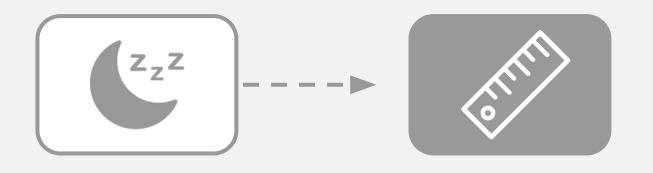
Nocturnal Scratch:

Ontology & Terminology



NOCTURNAL SCRATCH



Digital Measures Development

www.dimesociety.org/tours-of-duty/digital-measures-nocturnal-scratch

A project by the



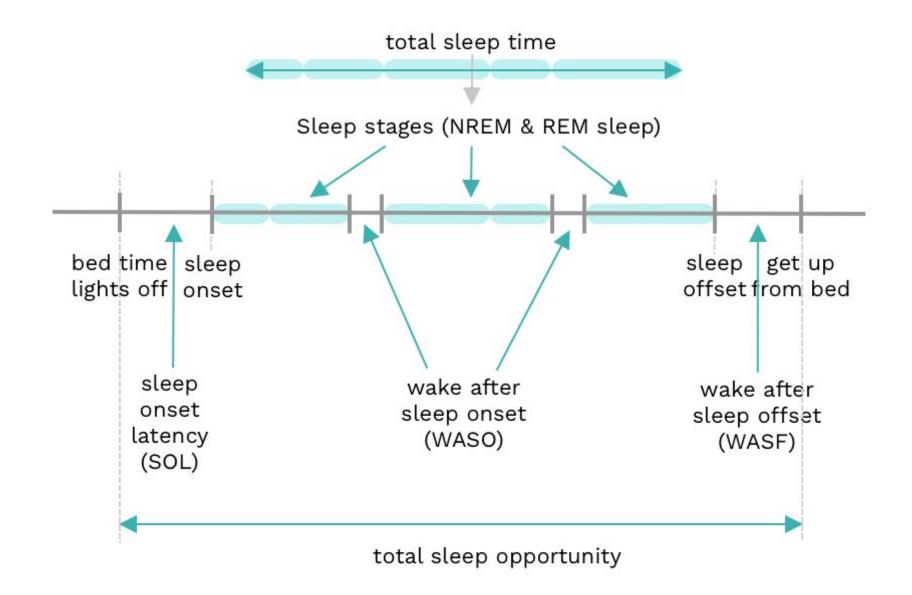
Ontology of "Nocturnal"

Values (or nested properties) **Properties Concepts** Class Lights on/lights off time or Defined by **Total sleep** Start / end Bed time/get up from bed time **Nocturnal*** opportunity Hours, minutes, seconds Duration **Nocturnal Sleep opportunity** or Total sleep A delimited opportunity (TSO) duration of time/ time period; Amount of time that Sleep of intended sleep; Total sleep time (TST) an individual allows Duration; % of TSO episode not restricted to themselves to try to any specific time sleep of the day or night Light sleep (NREM N1, NREM N2), deep sleep (NREM N3), **Attempted sleep** Sleep stage REM sleep or Intended sleep The time between Wakefulness bed time and awake episode time, when a person Y/N Main sleep event intends to sleep Sleep onse/sleep offset Start / end Sleep onset latency (SOL), Duration, Type Wake after sleep onset (WASO), % of TST, Wake after sleep offset (WASF) % of TSO, Sleep measurement Device model, Metadata Sleep diary, EEG, PSG, modality, surveys, sleep Evaluation algorithm, quality, ambient actigraphy, videography, etc. *In the context of Device placement nocturnal scratch temperature, COAother metadata

Measurement of Nocturnal

"Nocturnal" period in the measurement of nocturnal scratch

- Defined in the context of sleep as the total sleep opportunity delimited by bed time (start)/getting up from bed (end)
 - Start/end times should be determined by a suitable measurement modality (sleep diary, EEG, PSG, actigraphy, videography, etc.)
- Each of the "optional" sleep outcome measures needs to be defined if they are included as a part of the measurement (YES/NO). The more optional sleep outcome measures are included, the more granular the measurement will be



For nocturnal scratch, in the context of use as a COA, total sleep opportunity is more relevant to support the COA content validity, because scratching before falling asleep contributes to the impact of nocturnal scratch behavior on patient sleep quality."

-Nocturnal Scratch Project Team

Table 1. Measurement of nocturnal period as defined by sleep outcome measures

Nocturnal scratch outcome measures	Property	Use of property
Total sleep opportunity	Start/end time of TSO (bed time/get up from bed)	Required
	Duration of TSO	Required
Sleep episodes	Main sleep event (Y/N)	Optional
	Sleep stages	Optional
	Start/end time of sleep episodes (wake up/fall asleep)	Required (*if sleep episodes are measured)
	Sum of all sleep episodes (= total sleep time, TST)	Required (*if sleep episodes are measured)
Wakefulness episodes	Type (SOL, WASO, WASF)	Optional
	Main sleep event (Y/N)	Optional
	Start/end time of wakefulness episodes (wake up/fall asleep)	Required (*if sleep episodes are measured)
	Sum of all sleep episodes (= time spent awake)	Required (*if sleep episodes are measured)
Metadata	Sleep measurement modality	Required
	Ambient temperature	Optional
	Surveys	Optional
	Other metadata	Optional

We believe here is where we should propose a new name - such as "sleep-time scratch", since "nocturnal" implicitly means "during the night." New term anchored in sleep context is more patient-centric, as some patients may not sleep mainly during the night (e.g. infants, shift workers)."

-Nocturnal Scratch Project Team

Summary: Definition & outcome measures of nocturnal scratch

Definition of nocturnal scratch

Scratching is an action/behavior, of rhythmic and repetitive skin contact movement

Performed during a delimited time period of **intended and actual sleep**; not restricted to any specific time of the day or night

Outcome measures of nocturnal scratch

Total scratch time (sum of all scratch bouts) measured during a delimited measured period of intended and actual sleep within the total sleep opportunity

Total scratch time can be also represented as a percentage of the measured total sleep opportunity period

NOCTURNAL SCRATCH



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Additional Relevant Resources

Publication of the literature review will be available here

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Let us know how you've used this resource in action!

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