Graduate thesis

NTNU
Norwegian University of Science and Technology
Faculty of Social and Educational Sciences
Department of Psychology

Sigrun Borgen Austad &
Hanna Størksen Follesø

Setting the Rest Interval in Actigraphy

A Systematic Review and Development of a Novel Manual

Graduate thesis in the Clinical Psychology Programme
Supervisor: Ingvild Saksvik-Lehouillier & Alexander Olsen
Trondheim, December 2018

NTNU
Norwegian University of
Science and Technology

Sigrun Borgen Austad &
Hanna Størksen Follesø

Setting the Rest Interval in Actigraphy

A Systematic Review and Development of a Novel Manual

Graduate thesis in the Clinical Psychology Programme
Supervisor: Ingvild Saksvik-Lehouillier & Alexander Olsen
Trondheim, December 2018

Norwegian University of Science and Technology
Faculty of Social and Educational Sciences
Department of Psychology

NTNU
Norwegian University of
Science and Technology

Preface and Acknowledgements

This thesis consists of two studies. The first study is a systematic literature review motivated by our observations of rest intervals that needed correction while processing an actigraphic dataset. We wanted to find common practices for processing actigraphic data and investigate whether standardized guidelines for setting the rest interval existed. We realised that the research field was so vast that we had to chart common practice and search for guidelines in a systematic manner. In the literature review, despite numerous inquiries in the literature, we found inconsistent practices and no established guidelines for setting the rest interval. Inspired by our review results, we developed a manual for setting rest intervals. We hope it will gain traction in the field of actigraphy.

In the second study of this thesis, we wanted to assess the reliability of our newly developed manual. We tested our manual on the SLEEPIC dataset, a project led by our supervisor Ingvild Saksvik-Lehouillier. We contributed to two out of five waves of data collection in this project. All analyses in this thesis were performed by the authors, and we have at all times worked side by side and contributed equally throughout the process.

We would like to express our gratitude to our supervisors Ingvild Saksvik-Lehouillier and Alexander Olsen. Thank you, Ingvild, for your availability, engagement, and for trusting us with the privilege of testing our manual using the SLEEPIC data. Thank you, Alexander, for spending nights and weekends reading our thesis, and for sharing your competence and knowledge. Much gratitude to you both for having confidence in us and setting high standards.

Thanks goes to Anne Martha Holmvåg Nordnes, our independent scorer testing our proposed procedure. Thank you, Eva Langvik, for taking the time to advise us.

We also appreciate our volunteers who selflessly read our thesis and provided valuable feedback: partners Yngve and Borgar, Hanna´s parents Marna and Knut, and Sigrun´s mother-in-law Randi. In addition, we thank both our partners and sets of parents for their support. Last but not least, we would like to thank each other for the willingness to take on a large project like this one, together. We have served as a motor for one another when one of us ran low on fuel. Our friendship and cooperation made the process of writing our main thesis a fun, educational and social joint project.

Abstract

Sleep is becoming an increasingly important topic in the study of mental and physical health. Several methods exist for measuring sleep duration and quality. Actigraphy has become one of the most applied methods due to its easy administration and non-invasive nature. A persistent problem with actigraphy is its struggle to distinguish inactive behaviour from time spent resting and attempting to sleep. This issue is apparent when the algorithm attempts to identify the rest interval. The rest interval onset and offset, however, can be changed manually. This thesis consists of two studies, both considering actigraphic data processing and practices for setting rest intervals.

In Study 1, through a systematic literature review, we sought to identify common practices for processing actigraphic data and investigate whether standardized guidelines for setting the rest interval exist. We reviewed an extensive selection of research articles (N = 1,061). The results indicate that methods and reporting practices are inconsistent and that there is a need for an established standardized procedure for setting the rest interval. Therefore, we developed a stepwise and easily applied manual. It combines subjective sleep measures with objective actigraphic measures to either validate or change algorithmically defined rest intervals. Our manual includes a screening process that automatically identifies valid rest intervals. This process distinguishes our manual from existing procedures.

