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Review of the literature

## Screening tools for sleep disorders in patients with psychiatric disorders

### *Outils de dépistage pour les troubles du sommeil chez les patients avec des troubles psychiatriques*

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#### ABSTRACT

Sleep and mental health are closely interconnected. Alterations in sleep patterns are frequent among patients with psychiatric disorders and can exacerbate symptom severity or interfere with treatment outcomes. Despite this, systematic sleep assessment is not consistently integrated into psychiatric practice. This review presents a comprehensive overview of the main questionnaires available to assess sleep and its disturbances in psychiatric populations. We propose a minimal sleep semiology framework that includes non-specific sleep complaints (satisfaction, non-restorative sleep), sleep symptoms (insomnia, hypersomnolence), sleep-related distress/impairments, specific sleep disorders (sleep-related breathing disorders, sleep-related movement disorders, parasomnias), sleep needs (chronotype, flexibility) and behaviors (duration, timing, regularity, hypnotic use). Generic questionnaires, such as the Pittsburgh Sleep Quality Index (PSQI) and the RU-SATED scale, provide a global view of sleep health, while disorder-specific instruments allow precise evaluation of particular dimensions. This review allows for the selection of the most appropriate tool for specific applications in both clinical and research settings. Integrating these questionnaires with patient history and environmental context enables a holistic approach, improving both diagnosis and management. Ultimately, combining these subjective measures with objective assessments while considering environmental, social, and behavioral factors facilitates the promotion of sleep health, thereby enhancing psychiatric care and potentially benefiting population-level mental health.

#### R É S U M É

Le sommeil et la santé mentale sont étroitement liés. Les altérations du sommeil sont fréquentes chez les patients présentant des troubles psychiatriques, et peuvent aggraver la sévérité des symptômes ou interférer avec les résultats des traitements. Malgré cela, l'évaluation systématique du sommeil n'est pas toujours intégrée en pratique psychiatrique. Cette revue fournit un aperçu complet des principaux outils permettant d'évaluer le sommeil et ses perturbations dans les populations psychiatriques. Nous proposons une sémiologie minimale du sommeil comprenant les plaintes générales non spécifiques (satisfaction, sommeil non réparateur), les symptômes (insomnie, hypersomnolence), les répercussions liées au sommeil (détresse et handicap fonctionnel), les troubles spécifiques (troubles respiratoires, moteurs et parasomnies), les besoins de sommeil (chronotype, flexibilité) et les comportements (durée, temporalité, régularité, usage d'hypnotiques). Les questionnaires génériques, tels que le *Pittsburgh Sleep Quality Index* (PSQI) et la RU-SATED, offrent une vision globale de la santé du sommeil, tandis que les

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instruments spécifiques permettent une évaluation détaillée de dimensions particulières. Cette revue facilite le choix de l'outil le plus adapté aux contextes cliniques et de recherche. L'intégration de ces questionnaires avec l'histoire du patient et le contexte environnemental permet une approche globale, améliorant le diagnostic, la prise en charge et le suivi. Enfin, la combinaison de mesures subjectives et objectives, en tenant compte des facteurs environnementaux, sociaux et comportementaux, favorise la promotion de la santé du sommeil, améliore les soins psychiatriques et peut bénéficier à la santé mentale au niveau populationnel.

## 1. Introduction

Sleep and mental health are closely interconnected [1,2]. In many cases, addressing sleep disturbances can lead to improvements in comorbid psychiatric disorders [3,4]. However, sleep assessment is not routinely performed in psychiatry, and sleep alterations are often attributed solely to the psychiatric condition [5]. Therefore, the development of tailored questionnaires and the standardization of practices to effectively evaluate sleep and its disturbances are crucial components of care for patients with psychiatric disorders.

Numerous questionnaires exist to assess sleep and its disturbances, but their effectiveness varies depending on several factors, including the population being studied, the specificity of the tool in relation to different dimensions of sleep, and the ability of clinicians and researchers to correctly interpret the results. As a preliminary step, we will review the various dimensions that may be important in evaluating sleep and its disturbances. Next, we will present different questionnaires that assess each of these dimensions, each with its own strengths and limitations. The questionnaires will be categorized as either "generic" or "specific", depending on whether they explore one or multiple dimensions. Altogether, this overview will help guide the selection of the most appropriate tool for each patient, whether in clinical practice or within clinical research.

