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## RESEARCH ARTICLE

# RESTLESS LEG SYNDROME (RLS) AND ASSOCIATED

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## Abstract

**Background:** Restless leg syndrome has been a problem for a large percentage of the population as it affects many aspects of life. The aim of this research was to outline the effect of restless leg syndrome on the human body and related diseases that can affect human wellbeing.

**Methods:** The research methodology was done through the cross-sectional process and therefore, the research design that can be included in the descriptive research design. The selected research design would be justified for the present research methodology as a survey would be done with a proper questionnaire. Hence, the selected research design would help in describing and interpreting the collected data. The population that the present research involved in the research methodology belonged to the patients who are suffering from restless legs syndrome disease. The people who go to the national government hospitals for the medication process would be the target population for the survey method.

**Results:** Study included 803 participants in which all of them responded to study survey questions. Study participants believe that restless leg syndrome is not a genetic disorder (n= 359, 44.7%). More than half of study participants reported that taking medicines will help with RLS (n= 436, 54.3%). There were 607 participants reported that daily exercise would help in diminishing the RLS (75.6%). Furthermore, 492 participants considered exercise is essential for RLS (61.2%). Participants were asked about the pain degree with regard to leading a life with restless leg disorder. More than half of participants reported that it is moderate painful (n= 456, 56.8%) Regarding the duration of treatment of restless leg syndrome, than half of participants reported the duration to be moderate span of time (n= 408, 50.8%).

**Conclusion:** In conclusion, this research was a population-based study with a large sample size, and its findings indicate that RLS is widespread among study population. This indicated that RLS could be more prevalent, manifest differently in patients, and have distinct risk factors. Study participants believe that restless leg syndrome is not a genetic disorder. More than half of study participants reported that taking medicines will help with RLS. Participants also reported that daily exercise would help in diminishing the RLS and considered exercise is essential for RLS.



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## Introduction:-

Throughout history, RLS has been a problem for a large percentage of the population, not only in the UK but elsewhere. Every unpleasant experience has a root cause that may be addressed [1]. Those afflicted with other conditions, such as diabetes, cancer, and so on, endure the greatest pain. A recent research has shown that over a million individuals have restless legs and associated symptoms [2]. As a result, those who have the aforementioned illness are plagued by a plethora of problems and are compelled to move their legs involuntarily out of an excessive impulse.

Minor cases of RLS that are not associated with a significant medical condition do not need treatment and may be resolved by practicing meditation and getting regular exercise. People with the disease's principal symptoms, however, should adopt a healthy lifestyle in order to alleviate this problem [3]. Regular exercise, not drinking or smoking, and getting enough sleep are all examples of positive lifestyle changes that individuals may make. However, the person with RLS has to follow a correct and minimum medication method.

Restless legs syndrome (RLS) is an under-recognized and under-discussed medical condition across the globe. Therefore, greater attention must be paid to this problem so that people with this illness may have a better quality of life.

All across the globe, millions of people experience the discomfort of restless leg syndrome. Symptoms of the condition include a wide range of disconcerting and strange feelings, which brings up a variety of health concerns [4]. Problems with restless leg syndrome (RLS) are common in people of all ages and both sexes, which raises concerns about nerve damage and conditions including peripheral neuropathy. Patients with diabetes and cancer are more at risk for suffering from the syndrome's long-term effects. As people live longer, they are more likely to experience the symptoms of RLS [5]. In most cases, this happens after a prolonged period of sitting awkwardly or resting in bed. Therefore, appropriate medicine and counseling are required to remove the associated risks.

The goal of the current study is to learn more about the physiological basis and impact of Restless Legs Syndrome. Thus, the current study is important for scholars who want to pursue more study on the issue in the future. In addition, the current study and the outcomes that would be obtained via the research approach may be useful to medical practitioners.

## Methods:-

### Design

The research methodology was done through the cross-sectional process and therefore, the research design that can be included in the descriptive research design. The selected research design would be justified for the present research methodology as a survey would be done with a proper questionnaire [6]. Hence, the selected research design would help in describing and interpreting the collected data.

### Approach

The research methodology involved the inductive research approach for the present study. The selected research approach helped in the development of a clear perception about the research topic that would be useful in the future [6].

**Population**
The population that the present research involved in the research methodology belonged to the patients who are suffering from restless legs syndrome disease. The people who go to the national government hospitals for the medication process would be the target population for the survey method [6].

**Sample**
The research included the stratified random sampling method involving the participants suffering from the issue of RLS and residing in the UK. The participants would be selected in a random manner and the target participants would be the patients of RLS belonging to the age group of 18 to 55 years. A total of 50 participants would be selected for the survey [6].