In Study 2, we aimed to empirically test the manual for defining rest intervals developed in Study 1. The manual was applied to a dataset of 537 nights from the sleep study SLEEPIC. Participants (N = 55) were aged 19-33 (M = 22.69, SD = 3.024). The screening process successfully identified 37.1% valid rest interval onsets and 63.9% valid rest interval offsets. Three scorers independently applied the manual to the screened dataset, and agreement between scorers was high both in rest onsets (α = .975) and offsets (α = .998). Applying the manual to the dataset resulted in a shortening of the rest interval by 36 minutes and 19 seconds on average. There were significant changes ($p < .001$) in all sleep estimate outcomes after applying the manual. Based on the results, we conclude that the proposed manual saves scorers time by screening out a large proportion of the rest intervals. It is applicable with high agreement between scorers, produces significant changes to sleep variables, and it reduces noise in actigraphic datasets. Thus, the manual is a promising candidate for common practice.

Table of Contents

Setting the Rest Interval in Actigraphy: A Systematic Review and Development of a Novel Manual

The importance of sleep in human mental and physical health has been emphasized for over half a century. Sleep influences people in a variety of ways, but its relationship with human behaviour has yet to be fully understood (Siegel, 2003). In the vast field of psychology, sleep is a recurring theme. It is important for normal everyday functioning as well as in the field of mental disorders and distorted sleep.

Sleep is a basic human need. A two-process model of sleep regulation was proposed as early as 1982 (Borbély, 1982). According to this model, sleep structure is determined by homeostatic and circadian processes. Homeostasis is the process in which sleep propensity increases during wake and decreases during sleep (Borb & Achermann, 1999). What drives the homeostatic process is not yet established, but it is presumed to be endogenously driven by somnogenic processes through adenosine (Huang, Urade, & Hayaishi, 2011) and neural processes (Morairty et al., 2013). The circadian process refers to temporal patterns of approximately 24 hours (Moore-Ede, Sulzman, & Fuller, 1982). It is both endogenous and influenced by external cues called zeitgebers, a German term for time givers (Crowley, Acebo, & Carskadon, 2007). The biological correlate for the endogenous factor is the suprachiasmatic nucleus in the hypothalamus in the brain (Fuller, Gooley, & Saper, 2006). The circadian rhythm cannot be measured directly in the brain; thus, we rely on biological markers, regulated by the circadian process, to assess the rhythmicity. Body temperature and melatonin release are two such markers (Deboer, 2018), and melatonin secretion is considered the most reliable marker (Klerman, Gershengorn, Duffy, & Kronauer, 2002). The circadian process synchronizes to external zeitgebers, especially light conditions (Czeisler, Richardson, Zimmerman, Moore-Ede, & Weitzman, 1981). Other zeitgebers that have been proposed are food (Stephan, 2002) and social zeitgebers (Grandin, Alloy, & Abramson, 2006).

It is established that the homeostatic process and the circadian process work in parallel. However, it has been questioned whether the two processes influence each other. A recent review (Deboer, 2018) empirically accounted for the homeostatic influence on the circadian process. As for the circadian process' influence on the homeostatic process, more empirical evidence is needed to define the relationship.

Methods for Sleep/wake Assessment

There is a multitude of research methods for assessing sleep and wake. The most common are polysomnography, sleep diaries and actigraphy.

Polysomnography. The gold standard for sleep measurement is polysomnography (Grote & Zou, 2017, p. 1624). Multiple sensors are placed on the participant's body and attached to a computer with wires. Polysomnographic assessment is usually performed overnight, in a laboratory or in a controlled environment, where sleep technicians can observe the participant on a monitor throughout the night in a sleep laboratory. In addition, it can be performed as an ambulatory procedure, which allows for daytime data collection as well. Polysomnography permits for discrimination between sleep stages and assessment of additional parameters, for example cardiac rate and rhythm, detection of hypopnea and apnoea, as well as limb movements (Berry & Wagner, 2014). It is also widely used as a diagnostic tool for sleep disorders (Kushida et al., 2005) . Thus, it is a specific and well-standardized sleep assessment tool (Basner, Brink, & Elmenhorst, 2012).