## 2. The different dimensions of sleep

Sleep is a fundamental physiological function and behavior essential for both physical and mental health [6]. It is regulated by two interacting processes: homeostatic (sleep pressure) and circadian (timing of sleep) mechanisms [6]. These regulatory processes work together to maintain a balanced sleep-wake cycle, but they can be disrupted by sleep disorders or sleep behaviors that are inappropriate relative to individual needs [7].

### 2.1. Assessment of the sleep complaint dimension

These disruptions may manifest as a sleep complaint, which can be characterized in several ways:

- general framework: subjective, non-specific sleep complaints in terms of quantity and/or quality, including:
  - sleep satisfaction,
  - refreshing or restorative quality of sleep,
  - daytime alertness and vigilance;
- semiological approach: sleep symptoms identified by a clinician and normalized to fit a nosological framework, including:
  - insomnia symptoms, such as difficulty falling asleep, insomnia maintaining, and early morning awakenings,
  - hypersomnolence symptoms, including excessive daytime sleepiness, excessive need for sleep, and awakening disturbances,
  - symptoms of unusual behaviors during sleep;
- sleep-related distress/impairments: this dimension differentiates the presence of daytime symptoms linked to sleep disruption, such as sleepiness, from their consequences on distress or functional impairment (e.g., drowsiness while driving that interferes with daily activities or limits driving ability).

### 2.2. Assessment of the causal dimension of sleep complaints

Sleep complaints may result from:

- a primary sleep disorder: in which case it is important to question the patient about the specific semiology of the suspected disorder, i.e., complaints identified by the clinician and normalized within a nosological framework, including:
  - sleep-related breathing disorders (snoring, awakenings with choking),
  - motor and behavioral symptoms during sleep (restlessness, periodic limb movements, rhythmic jaw contractions),
  - symptoms related to unwanted sensory or intrapsychic experiences (hallucinations, nightmares, unpleasant limb sensations, cramp-related pain);
- comorbid psychiatric disorder or other condition that may alter sleep;
- inappropriate sleep health behaviors relative to individual needs: in this case, the patient should be assessed regarding:
  - sleep needs, which are genetically determined traits, including,
  - chronotype (individual diurnal preference for various mental and physical activities, sleep, and wakefulness),
  - somnotype (individual preference for longer or shorter sleep duration),
  - trototype (ability to tolerate reduced sleep relative to somnotype needs),
  - circadian flexibility (ability to tolerate irregular sleep timing relative to chronotype preferences);
- sleep health behaviors, which are influenced by multiple individual, social, societal, and environmental factors, reflected in sleep hygiene, including:
  - sleep duration (total amount of sleep obtained in 24 hours),
  - timing (period allocated to sleep within a 24-hour day),
  - regularity (stability of sleep timing from day to day),
  - hypnotic use.

All these dimensions are summarized in Fig. 1.

