

Clinicians Heuristic Impression of the Presentations of Restless Legs Syndrome: A Survey among Medical Graduate Trainees in an Academic Hospital in India

Sir,

Restless legs syndrome (RLS) is a sensorimotor neurological disorder that is diagnosed based on clinical criteria.^[1] The four essential criteria for diagnosis include an urge to move legs accompanied by or caused by an uncomfortable sensation in the legs, worsening of

the symptoms with rest or inactivity, improvement of symptoms with movement, and symptoms worsening toward the evening or at night. The original diagnostic criteria were developed by the Delphi method.^[2] The essential component of the original criteria was retained in all the subsequent modifications.^[1]

The prevalence of the RLS is estimated to be about 10% in the North American and European populations where the diagnostic criteria have been validated.^[3,4] However, in studies from Asia, the prevalence is estimated to be 1%–3%.^[5] This has been attributed to possible ethnic and racial differences. The prevalence of severe RLS is about 2.5%. Given the range of prevalence of RLS, it forms one of the most common neurological illnesses. However, in India, it is an uncommonly diagnosed entity. The reason for this could be multifactorial. It could be a case of genuine ethnic and racial differences. It could also be due to the poor discriminant capacity of the diagnostic criteria to characterize the condition in a linguistically diverse population. Another important factor could be the inability of clinicians to appreciate the nuances of diagnostic criteria and apply them to the local population.^[5]

We did a survey to evaluate the heuristic impression of clinicians regarding the clinical profile and presentation of patients with RLS.

The survey was conducted from June 2018 to February 2020 in a large tertiary care hospital in south India. The institutional ethics review board approved the study. The study participants were postgraduate students in medicine, pediatrics, or neurology undergoing neurology posting as a part of the residency.

Participants were requested to respond to a survey questionnaire on RLS [Appendix]. The questionnaires consisted of polar questions, multiple response questions, and fill in the blank's questions.

Trainees who claimed to have seen patients with RLS in their clinical tenure	61 (61%)
Trainees who denied seeing patients with RLS in their clinical tenure	39 (39%)
Trainees who claimed to have seen less than five patients	44 (72%)
Trainees who claimed to have seen 5-10 patients	13 (21.3%)
Trainees who claimed to have seen 11-50 patients	4 (6.5%)
Trainees who claimed to have read about RLS	82 (82%)
Trainees who claimed to have been taught about RLS	48 (48%)

The questionnaire explores the clinical detection rate and the clinical impression of doctors regarding RLS. It begins by inquiring about the number of patients with RLS that the participants have seen during their clinical careers. Thereafter, it enquires on the “clinical impressions of the participants concerning the presentation of RLS”. The questionnaire concludes with the question on the participant’s impression of the population prevalence of RLS. The questionnaire takes 10–15 min to complete, and the response sheet was collected within 30 min of submission for the participant’s response.

One hundred medical graduates participated in the survey. The mean age of the participants was 28.2 (SD: 2.5). The average years after graduation was 4.28 (SD: 2.4). Ninety-two (92%) participants were postgraduate (PG) students in general medicine or neurology. Five (5%) participants were undergoing postgraduation in psychiatry, and three (3%) in pediatrics.

Thirty-nine percent of the participants have not seen patients with RLS in their clinical careers. A total of 82% of participants had read about RLS, whereas 48% have been taught about the illness. Of the participants who responded to have seen patients with RLS, 72.1% reported that they have seen less than five patients in their career. Fourteen participants claimed to have seen 5–10 patients, whereas only four participants claimed to have seen 11–50 patients [Table 1].

More than half of the participants (59%) considered RLS as a “movement disorder” [Figure 1a]. Of the participants who responded to the question on the most impressive clinical feature of RLS, the most common symptoms described were the “urge to move limbs” (50%). The other symptoms considered as the most common symptoms were restlessness and unpleasant sensation. A minority of respondents considered “improvement of symptoms on movement” and “symptoms present at night/sleep” as the most impressive clinical feature.

The majority of the doctors were either not aware or did not agree on the topography of the presentation of RLS: 37% were not aware or did not agree on bilateral presentation of RLS, whereas 46% were not aware or did not agree of the unilateral presentation of the condition. A total of 73% were

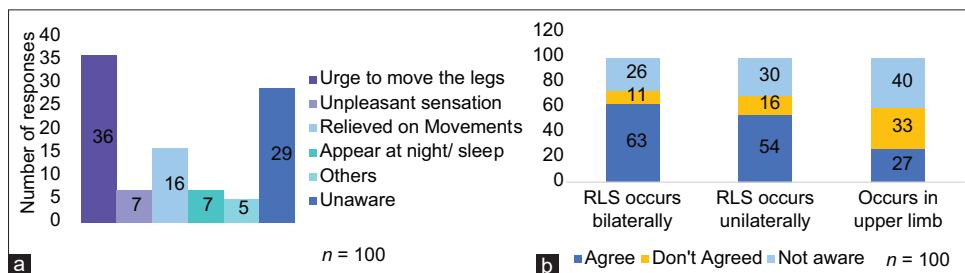


Figure 1: Clinical manifestation of RLS according to the trainees (a) Most impressive clinical feature of RLS according to the trainees. (b) Topography of symptoms in RLS according to the trainees

