



## Review article

Instruments to study sleep disorders in climacteric women<sup>☆</sup>

Álvaro Monterrosa-Castro<sup>a,\*</sup>, Katherin Portela-Buevas<sup>b</sup>, Marlon Salgado-Madrid<sup>c</sup>,  
Joulen Mo-Carrascal<sup>c</sup>, Carolina Duran-Méndez Leidy<sup>c</sup>

<sup>a</sup> Physician, Gynecology and Obstetrics, Facultad de Medicina, Grupo de Investigación Salud de la Mujer, Facultad de Medicina, Universidad de Cartagena, Colombia

<sup>b</sup> Physician, Grupo de Investigación Salud de la Mujer, Facultad de Medicina, Universidad de Cartagena, Colombia

<sup>c</sup> Student, Facultad de Medicina, Grupo de Investigación Salud de la Mujer, Facultad de Medicina, Universidad de Cartagena, Colombia

## ARTICLE INFO

## Keywords:

Climacteric  
Sleep  
Quality of life  
Menopause

## ABSTRACT

To identify the scales to assess sleep disorders applied to women with climacteric stage. Bibliographical research without intervention, the available information in scientific databases. Performed in PubMed, ScienceDirect, Scopus, Ebscohos OvidSP and Health Library. The words used in this article: insomnia, adjustment sleep disorder, questionnaires, studies and menopause. Publications of all types were included. Seven scales were identified: Insomnia Severity Index, Athens Insomnia Scale, Pittsburgh Quality of sleep Index, Epworth Sleepiness Scale, Jenkins Sleep Scale, Basic Nordic Sleep Questionnaire and The St Mary's Hospital Sleep Questionnaire. There are validated scales in multiple languages and considered appropriate for studying sleep disorders.

## 1. Introduction

Several ways to classify sleep disorders (SD) have been proposed. The most important is the International Classification of Sleep Disorders [ICSD-2] with numerous subdivisions and specialized approaches [1]; other one is proposed by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders [DSM-5] [2], which is used specially by health professionals who are not experts in sleep medicine. Finally, there is the International Classification of Diseases [ICD] [3] with general medical approach [4].

The SD are widespread and important complaints in the vital climacteric stage [5,6]. These sleep disorders occur in approximately 30% of the general population increasing with the pass of time; it is estimated in more than 50% of adults over 65 years old [7].

The prevalence of SD varies with the menopausal status, with estimated ranges between 39% and 47% in perimenopause and 35–60% in postmenopausal women [5,7,8]. In a study carried out in eleven cities from Latin America, which involved 6.079 women aged 40–59 years, insomnia was reported in 56.6% of the population, with poor quality of sleep or both [9]. Monterrosa [5] has reported that 57.1% of Colombian women in climacteric, who live in the Caribbean and the Pacific coasts, had poor quality of sleep when they were diagnosed by the quality of sleep index of Pittsburgh.

Insomnia is the main SD, being approximately two times more common in women than in men [6,10]. It is characterized by difficulty to sleep, staying asleep or difficulty to get a restful sleep. It is recommended to specify an episodic, persistent or recurrent event, or whether they are associated with a concurrent mental disorder unrelated to sleep, with a medical condition or another sleep disorder [11,12].

Among the types of SD, insomnia, in particular, may arise situations that impair the quality of life such as decreased concentration and attention, feelings of fatigue and physical or mental exhaustion, decreased motivation, irritability, difficulty in interpersonal relationships and general complications [11]. It has been noted that SD could often be accompanied by depression, anxiety or cognitive changes, while insomnia and excessive daytime sleepiness are risk factors for the later development of mental illness. The interpretation of SD as an expression of mental diseases allows preventive intervention in mental health [2]. Sleep disorders restrict the appropriate recovery/cell repair that comes during sleep and affect adversely the emotional state of women [11].

The physiology of sleep-wakefulness cycle may be affected as a result of changes in ovarian hormone synthesis. The menopause and the reduction in the availability of endogenous estradiol, that occur within the climacteric, have been considered risk factors for SD. The effect could be directly influenced by changes in the steroid profile, as a

Peer review under responsibility of Brazilian Association of Sleep.

\* Correspondence to: Edificio City Bank, La Matuna, Avenida Venezuela of: 6-A, Cartagena, Colombia.

E-mail address: [alvaromonterrosa@gmail.com](mailto:alvaromonterrosa@gmail.com) (Á. Monterrosa-Castro).

<http://dx.doi.org/10.1016/j.slsi.2016.11.001>

Received 1 August 2016; Received in revised form 27 October 2016; Accepted 7 November 2016

Available online 18 November 2016

1984-0063/ © 2016 Brazilian Association of Sleep. Production and hosting by Elsevier B.V.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

result of variations in body temperature by the presence of hot flashes, circadian rhythm disturbances or higher reactivity to stress [11–14].

There is controversy about whether severity criteria should be assessed in the presence of insomnia or in the functional impairment that this could entail, which always should be considered due to they could affect the quality of life further than sleep disturbances [15]. The diagnostic method of SD is the polysomnography, considered the gold standard; however, it has some limitations due to it does not evaluate quality of sleep and the impact of SD on daily activities. In addition, to carry out the procedure is necessary to have a quiet room, as close as possible to the home address, where the patient could sleep and another room where the necessary sleep equipment could be installed [16].