## 3. Generic questionnaires

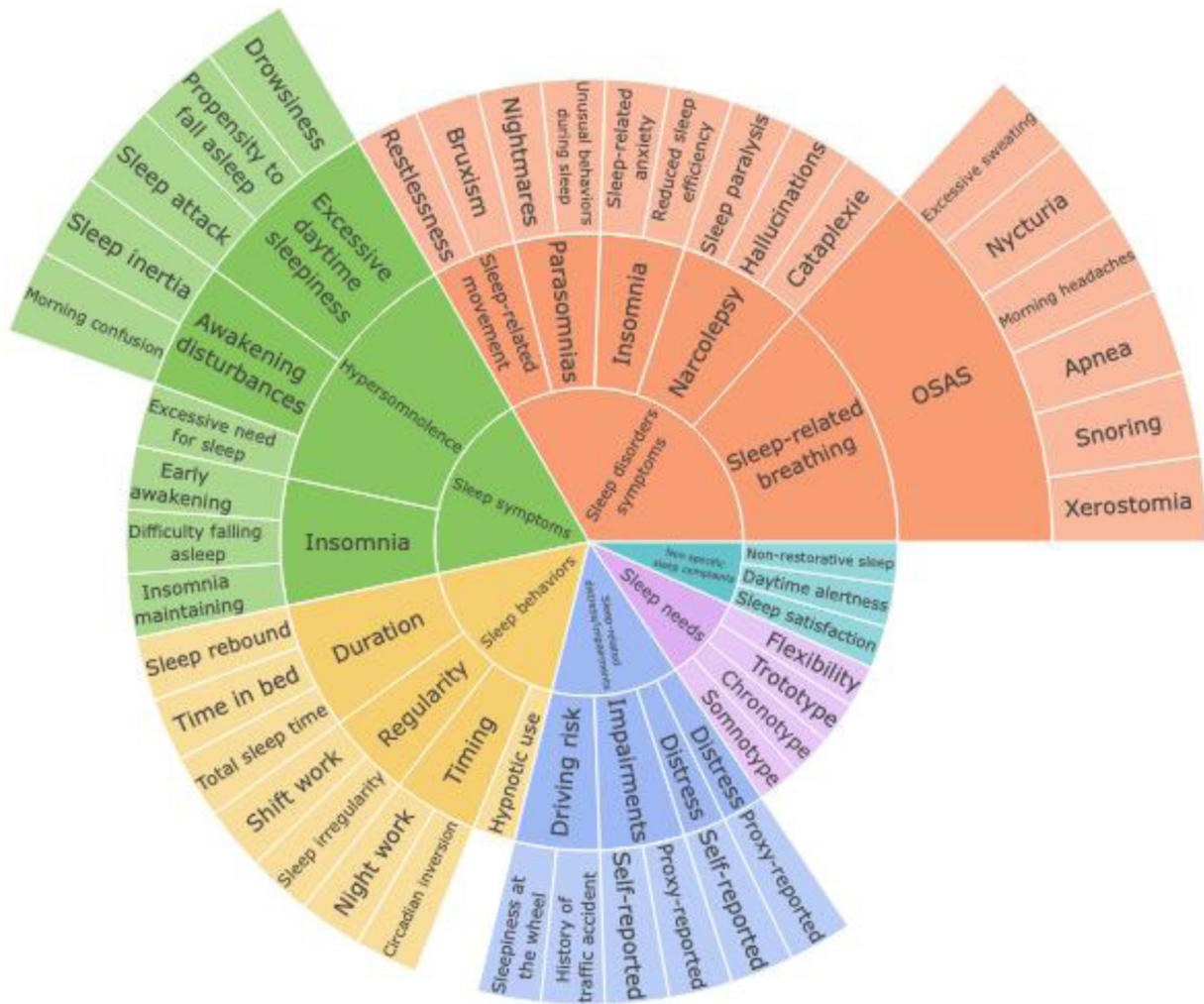
Generic questionnaires are often used as a first-line tool to broadly assess an individual's sleep, regardless of a specific complaint or disorder. They allow for a characterization of sleep as a whole but may not always be able to identify the specific type of sleep disorder affecting the patient. Nonetheless, they serve as a useful tool for providing psychiatrists with a general overview of sleep and its disturbances. Table 1 summarizes the various dimensions assessed by generic questionnaires.

### 3.1. Generic questionnaires of altered sleep

One of the most widely used of these questionnaires is the Pittsburgh Sleep Quality Index (PSQI) [8]. This 18-item questionnaire, typically referencing the past month, assesses seven dimensions of sleep: quality, latency, duration, efficiency, disturbances, use of sleep medications, and daytime dysfunction. The PSQI is extensively used because it has been validated in multiple languages, including French [32], and is applicable to various populations, including those with psychiatric disorders. However, its sensitivity remains limited for diagnosing specific sleep