Polysomnographic examination is, however, costly and invasive in that wearing the equipment may disrupt the participants' natural sleep (Blackwell et al., 2008). A well-known data collection bias for polysomnography is the first-night effect, where participants show substantial changes in their sleep characteristics during the first night of polysomnography (Agnew Jr, Webb, & Williams, 1966; Blackwell et al., 2017). Polysomnography is not indicated for measuring sleep/wake patterns on a longitudinal 24h basis due to its complex electronic equipment and resource intensiveness.

Sleep diary. When assessing subjective sleep, researchers use various kinds of sleep diaries. It is an affordable method, completed on paper or electronically. Participants report bed time, rise time, when they fell asleep and awoke, and number of awakenings during the night. The sleep diary is also a survey, making it a flexible tool. Researchers can add questions of interest to their research project, and subjective sleep quality is often assessed in sleep diaries (see e.g., The Pittsburgh Sleep Diary, Monk et al., 1994; The Consensus Sleep Diary, Carney et al., 2012). The sleep diary requires the participants to actively register and remember the times when they went to bed and fell asleep. This makes sleep diaries prone to memory bias.

Studies seeking to validate sleep diary parameters against polysomnography report contradictory results. In one study investigating one bipolar group and one control group, there were no significant differences between the sleep diary and polysomnography in total

sleep time and sleep efficiency. The sleep diary had, however, a significantly lower number of awakenings and longer time lapse between bedtime and sleep onset (sleep onset latency) than polysomnography (Kaplan, Talbot, Gruber, & Harvey, 2012). Another study found significant differences between polysomnography and sleep diary in depressed insomniacs. They reported shorter mean total sleep time, and longer sleep onset latency and wake after sleep onset (McCall & McCall, 2012). Thus, the validity of the sleep diary assessment varies.

Actigraphy. Actigraphy is an objective method for sleep assessment. It is also the methodological standard for assessment of circadian rhythms of sleep. Actigraphy is a well-established sleep research method, and the number of actigraphy publications increases every year (Sadeh, 2011) . It allows for continuous, non-invasive longitudinal sleep assessment in large samples at low cost (Kushida et al., 2001). An actigraph is a portable, lightweight, and battery-operated wristwatch device. It records movements in the form of activity counts through an inbuilt accelerometer (Ancoli-Israel et al., 2003) . The accelerometer converts movement into electrical units which is stored digitally in predefined time modules called *epochs*. Epoch length is adjustable, varying from 1 second to 2 minutes in different brands. Short epochs provide a dataset with high temporal resolution, whereas long epochs yield coarser data. Short epochs require more data storage. Long epochs are more beneficial in longitudinal studies, enabling long-term data storage. Activity data is downloaded to a computer, and through actigraphy software the activity counts are visually presented in an actogram. The actogram displays activity count columns for each epoch, making a continuous activity curve. Some actigraphs also collect light information and have event markers. Event markers are buttons the participants can press to mark specific events in time, such as removing the actigraph from the wrist, turning lights off to try to sleep or waking up in the morning. The light and event marker information are visible in the actogram (for examples of actograms, see Appendix, Attachment 1).

Actigraphs are often worn as a watch on the participants' wrist, but they can also be placed on the participants´ trunk, upper arm and leg. Reports suggest that wrist placement is superior to ankle placement, which in turn is superior to trunk placement when measuring sleep and circadian rhythms (Littner et al., 2003).

There are several well-established suppliers of activity monitors and associated software customized for research, including Philips, ActiWare, Motionlogger and Ambulatory Monitoring. In addition, several brands have launched commercial consumer-targeted smartwatches and fitness monitors that measure activity and sleep. A recent review

regarding the use of consumer-targeted devices in research found high agreement between the consumer-targeted devices. However, when these devices were compared to polysomnography, the agreement was moderate to poor (Baron et al., 2017).