**Tool**
The research was done through a primary data collection method while considering the survey method. The survey would be done by adopting the tools like a proper questionnaire that was sent through email to the participants [7].

**Data collection**
The research methodology was done using the primary data collection method including the quantitative data analysis method. Therefore, the survey method was done with a questionnaire that had a total of 14 questions with multiple-choice questions [6]. The selected data collection method helped in gathering proper information as well as knowledge about the concerned topic.

**Data analysis**
The present research methodology included the quantitative data analysis method that would be justified in conducting the survey process. The data analysis technique would help in collecting and analysing the appropriate information related to the topic [8].

**Ethical consideration**
The aspect of ethical consideration was needed while conducting the research methodology. The researcher ensured that the primary survey method would be conducted through an authentic process. The participants were well aware of the topic before the conduction of the survey [8]. The collected data was authentic and no data breaching was done throughout the research methodology.

## Results:-

Study included 803 participants in which all of them responded to study survey questions. Participants' responses are provided in table 1. It is noticed from the table that study participants believe that restless leg syndrome is not a genetic disorder (n= 359, 44.7%). More than half of study participants reported that taking medicines will help with RLS (n= 436, 54.3%). There were 607 participants reported that daily exercise would help in diminishing the RLS (75.6%). Furthermore, 492 participants considered exercise is essential for RLS (61.2%). Responses to the rest of questions are presented in table 1.

**Table 1:-** Participants' responses to survey items.

| Item | Yes | No | Neutral |
|---|---|---|---|
| 1) Do you feel restless leg syndrome is a genetic disorder? | 233<br>29% | 359<br>44.7% | 211<br>26.3% |
| 2) Do you think that taking medicines will help in addressing the issue of restless leg disorder? | 436<br>54.3% | 196<br>24.4% | 171<br>21.3% |
| 3) Is the issue of restless legs a common disorder in human beings? | 332<br>41.3% | 291<br>36.2% | 180<br>22.4% |
| 5) Are leg syndrome diseases completely curable? | 320<br>39.9% | 141<br>17.6% | 342<br>42.6% |
| 6) Do you consider that practicing daily exercise will assist in diminishing the syndrome of restless | 607<br>75.6% | 48<br>6% | 148<br>18.4% |
| 9) Do you consider that exercise for RLS is a necessity? | 492<br>61.3% | 64<br>8% | 247<br>30.8% |

| | | | |
|---|---|---|---|
| 10) Do you feel any recovery or improvement after exercising for RLS? | 416<br>51.8% | 57<br>7.1% | 330<br>41.1% |
| 11) Do you think that Exercise will affect the strength of your legs? | 573<br>71.4% | 92<br>11.5% | 138<br>17.2% |
| 12) Would you recommend another person undergo the process of RLS? | 238<br>29.6% | 140<br>17.4% | 425<br>52.9% |
| 13) Do you feel that exercise and a proper lifestyle is the only solution for reducing the issue of RLS? | 424<br>25.8% | 162<br>20.2% | 217<br>27% |
| 14) Do you know about any other solution to improve the appearance of RLS? | 115<br>14.3% | 420<br>52.3% | 268<br>33.4% |

Participants were asked about the pain degree with regard to leading a life with restless leg disorder. More than half of participants reported that it is moderate painful (n= 456, 56.8%) (Figure 1).