**Table 1**  
Rationalization of Questionnaire Selection Based on Minimal Sleep Semiology.

	Sleep needs	Sleep behaviors	Non-specific sleep complaints	Sleep symptoms	Sleep disorders symptoms	Distress/ Impairments
<b>Generic questionnaires</b>						
Pittsburgh Sleep Quality Index (PSQI) [8]	Chronotype	Duration, timing, hypnotic use	Satisfaction	Insomnia, hypersomnolence	Unspecified disorders	
Sleep Disorder Symptom Checklist-17 (SDS-CL-17) [9]						
RU-SATED [10]		Duration, timing, regularity	Satisfaction	Insomnia, hypersomnolence	Unspecified disorders	
Sleep Health Index (SHI) [11]		Duration, timing, regularity	Satisfaction	Insomnia, hypersomnolence	Unspecified disorders	Distress, impairments
<b>Specific questionnaires</b>						
<b>Sleep complaints</b>						
Non-Restorative Sleep Scale (NRSS) [12]			Non-restorative sleep			
<b>Sleep symptoms</b>						
Insomnia Severity Index (ISI) [13]			Satisfaction	Insomnia	Insomnia disorder	Distress, impairments
Sleep Condition Indicator (SCI) [14]			Satisfaction	Insomnia	Insomnia disorder	Distress, impairments
Epworth Sleepiness Scale (ESS) [15]				Hypersomnolence		
Hypersomnolence Severity Index (HSI) [16]			Satisfaction	Hypersomnolence	Central hypersomnolence disorder	Distress, impairments
<b>Sleep-related distress/impairments</b>						
Functional Outcomes of Sleep Questionnaire (FOSQ) [17]						Distress, impairments
Bordeaux Sleepiness Scale (BOSS) [18]				Hypersomnolence		Driving risk
<b>Sleep disorders</b>						
NoSAS score [19]					OSAS	
STOP Bang [20]				Hypersomnolence	OSAS	
International Restless Legs Syndrome Scale (IRLS) [21]					RLS	Distress, impairments
Standardised Tool for the Assessment of Bruxism (STAB) [22]					Bruxism	
BruxScreen [23]					Bruxism	
Paris Arousal Disorders Severity Scale [24]					Parasomnias	Distress
Nightmare Severity Index [25]					Nightmares	Distress
Narcolepsy Severity Scale (NSS) [26]				Hypersomnolence	NT1/NT2	Distress, impairments
Idiopathic Hypersomnia Severity Scale (IHSS) [27]				Hypersomnolence	IH	Distress, impairments
<b>Sleep needs and sleep behaviors</b>						
Morningness–Eveningness Questionnaire (MEQ or rMEQ) [28]	Chronotype					
Circadian Type Inventory (CTI) [29]	Flexibility					
Munich ChronoType Questionnaire (MCTQ) [30]	Chronotype	Duration, timing, regularity			CSWRD	
Sleep Regularity Questionnaire (SRQ) [31]		Regularity				



**Fig. 1.** Proposed Minimal Sleep Semiology in Psychiatry. In addition to symptoms of sleepiness and insomnia (in yellow) and specific semiological features (in turquoise), which are typically part of clinical reasoning in sleep medicine, it is also necessary to consider general sleep complaints (in blue), the patient’s sleep needs (in green), behaviors that may affect their sleep (in purple), and the consequences of sleep disturbances on the patient (in orange). An interactive online version of this figure is available: <https://sleepsemiology.github.io/>

disorders such as insomnia, obstructive sleep apnea syndrome, or parasomnias. In practice, the PSQI is often used to establish a baseline sleep profile, which can then guide clinicians toward more specific assessments if a sleep disorder is suspected.

The Sleep Disorder Symptom Checklist-17 (SDS-CL-17) [9] is another example of a generic questionnaire designed to assess a broad range of sleep symptoms. However, this tool is more recent and has not yet been widely adopted in clinical practice. Nevertheless, it holds promise for providing a more comprehensive assessment framework to reliably and validly determine which specific type of sleep disorder may be affecting the patient. Further research and psychometric validation, particularly in psychiatric populations, are needed before it can be used systematically.