Table 2: Comparison of Knowledge of RLS between Neurology Trainees and Non-Neurology Trainees*

	General Medicine Trainees	Neurology Trainees	P
Trainees who claimed to have seen patients with RLS in their clinical tenure	28/59 (47.4%)	33/41 (80.4%)	<0.01**
Trainees who claimed to have read about RLS	43/59 (72.8%)	39/41 (95.1%)	<0.01**
Trainees who claimed to have been taught about RLS	23/59 (38.9%)	25/41 (60.9%)	0.04
Trainees who think RLS occur bilaterally	25/59 (42.4%)	29/41 (70.7%)	0.01**
Trainees who think RLS can occur unilaterally	28/59 (47.4%)	35/41 (85.3%)	<0.01**
Trainees who were not aware of typical RLS symptoms	21/59 (35.6%)	6/41 (14.6%)	0.02
Trainees who think RLS can occur in upper limb	12/59 (20.3%)	15/41 (36.5%)	0.11

*Non-neurology trainees include trainees in general medicine, pediatrics, or psychiatry. ** $P \leq 0.01$ was considered statistically significant

not aware or did not agree on the upper-limb presentation of RLS [Figure 1b].

Of the participants who responded to the question to guess the population prevalence of RLS ($n = 73$), 27 (37%) responded that it was 1%–2%, 32 (44%) mentioned it as 0.1%–1%, and 14 (19.1%) considered the prevalence to be less than 0.1%.

The knowledge about RLS was compared between neurology trainees and trainees in general medicine, pediatrics, and psychiatry trainees. It was found that neurology trainees have better knowledge of RLS. However, even neurology trainee was not proficient in the entire range of symptomatology of RLS [Table 2].

This survey demonstrates the low rate of clinical detection of RLS. Although prevalence studies from Asia have found a prevalence of 1%–3%,^[6] it is still substantial to have not been recognized as a common clinical problem by the trainee doctors. A prevalence of 1%–3% of the illness would make it as common as epilepsy in medical and neurological clinical practice. In the present survey, only 60% of the doctors had seen a case of RLS, and 72% of the respondents had seen only less than five patients in their clinical tenure. This is a dismally low detection rate, as RLS is a common disorder associated with many common medical disorders such as anemia, peripheral neuropathy, and renal failure. It is possible that patients may not consider RLS as a condition needing medical attention, and is, therefore, underreported to medical practitioners in India.

The survey demonstrates the lack of a clear “heuristic” impression among the young doctors regarding the clinical presentation of RLS. There is a widespread misunderstanding of RLS as a movement disorder. This appears to be compounded by the textbook description of the condition under hyperkinetic movement disorder.^[7] This is bound to create a heuristic mismatch when clinicians see patients with RLS. It is likely that RLS is underdiagnosed in India due to a host of reasons including the ability of clinicians to elicit the cardinal symptoms of the illness in a linguistically diverse population.

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Conflicts of interest

There are no conflicts of interest.

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APPENDIX

PHYSICIAN'S RECOGNITION OF CLINICAL FEATURES OF RESTLESS LEGS SYNDROME

A. Particulars

Name:

Age/Gender:

Year of graduation:

Year of postgraduation:

Medical college/hospital:

Current specialization:

B. Questionnaire on RLS

1. Have you ever seen a patient with restless legs syndrome?: Yes/No

If yes, how many patients have you seen?

- a. <5
- b. 5–10
- c. 11–50
- d. >50

2. Have you read about RLS? Yes/No

3. Have you been taught about RLS? Yes/No

If the answer to (2) or (3) is yes, what is your impression of RLS?

- a. It is a movement disorder: Yes/No/Don't know
- b. Patient will be restless and will move their legs: Yes/No/Don't know

If you have any other "impression" of RLS, please specify below

c. Most impressive clinical feature of RLS is -----

d. Most impressive clinical features of RLS in the legs are

-----, -----, -----

e. RLS occurs bilaterally: Yes/No/Don't know

f. RLS occurs unilaterally: Yes/No/Don't know

g. Occurs in upper limbs: Yes/No/Don't know

h. Can you name any three groups of drugs given for RLS?

-----, -----, -----

i. Can you name groups of drugs that can aggravate RLS?

-----, -----, -----

4. What is your impression of the population prevalence of RLS?

- a. <0.1% b) 0.1–1% c) 1%–2% d) 2%–10% e) Don't know