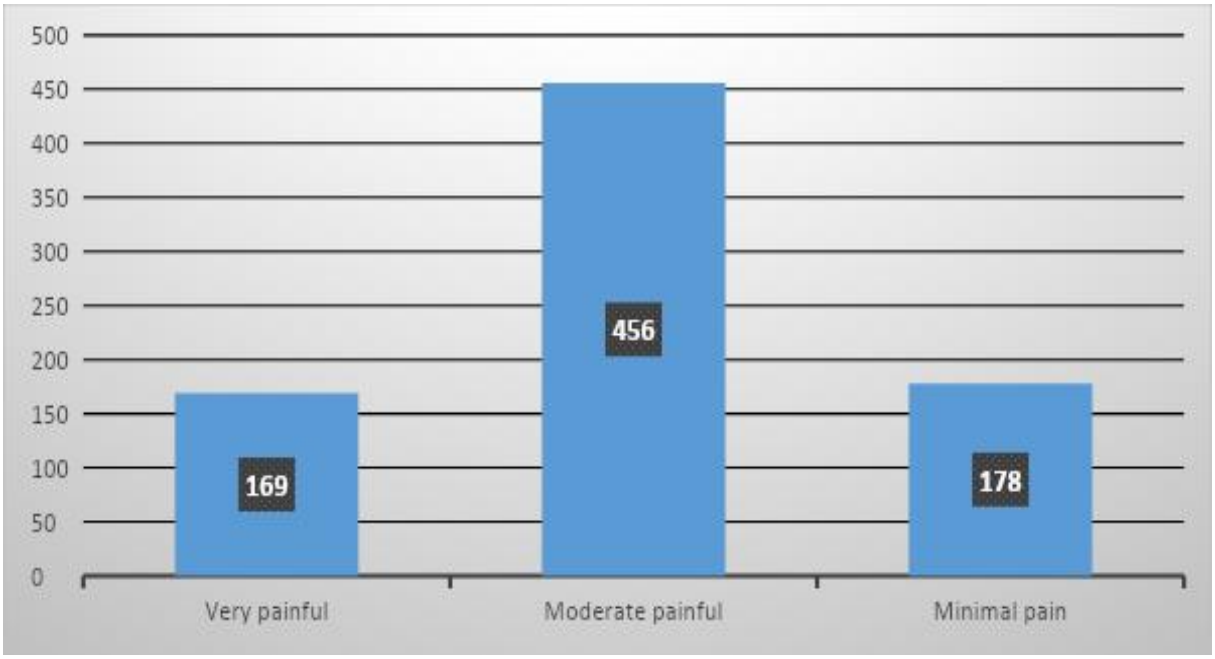


**Figure 1:-** Degree of pain to lead a life with restless leg syndrome.

Participants reported that the process of medication of restless leg syndrome is moderately costly (n= 360, 44.8%) while 191 participants reported that it is very costly (23.8%). On the other hand, about one third of participants reported that it is affordable (n= 252, 31.4%).

Regarding the duration of treatment of restless leg syndrome, than half of participants reported the duration to be moderate span of time (n= 408, 50.8%). Participants' responses to this question is presented in figure 2.