### 3.2. Generic questionnaires of sleep health

It is important to emphasize the role of these generic questionnaires, which have led to the emergence of a broader and complementary concept to that of sleep complaints or sleep disorders: sleep health [10]. Sleep health is defined as ‘ multidimensional pattern of sleep-wakefulness, adapted to individual, social, and environmental demands, that promotes physical and mental well-being. Good sleep health is characterized by subjective satisfaction, appropriate timing, adequate

duration, high efficiency, and sustained alertness during waking hours ’ [10]. The PSQI, in its original design, already contained the early elements of sleep health assessment, but its focus was primarily on the alterations of sleep health [8]. Two questionnaires were later developed to measure sleep health from a positive (not only negative, through dysfunction) and dynamic (over time) perspective, acknowledging that sleep health can be affected by sleep disorders, comorbid psychiatric conditions, or inappropriate sleep behaviors.

The first of these is the RU-SATED scale (Regularity, Satisfaction, Alertness, Timing, Efficiency, Duration), a six-item self-report questionnaire that assesses each of the six dimensions of sleep health, and has been translated into several languages, including French [33]. The Sleep Health Index (SHI), a 14-item self-report questionnaire, was published in 2017 [11]. It allows the calculation of several sub-indices, including sleep quality, sleep quantity, sleep disturbances, as well as timing and regularity. A French version has recently been validated [34].

While these generic questionnaires are valuable for providing an overall picture of the patient’s situation, whether focused on sleep disturbances or on sleep health, they also have limitations. Their main drawback is their lack of specificity: a patient may obtain a high score indicating poor sleep quality, without the clinician being able to immediately determine the precise nature of the disorder. For this reason, such questionnaires are generally used as an initial step before more tar-

ged evaluations are performed using disorder-specific questionnaires or other diagnostic methods such as polysomnography. They are also particularly useful in large-scale epidemiological studies, notably for assessing the impact of sleep health promotion campaigns.

#### 4. Specific questionnaires

In contrast to generic questionnaires, specific questionnaires target particular dimensions of sleep. They provide greater precision and allow for detailed information on a given aspect, such as symptoms of insomnia, hypersomnia, or the screening of a specific sleep disorder like obstructive sleep apnea syndrome or parasomnias. These questionnaires generally demonstrate higher sensitivity and specificity, making them essential for refining the diagnostic process. Table 1 summarizes the different dimensions assessed by specific questionnaires.

##### 4.1. Non-specific sleep complaints

There is no self-report questionnaire specifically designed to assess the non-specific sleep complaints of a disorder or of sleep that is disturbed in quantity and/or quality. However, several scales include at least one item that addresses this dimension. Examples include the “Quality” dimension of the PSQI [8], the “Satisfaction” dimension of the RU-SATED [10], item 4 of the Insomnia Severity Index (ISI, see below) [13], or the Non-Restorative Sleep Scale (NRSS) [12]. Ultimately, the clinical interview remains the most appropriate tool for assessing this dimension, which is highly dependent on the patient’s subjective perception.

##### 4.2. Sleep symptoms

###### 4.2.1. Insomnia

Insomnia is a common sleep symptom, particularly among patients with psychiatric disorders [2] (see chapter 2: pathophysiology and neurobiology of insomnia). To assess insomnia severity, the most widely used tool is the ISI [13]. This 7-item questionnaire, validated in multiple languages including French [32], evaluates the three main components of insomnia: difficulty falling sleep (item 1), insomnia maintaining (item 2), and early morning awakening (item 3). In addition, the ISI assesses non-specific sleep complaints (satisfaction/dissatisfaction) as well as the sleep-related distress/impairments on quality of life, daytime performance, and mood [35]. It is particularly well suited for patients with psychiatric disorders because it is simple to administer and provides results that are easily interpretable by clinicians. The Sleep Condition Indicator (SCI) is another questionnaire, based on DSM-5 criteria, designed specifically to assess insomnia [14]. It provides a more rigorous and comprehensive evaluation of insomnia symptoms and their impact on daily functioning. The SCI has also been validated in French and has demonstrated reliability across various populations [36]. Both questionnaires are recommended in the European consensus for the assessment and management of chronic insomnia disorder [37].

