated that late night eating and sleepless night may relax or tense the throat and tongue muscles resulting in snoring. Since there is inadequate evidence on this, the current study aimed to analyze the impact of eating and sleeping attitudes among 100 healthy individuals between 30 to 50 years in Chennai. Eat 26 questionnaire, sleep quality questionnaire and Thornton questionnaire were used to assess all the participants. EAT-26 usually provides very useful information about the eating symptoms and concerns that are common in eating disorders. Sleep quality questionnaire is a general, efficient assessment tool suitable for evaluating sleep quality in a variety of patient and research populations. Thornton Snoring Scale assess the effects of snoring on life and relationships in various situation. On analyzing the score of the questionnaire it was found that poor sleeping and eating attitudes has an adverse effect on snoring.

Keywords: *Snoring; Eating; Sleep Quality; EAT-26 Questionnaire; Sleep Quality Questionnaire and Thornton Questionnaire*

Introduction

Snoring has customarily been viewed as an annoyance or a wellspring of humour, however it is a disorder with significant social and health consequences. It is a hoarse sound from the nostril or mouth that takes place while respiration is partly obstructed. Air flow may be obstructed with the aid of an aggregate of things, together with nasal congestion, anatomical variation of the nose and gentle palate or alcohol intake [1]. Snoring is a cardinal feature of obstructive sleep apnea and consequences from vibration of the partially obstructed upper airway at some stage in sleep [2]. Snoring could have detrimental health effects in its own, in conjunction with vibration may induce artery arteriosclerosis and doubtlessly artery plaque rupture and stroke. Snoring very regularly disrupts the sleep of others in particular affecting mattress accomplice sleep and first-class of existence [3]. Habitual snoring is common in the population, its overall prevalence increases with age and is higher in males (35 - 45%) than females (15 - 28%) [4].

Snoring antecedently is related to body mass index, additionally to the risk of cardiovascular disease such as coronary heart disease and stroke among postmenopausal women. Unfortunately, together with the improvement of living conditions the incidence of snoring has increased. It may be mediated through other heritable lifestyle factors such as poor hygiene, quality and quantity of rest and sleep, unhealthy eating habits, smoking and alcohol consumption [5,6]. Sleep disorders are common and at least 10% of population suffers from sleep disorder that is clinically significant and of public health importance. Sleep quality and disturbance are associated with acute and sizeable cardiovascular stress [7].

Both eating and sleeping are influenced by the circadian rhythm, specified sleep typically happens at night-time and food intake predominately happens throughout the day in humans. In general, sleep is initiated 1 - 4h after the last meal, partially depending on one's lifestyle and sleep duration (7 - 9h on average) [8]. Eating attitudes can be defined as beliefs, thoughts feelings, behaviour and relationship with food [9]. They can influence people's food choices and health status. Eating disorders affect an increasing proportion of young as well as elders. This may be a chance for many changes and many sicknesses nowadays [10]. The body is an immensely perplexing, interlinked organization of frameworks where each activity has a host of reactions. Snoring and weight gain work in a vicious cycle but not in isolation; the two elements suck in more medical conditions as the cycle spirals out of control. Indeed, even without being overweight, low oxygen-carrying capacity in rest puts a strain on the heart and veins [11]. These days poor diet, with its huge increase in the consumption of sugar, soft drinks, fat, and processed foods along with our dinnertime escalates snoring. The EAT-26 items form three subscales (i.e. Dieting, Bulimia and Food Preoccupation and Oral Control) and identification of those at risk for eating disorders is based on information on the individual's body mass index (BMI) and behavioural symptoms reflective of an eating disorder.