In sum, polysomnography, sleep diary and actigraphy are valuable tools for sleep assessment. Polysomnography is the golden standard for sleep measurement, but it is resource intensive and impractical for circadian rhythm assessment. Sleep diaries are affordable and assess subjective sleep, although they are prone to human memory bias. Actigraphy allows for objective, longitudinal measures of sleep/wake cycles as well as being the standard for assessment of circadian rhythms of sleep in large samples. In this thesis, we will discuss the actigraphic tool in depth.

Actigraphic Sleep and Circadian Variables

There are several sleep variables that can be extracted from actigraphy. *Rest interval duration* is the number of minutes between the time participants begin attempting to fall asleep and the time they get out of bed in the morning or are fully awake. *Total sleep time* is the number of minutes scored as sleep during the rest interval, and *sleep onset latency* is the time between rest onset and sleep onset. *Sleep efficiency* is the percentage of the time in bed spent asleep. *Wake after sleep onset* is the time in minutes between sleep onset and sleep offset scored as wake.

The actigraph records activity data on a continuous basis, thus capturing longitudinal variations in activity and sleep. Circadian variables are extracted by fitting activity data to a 24h cosine curve that shows increases and decreases in activity over time. Three circadian variables can be extracted: acrophase, amplitude and mesor. The acrophase refers to the apex of the cosine curve, marking the time of peak activity. The activity level difference between the curve minimum and maximum is called the amplitude, and the mesor is the mean activity of the fitted curve (Ancoli-Israel et al., 2003) . Actigraphically measured sleep patterns correlate with the established markers of circadian rhythm melatonin release and body temperature fluctuations (Morgenthaler et al., 2007).

Sleep Research and Actigraphy

Sleep research is necessary for a better understanding of human behaviour as well as to understand the relationship between sleep and psychological dysfunction (Siegel, 2003). Actigraphy is widely used to bring this relationship to light (Sadeh, 2011) .

Sleep disturbances occur as core symptoms in (World Health Organization, 1993), predictors for (Riemann, Berger, & Voderholzer, 2001), and are comorbid to several

psychiatric disorders, for example depression (Tsuno, Besset, & Ritchie, 2005). When sleep itself is the core problem, it is defined as one or more sleep disorders. The most common sleep disorder is insomnia (Mai & Buysse, 2008; Pallesen et al., 2001). Insomnia is described as difficulty in falling asleep and/or remaining asleep (American Psychiatric Association, 2013; World Health Organization, 1993). Actigraphy is a reasonable tool for diagnosing insomnia (Sadeh, 2011), making it valuable for assessing the relationship between impaired sleep and health.

To assess the relationship between sleep and health outcomes, researchers can manipulate sleep conditions. Sleep deprivation is one such manipulation. It is induced by instructing participants to sleep less than normal, followed by a study of the effects of sleep loss. Actigraphy is a valuable tool for assessing compliance to a set sleep schedule (Sadeh, 2011) , and it has been applied to investigate how sleep deprivation influences several constructs, such as mood (Talbot, McGlinchey, Kaplan, Dahl, & Harvey, 2010) and attention (Sadeh, Dan & Bar-Haim, 2011).

Actigraphy can also be used in research that investigates circadian rhythms in naturalistic settings, as in how shift work affects a variety of health outcomes (Saksvik et al., 2011). Actigraphy can also be used as a diagnostic tool for circadian rhythm sleep-wake disorders (American Academy of Sleep Medicine, 2014), including shift work disorder (Morgenthaler et al., 2007) and jet lag disorder (Sack et al., 2007).

Software Processing and Algorithms

Tailored software is used to translate the activity counts gathered by the actigraph into sleep estimates. Activity data is analysed in the software by applying mathematical algorithms to the data collected through the actigraph.

For each epoch, the algorithm integrates activity data from surrounding epochs to the current epoch, scoring it as sleep or wake. The algorithms are developed to identify sleep/wake as precisely as possible, often assessed by agreement with polysomnography. There is a continuous process to further develop the algorithms to reach higher levels of agreement with polysomnography (Sadeh, 2011). Existing algorithms rely on activity data only. Other available data sources, such as light or event marker information, have yet to be integrated into the algorithms (Patel et al., 2015).