###### 4.2.2. Hypersomnolence

Hypersomnolence is another common sleep complaint in psychiatry, characterized by excessive daytime sleepiness [38], prolonged sleep duration [39], or difficulty waking up [40,41] (see chapter 13: clinical approaches to hypersomnolence complaints in psychiatry: a narrative review). The most widely known and frequently used questionnaire for assessing excessive daytime sleepiness is the Epworth Sleepiness Scale (ESS) [15]. This simple tool asks patients to rate their likelihood of falling asleep in various everyday situations. Although widely used and validated in many languages, it has certain limitations, particularly its insufficient sensitivity for detecting rarer or more complex sleep disorders [42]. Nevertheless, it remains an excellent screening tool, validated in French, with clear thresholds: a score above or equal to 11 indicates excessive sleepiness, while a score above or equal to 16 is associated

with an increased risk of sleepiness-related accidents, such as traffic accidents or medical errors [43]. The Hypersomnia Severity Index (HSI), published in 2019, is a more recent tool designed to assess the severity of hypersomnolence symptoms [16], structured symmetrically to the ISI. It is currently being validated in several languages, including French, and offers a holistic approach to measuring hypersomnolence symptoms and their impact on daily life. In geriatric populations, validated hypersomnolence scales may take the form of hetero-questionnaires, in which an external evaluator observes excessive sleepiness in the elderly patient [44]. The Sleep Inertia Questionnaire, published by Kanady & Harvey in 2015, is another scale that specifically measures sleep inertia, and it has been validated in a population of patients with psychiatric disorders [45].

##### 4.3. Sleep-related distress/impairments

With regard to the consequences of sleep disturbances, the Functional Outcomes of Sleep Questionnaire (FOSQ) provides a measure of disability and distress reported in relation to sleep alterations [17], while the Bordeaux Sleepiness Scale (BOSS) is a specific tool designed to assess the risk of accidents associated with sleepiness [18].

##### 4.4. Screening for sleep disorders

###### 4.4.1. Sleep-related breathing disorders

Sleep-related breathing disorders, such as obstructive sleep apnea syndrome (OSAS), are common conditions (affecting 4–8% of the general population), particularly among individuals with psychiatric disorders [3] (see chapter 17: obstructive sleep apnea and its relationship with psychiatric disorders). Several specific questionnaires are available to screen for these disorders. The NoSAS score is one of the most widely used questionnaire to assess the risk of OSAS [19]. This questionnaire considers multiple symptoms, including snoring and daytime sleepiness, as well as risk factors such as obesity and a large neck circumference. It has been specifically validated in patients with psychiatric disorders [19]. The STOP-Bang questionnaire is another frequently used tool for evaluating OSAS [20]. It is simple to administer and relies on a set of straightforward questions to quickly estimate a patient’s risk of OSAS. While these questionnaires are valuable, they sometimes exhibit increased sensitivity at the expense of specificity, particularly in patients with psychiatric disorders.

###### 4.4.2. Sleep-related movement disorders

Restless legs syndrome (RLS), also known as Willis-Ekbom disease, is a common condition (affecting 4–6% of the general population), particularly among individuals with psychiatric disorders [46]. It can be assessed using three self-report questionnaires: the International Restless Legs Syndrome Scale (IRLS), published by the International Restless Legs Syndrome Study Group in 2003 [21], the Johns Hopkins Restless Legs Severity Scale (JHRLSS), published in 2001 [47] and the Restless Legs Syndrome-6 Scale (RLS-6), published by Kohonen in 2016 [48]. The JHRLSS provides a more precise evaluation than the IRLS of the three key symptoms of motor sleep disorders:

- unpleasant sensations in the lower limbs;
- an irresistible urge to move the legs;
- symptom relief induced by movement;
- moreover, the JHRLSS and the RLS-6 better assess the impact of the disorder on functioning. However, these scales do not screen for RLS and are intended primarily to measure symptom severity. A five-item screening questionnaire, the Restless Legs Syndrome Questionnaire, proposed in French by Tison et al. in 2005, allows evaluation of the three key RLS symptoms [49].

Sleep bruxism is another sleep-related movement disorder, characterized by involuntary nocturnal contractions of the masticatory

muscles [50]. In some individuals, bruxism causes headaches, neck pain, and/or jaw pain. Over time, bruxism can wear down the enamel and dentin of dental crowns, damage metal or ceramic crowns, and lead to tooth loosening [50]. Two questionnaires are available to assess bruxism symptomatology and clinical impact, both during wakefulness and sleep: the BruxScreen and the Standardised Tool for the Assessment of Bruxism (STAB) [22,23]. The STAB allows for a more detailed evaluation of bruxism, its comorbidities, and its impact, whereas the BruxScreen has the advantage of being quicker to complete. French validation of both questionnaires is currently underway.