Unlike sleep duration, which is clearly defined by the amount of sleep one gets at night, sleep quality can be defined in different ways. By using objective measures of sleep, such polysomnography, sleep quality can be characterized by the amount of slow wave sleep (SWS) and rapid eye movement (REM) sleep one gets at night [12]. Regular snoring at night can disrupt the quality of sleep-leading to daytime fatigue, irritability and increased health problems. Recent studies have found that frequency of snoring among the sleep stages differed for light and heavy snorers: light snorers snored uniformly throughout all stages, whereas heavy snorers tended to snore more during slow-wave and REM sleep. Snoring frequency and snoring index were similar during all sleep stages in light snorers, but they were higher during slow-wave sleep in heavy snorers. Wakefulness time after sleep onset and sleep efficiency correlated significantly with the snoring index [13]. The Sleep quality questionnaire scale is a suitable measure for evaluating sleep quality with six domains of sleep quality: daytime symptoms, restoration after sleep, problems initiating and maintaining sleep, difficulty waking, and sleep satisfaction.

Since there is lack of evidence regarding the association between eating habits, sleep quality and snoring, this study intended to analyse the linkage of the same using EAT 26 questionnaire, sleep quality questionnaire and Thornton questionnaires among middle aged population.

Methods

100 individuals between 30 to 50 years, both male and female with a history of snoring for less than 1 year were included in this observational study with their voluntary consent for participation. People with cardiovascular disorders, recent surgeries, hypertension and any other pathological respiratory conditions were excluded from this study. The selected individuals were asked to answer the EAT 26 questionnaire, sleep quality questionnaire and Thornton questionnaire to assess their eating attitudes, sleeping quality and severity of snoring respectively. Then the scores of all the questionnaire were analysed.

Results

The collected data were tabulated and analyzed using Pearson correlation of coefficient. All the parameters were assessed using statistical package for social science (SPSS) version 24.

Pearson correlation of coefficient of snoring on sleep quality and eating attitudes

The above table reveals that the Pearson Correlation of coefficient 'r' value and p-value of Sleep Quality and Eating attitudes with respect to snoring is significant at $p < .01$.

Parameters	'r' value	P value
Sleep quality	0.9692	< .00001
Eating attitude	0.6719	< .00001

There was a strong positive correlation between Snoring and Quality of sleep among all the subjects and there was a moderate positive correlation between snoring and eating attitudes.

Discussion

Routine snoring affects a large number of individuals and their partners but often goes unresolved unless it coexists with a more serious sleep disorder or a systemic illness that requires treatment. The first line of management is self-care techniques, together with losing weight, reducing alcohol intake and changes in sleeping position [14]. Thus, this study intended to analyse the impact of eating and sleeping behaviour on snoring.

The present study indicated that simple snoring had a strong positive correlation with the quality of sleep. Sleep is the magical bond that unites health and our bodies together. Poor sleep relates not only to the total amount of sleep but also to the quality of sleep and the amount of time spent awake. 55% of the subjects in this study stated that they had episodes of snoring lying on the back then in side-lying. This was similar to the findings of Chen, Hui., *et al*. found that by sleeping on the back, our mouth has a tendency to fall open which causes changes to the shape of our upper airway, additionally the effect of gravity on our face, head and neck starts to compress our airway [15]. Few subjects also reported that they often had difficulty in falling asleep and rarely felt refreshing after sleep. They also added that poor sleep often makes them irritated and created headaches.

The eating attitude is a behavioural relationship with the food. They can influence people's food options and health status. The findings of this study showed a moderate positive correlation between snoring and eating attitudes. Around 40% of subjects in this study stated that due to poor quality of sleep sometimes created a loss of appetite in them and they also reported that they had frequent complaints of snoring from their bed partners when they had their dinner late at night. Previous studies have proved that the ones who had abnormal eating attitudes had scored higher levels of depression and higher levels of both states as well as trait anxiety than those with normal eating attitudes [16]. The abnormal eating attitudes may stimulate stress, anxiety, and obesity that in turn can cause snoring.

Thus, both sleep quality and eating attitudes influence the episodes of snoring.

Conclusion

From this study, it is found that both poor quality of sleep and poor eating attitudes have a strong impact on snoring. Hence snorers should analyse their sleep quality and eating attitudes and make necessary changes to correct them and prevent the frequent episodes of snoring during sleep.

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Conflict of Interest

Nil.

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