Sleep scales are tools to identify, in a subjective way, SD [9,17]. They offer advantages as easy application and interpretation and the availability to study different disorders [5,18]. These scales must have been validated in populations and checked in the age groups. Since the high prevalence of SD in climacteric is necessary to know the differences among scales that are available to study adequately these women, and to establish the deterioration of the quality of sleep or the presence of any different types of SD [18–21]. The aim is to identify and to describe the different scales that have been used to assess SD in climacteric.

## 2. Methods

Bibliographic research without intervention was used; available data in scientific databases was chosen between January and March in 2016.

### 2.1. Types of studies

All types of publications were included: clinical trials, meta-analysis, observational studies, thematic or systematic reviews, letters to the editor, comments and editorials related to insomnia and other SD in climacteric women.

### 2.2. Research strategies

A convenient search was conducted through the databases and electronic resources of the Universidad de Cartagena-Colombia like Pubmed, ScienceDirect, Scopus, Ebscohost, OvidSP and Health Library. It was considered to finish on March 3th, 2016 and was limited to publications between 2005 and 2015, in English and Spanish.

### 2.3. Keywords

The words used in this article are present in MeSH: insomnia, adjustment sleep disorder, questionnaires, studies and menopause.

### 2.4. Review methods

A list of the identified titles was done, and then step by step the repeated words were eliminated. The summary was checked in the selected titles to identify those related to insomnia and SD. After that, a second review was carried out to establish those abstracts who were related to women in climacteric. And finally, those available in full text were selected. Type of intervention: Research and thematic review in articles, without intervention in the information obtained from sources.

## 3. Results

Two thousand eighty-two titles were identified: 567 (27.2%) in Science Direct, 312 (14.9%) in Pubmed, 257 (12.4%) in Ebscohost, 783 (37.7%) in OvidSP and 163 (7.8%) in Virtual Health Library. One

**Table 1**  
Scales to study sleep disorders in climacteric women.

	Autors (Ref.)	Year	Scale	Type of Sleep Disorders
1	Bastien et al. [21].	2001	Insomnia Severity Index (ISI)	Perceived insomnia severity
2	Soldatos et al. [17]	2000	Athens Insomnia Scale (AIS)	Insomnia. Quantification of sleep problems.
3	Buysse et al. [25]	1989	The Pittsburgh Sleep Quality Index: (PSQI)	Quality of sleep Distinguishing in good and poor sleepers.
4	Johns [29]	1991	Epworth Sleepiness Scale (ESS)	Daytime sleepiness
5	Jenkins et al. [32]	1988	Jenkins Sleep Scale (JSS)	High frequency of sleep disorders
6	Partinem and Gislason [35]	1995	Basic Nordic Sleep Questionnaire (BNSQ)	Quality of sleep
7	Ellis et al. [37]	1981	The St Mary's Hospital Sleep Questionnaire (SMHSQ)	Quality of sleep

thousand two hundred seven (57.9%) titles of the list remained after removing those repeated. Two hundred fifty (20.7%) abstracts were chosen in the first review; after the second review, 82 (32.8%) were relevant and consistent for the goal of this investigation. Finally, 63 (76.8%) articles were selected, of which, 59 (93.6%) were included in the review. Seven scales were identified; they have been used to study different types of SD in climacteric and are presented below [Table 1].

### 3.1. Insomnia Severity Index (ISI)

This scale is specific to study insomnia. It is a reliable, validated and self-applicable instrument, it lets to obtain a quantitative index of perceived severity of insomnia in the last month. The scale has seven questions designed to detect the severity of SD, the relation with the satisfaction experienced, the degree of functional impairment during the day, perception of decline and the concerns related to the sleep problem. Each item is rated on a Likert scale of five points (zero to four) to set a score from zero to 28. The higher scores indicate very severe insomnia; a cutoff point of ten has been proposed as optimal for detecting cases of insomnia in the population. However, the scores could be categorized as follows: Clinically significant insomnia: zero to seven points; some degree of insomnia: eight to 28 points [10,20–21].

The last one is subdivided in sub-threshold insomnia or mild: eight to 14, moderate insomnia: 15–21 and severe insomnia: 22–28 [21]. Recently, it has been described in three sub-domains: nocturnal sleep difficulties, sum of questions 1–2–3, impact of insomnia during the day, sum of questions 5–6–7 and dissatisfaction sleep with the sum of questions 1–4–7 [19] [Appendix A].

The ISI could be applied in studies for the population in health care consultation, given that it allows an easy approximation to identify the presence of insomnia.

Arakane [10] found high internal consistency according to Cronbach's alpha coefficient =0.87 in a cross-sectional study carried out in 340 healthy women of a group of inpatients visitors. They were women aged between 40 and 59 years and he showed that 41.5% of those, had some degree of insomnia, taking as cutoff point  $\geq 8$ . He also demonstrated that 32.0% of them had mild, 7.4% moderate and 2.1% severe insomnia. It was verified the presence of hot flashes, the use of psychotropic substances and physical inactivity, positively and significantly correlated with the total score of the ISI scale, by means of a multiple linear regression model. Likewise, Cuadros [22] found out, in 235 Spanish women aged 40–65 years, a positive correlation between the ISI scale and the Perceived Stress Scale (PSS) scores and the scores

Download English Version:

<https://daneshyari.com/en/article/5621746>

Download Persian Version:

<https://daneshyari.com/article/5621746>

[Daneshyari.com](https://daneshyari.com)