#### 4.4.3. Parasomnias

Parasomnias include:

- slow-wave sleep parasomnias such as sleepwalking, night terrors, and confusional arousals;
- REM sleep behavior disorders;
- other parasomnias, including sleep paralysis and nightmare disorder [51].

Psychometric questionnaires dedicated to parasomnias are rare and infrequently used. The Munich Parasomnia Screening (MUPS) [52] is a generic tool designed to screen for 21 “abnormal” sleep behaviors, mainly parasomnias. Each behavior is assessed with a single question, detailing lifetime occurrence and current frequency. More recently, a scale for screening and severity assessment of slow-wave sleep parasomnias, the Paris Arousal Disorders Severity Scale (PADSS), was published by Arnulf et al. in 2014 [24]. Another relevant tool is the Frontal Lobe Epilepsy and Parasomnias (FLEP) Scale [53], which helps differentiate between slow-wave sleep parasomnias and sleep-related hypermotor epilepsy. Several questionnaires have been developed for screening REM sleep behavior disorder (RBD), with the REM Sleep Behavior Disorder Screening Questionnaire (RBDSQ) by Stiasny-Kolster et al., 2007, being among the most widely used [54]. Finally, several questionnaires exist for screening nightmare disorder, particularly the Nightmare Distress Questionnaire by Belicki et al., 1992, which has been validated in French [55,56]. More recently, the Nightmare Severity Index was developed by a French team to evaluate the severity and impact of nightmares [25] (see chapter 9: dreams and nightmares: clinical aspects, management, and links to psychiatric disorders).

#### 4.4.4. Central hypersomnolence disorders

Type 1 and type 2 narcolepsy (NT1/NT2) and idiopathic hypersomnia (IH) are rare hypersomnolence disorders (fewer than 1 case per 2,000 individuals) with a significant impact on patients' quality of life [51]. There is a validated French scale for each of these disorders: the 15-item Narcolepsy Severity Scale for narcolepsy [26] and the 14-item Idiopathic Hypersomnia Severity Scale for idiopathic hypersomnia [27].

#### 4.4.5. Circadian sleep-wake rhythm disorders

Circadian sleep-wake rhythm disorders (CSWRD) arise from a circadian disruption between the circadian physiology and the nycthemeral behaviors of individuals. Two principal mechanisms account for these disruptions: circadian misalignment, a mismatch between sleep needs (i.e., chronotype, flexibility) and sleep behaviors (i.e., timing, regularity) produced by external constraints, and circadian impairment, a dysfunction of the biological clock itself [57]. There are no specific self-report questionnaires designed to assess CSWRD. However, the MCTQ is the only self-report tool validated in French that evaluates both sleep needs (chronotype) and related sleep behaviors (timing, and regularity) [30,58]. The Circadian Type Inventory (CTI) can complete this evaluation by exploring the flexibility [29]. The sleep diary remains the preferred clinical tool for evaluating an individual's sleep-wake rhythms [59]. While there is no specific questionnaire for the evaluation of the circadian-related insomnia complaints (initial insomnia and late insomnia), the widely used ISI and SCI include items that assess these

**Table 2**

Sleep behaviors assessment adapted from the Munich ChronoType Questionnaire.

Sleep behaviors assessment (adapted from the MCTQ)	
Workdays	Free days
I go to bed at _____ o'clock	I go to bed at _____ o'clock
I actually get ready to fall asleep at _____ o'clock	I actually get ready to fall asleep at _____ o'clock
I need _____ minutes to fall asleep	I need _____ minutes to fall asleep
I wake up at _____ o'clock	I wake up at _____ o'clock
After _____ minutes I get up	After _____ minutes I get up

symptoms [13,14]. Regarding circadian-related sleepiness complaints, the recently validated SIQ can be used for the sleep inertia [45]. For evening sleepiness, there is a lack of self-reported parameters. Alternatively, sleepiness could be assessed momentarily at specific circadian time points, using subjective measures such as the Karolinska Sleepiness Scale [60].