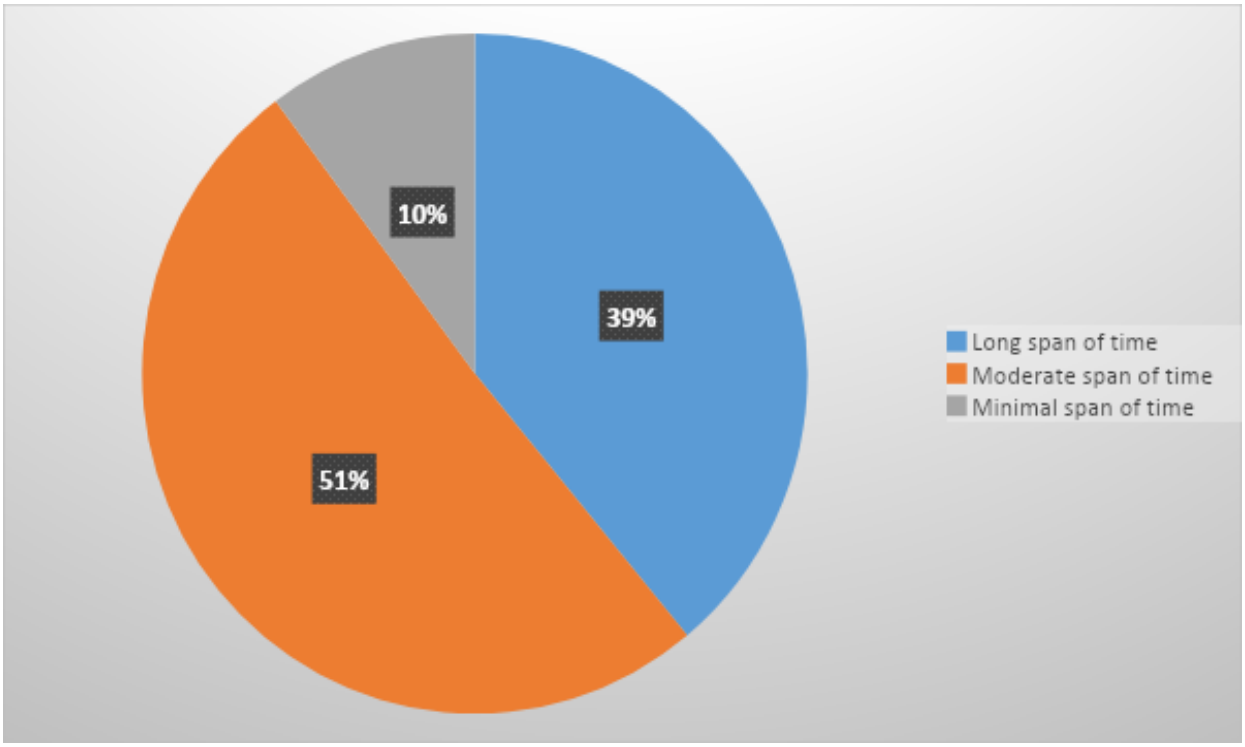


**Figure 2:-** Duration of treatment of restless leg syndrome.

## Discussion:-

Restless legs syndrome (RLS), also known as Willis-Ekbom illness, is a neurological clinical phenomenon characterized by involuntary leg movements that occur mostly during sleep [9]. In extreme cases, it may even spread to the limbs and other regions of the body. Leg pain and the need to move about are classic symptoms of restless leg syndrome (RLS), which most often occurs in the evenings. It becomes worse when you sit still and improves when you do anything [9-10]. Despite the fact that diseases including diabetic mellitus (DM), renal failure, and iron deficiency anemia may cause RLS, the majority of cases are idiopathic.

Despite Dr. Karl Ekbom's first description of RLS in 1945, it wasn't taken seriously by doctors and researchers until the late 1980s. As a result, [11] a group dedicated to developing diagnostic criteria for RLS called the International Restless Legs Syndrome Study Group (IRLSSG).

The IRLSSG published recommendations to improve clinical diagnosis and severity assessment of RLS, as well as clinical and epidemiological studies of RLS, [10] and to encourage further study of the disorder [12-13]. Insomnia and excessive daytime drowsiness are only two of the additional sleep problems that may develop as a result of the restlessness experienced by people with RLS [14].

Severe cases of the disease become a chronic and debilitating condition that needs ongoing care. There is currently no known cure for this disease; thus, therapeutic therapy focuses on eliminating potential triggers and exploring treatment options that alleviate symptoms. Dopaminergic agents, opioids, anticonvulsants, and sedative hypnotics are only some of the medications that may help alleviate symptoms. RLS affects anywhere from 5-15% of the population [15].

On a more regional scale, however, statistics on prevalence are few. Prevalence estimates range from 2% to 5.2%, with peak incidence between the ages of 45 and 60 among primary care patients [16].

RLS may be idiopathic, but it also can develop as a complication of other conditions such diabetes, renal failure, iron deficiency anemia, Parkinson's disease, and multiple sclerosis [17]. Pregnancy may bring it on or make it worse, and certain drugs can cause it [18]. There were no clinical tests or investigations conducted in our sample. However, a strong correlation between RLS and DM was discovered [19]. Finally, an unanticipated link between

RLS and asthma was discovered [19]. Research [19] results imply that RLS may be related to a different set of factors than previously thought. However, it is unclear if the use of antihistamines, which are often prescribed to people with asthma, is responsible for the observed correlation between the two conditions [19].

Although most investigations have failed to find a causal link between RLS and cardiovascular disease[19,20], one large population-based research found that various cardiovascular risk factors, such as obesity, diabetes, and hypertension, were independent predictors of incident RLS [21].

In both the univariate and multivariate analyses of [19] research, diabetes was the sole significant risk factor for RLS. The current investigation confirmed that hypertension is a major risk factor; however, this link was eliminated in the multivariate analysis. We also found no evidence that obesity is linked to RLS in literature. While prior epidemiological research linked RLS risk to BMI, our discovery runs counter to those results [22,23,24]. There is some evidence that fewer dopamine receptors exist in the brains of obese people, which may explain this association. As more than half of the Saudi population is overweight or obese [25], it may be difficult to distinguish between those who suffer from RLS and those who do not, which may explain why obesity has not been shown to have a role as a risk factor in this group. However, this finding that obesity does not play a part in RLS accorded with the findings of previous research [26,27]. Atherosclerosis in the carotid arteries was shown to be independently related with snoring, according to a research published just recently [28]. While snoring may not directly cause heart disease, it is a telltale indicator of obstructive sleep apnea, which might increase your chance of developing angina [29,30,31,32]. Male gender is an independent risk factor for coronary artery disease, and this was confirmed in this research of people with restless legs syndrome. Cigarette smoking, a major risk factor for cardiovascular disorders, was shown to be associated with an increase in RLS symptoms [19].

## Conclusion:-

In conclusion, this research was a population-based study with a large sample size, and its findings indicate that RLS is widespread among study population. This indicated that RLS could be more prevalent, manifest differently in patients, and have distinct risk factors. Study participants believe that restless leg syndrome is not a genetic disorder. More than half of study participants reported that taking medicines will help with RLS. Participants also reported that daily exercise would help in diminishing the RLS and considered exercise is essential for RLS.

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