#### 4.5. Assessment of sleep needs and behaviors

Although there is no self-report questionnaire specifically designed to assess circadian rhythm disorders, numerous questionnaires allow the evaluation of an individual's sleep needs and behaviors. These questionnaires are particularly useful in psychiatric clinical practice, given the importance of the sleep-wake rhythm in the assessment and treatment of psychiatric disorders [5].

##### 4.5.1. Sleep needs

No self-report questionnaire exists to assess an individual's somnotype or trototype. However, clinical interviews can provide extensive information about a person's sleep needs. Sleep behaviors on days off or during vacations, in the absence of external constraints, can be informative regarding an individual's sleep requirements and, notably, their somnotype. Indeed, after a few days of “recovery” sleep, during which sleep duration may be extended due to accumulated sleep debt from workdays, an individual's sleep schedule can provide a good reflection of their somnotype. The discrepancy between sleep behaviors in constrained and unconstrained environments, and its impact on symptomatology, also provides insight into an individual's tolerance to sleep deprivation, i.e., their trototype.

Chronotype, or circadian phase/type, reflects an individual's tendency to be a morning person (“morningness”) or evening person (“eveningness”), that is, to perform better at certain activities at particular times of the day. The Horne & Östberg Morningness–Eveningness Questionnaire (MEQ, 19 items) and the Munich ChronoType Questionnaire (MCTQ, 32 items) are the most widely used questionnaires to assess this dimension and have been validated in French [28,30,58,61]. The MEQ assumes that chronotype is predominantly represented by a psychological preference for certain time periods, relying on the individual's introspective accuracy. In contrast, the MCTQ is based on the principle that sleep schedules on free days align with the individual's physiological tendencies and therefore reflect their chronotype [62,63]. Despite this difference, the MCTQ offers the advantage of providing a combined assessment of sleep behaviors (see below).

Circadian flexibility (the adaptability of the biological clock to variations in activity imposed by the external environment, e.g., shift work) can be assessed using self-report questionnaires that evaluate behavioral changes and associated symptoms in response to schedule shifts, such as the CTI and its revised version (11 items) [29]. Circadian amplitude is



## 5. Conclusion

Sleep is a complex clinical feature that is highly relevant in patients with psychiatric disorders. Its assessment allows for a comprehensive approach to the patient's overall health but requires a thorough understanding of the various dimensions that compose it. The evaluation of sleep in a patient with a psychiatric disorder can ultimately be summarized as follows. The first step involves characterizing the patient's complaint, that is, assessing its subjective impact (sleep and wake satisfaction), providing a semiological description of the complaint (insomnia or hypersomnolence), and measuring its consequences in terms of distress and functional impairment (daily functioning, driving ability). The second step involves identifying the etiology of the patient's complaint, that is, screening for a sleep disorder (insomnia, respiratory, movement, parasomnia, hypersomnia, or circadian disorder) or inappropriate sleep health behaviors (duration, timing, regularity, hypnotic use).

In this article, we have described a dual approach combining generic sleep questionnaires, which provide a global overview, with disorder-specific questionnaires targeting particular dimensions to enhance sleep characterization. Finally, taking into account the patient's living environment is essential to maximize the promotion of sleep health in individuals with psychiatric disorders. Social and environmental factors can significantly impact sleep health and overall physiological functioning. Examples include work schedules (shift or night work), noise, or light, which can constrain an individual's sleep health. Thus, while psychiatry plays a central role in the care and treatment of psychiatric disorders, it can also promote mental health in the general population through campaigns that integrate sleep health. Such initiatives should consider social and environmental factors alongside physiology and behavior, following the principle of proportionate universalism (i.e., addressing everyone according to their needs), ideally targeting not only the individual but also the society and environment in which they live [71].

## Contribution author statement

Supervision: JAMF, PP.

Visualization: VM.

Methodology: JAMF.

Resources: JAMF.

Writing – original draft: JC.

Writing – review & editing: VM, AR, CQ, PP, JAMF.

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The authors declare that they have no competing interest.

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