Algorithms perform the sleep analysis within a given interval of immobility, the rest interval. A weakness of using activity as an indicator of sleep is that the algorithms cannot distinguish between sedentary behaviour, rest and sleep (Morgenthaler et al., 2007; Whiting

& Murdock, 2016). The algorithm calculates, based on activity levels, the time it is most likely that the participants started to rest before falling asleep and when they fell asleep. Therefore, estimates of rest onset and offset may be imprecise and risk overestimating the rest interval. To amend this problem, the rest intervals can either be edited or set manually in the software by a scorer. Opinions differ regarding how this process should be conducted. Boyne, Sherry, Gallagher, Olsen, and Brooks (2013) found that setting the rest interval based on visually inspecting the actigraphic data is superior to the algorithms in setting rest intervals compared with polysomnography. Others argue that a combination of subjective and automatic scoring provides the best results (Chow et al., 2016; Ustinov et al., 2015) and Kushida and colleagues (2001) found that actigraphy sleep estimates became more similar to polysomnography when combined with subjective sleep data. Ancoli-Israel et al. (2015) recently manualized the process of actigraphy assessment and recommend having at least one supplemental data source when scoring the rest interval. Self-reported rest onset and offset can validate the algorithmically estimated rest intervals or indicate where they should begin and end.

Several specific algorithms have been compared (de Souza et al., 2003; Kim et al., 2013) and validated against polysomnography. Examples of well-established and extensively applied algorithms are the Cole-Kripke algorithm (Cole, Kripke, Gruen, & Gillin, 1992; Marino et al., 2013), the Sadeh algorithm (Sadeh, Sharkey, & Carskadon, 1994), the SDSU algorithm (Action-W User's Guide, Version 2.0. ; Jean-Louis, Kripke, Mason, Elliott, & Youngstedt, 2001), and the algorithm validated by Oakley (1997), El Baz, Quera-Salva, Oakley, Lecendreux, and Gajdos (1998) and Kushida et al (2001). Sadeh & Acebo (2002) and Sadeh (2011) criticize the widely accepted use of algorithms developed in the early 1990s and argue that as the technology evolves and studies find issues with existing algorithms, new and better algorithms should be developed.

Validity and Reliability of Actigraphy

Questions about the reliability and validity of actigraphy scoring have been raised in several literature reviews (Sadeh, 2011; Sadeh & Acebo, 2002; Sadeh, Hauri, Kripke & Lavie, 1995). These reviews repeatedly call for better ways to standardize the use of instruments, procedures and analytical methods to ensure the comparability of research.

Validity. Studies seeking to validate actigraphy against polysomnography provide estimates of agreement between the two tools, assessing the accuracy, sensitivity and specificity of the measurements. Accuracy is the total number of epochs of

polysomnographic sleep/wake that are correctly identified by the actigraph, divided by the total number of epochs. Sensitivity refers to the amount of polysomnographic sleep minutes also scored as sleep minutes by actigraphy, and specificity is the number of epochs scored as wake by the polysomnography that are also scored as wake by the actigraph (Sadeh & Acebo, 2002). Actigraphy has high agreement with polysomnography in sleep detection with an accuracy of 88-93% and sensitivity of 90-95% (Morgenthaler et al., 2007). On the other hand, the actigraph is less precise for wake detection. Several studies have found low specificity, ranging from 24% (Sitnick, Goodlin-Jones, & Anders, 2008) to 34% and 44% (de Souza et al., 2003). In validation studies, actigraphy and existing algorithms tend to overestimate sleep and underestimate wake (Sadeh, 2011).

Actigraphy enables measurement of sleep/wake in natural settings, and therefore it has high ecological validity. Actigraphic tools monitor sleep/wake and activity rhythms continuously across multiple 24-hour cycles (Ancoli-Israel et al., 2003) and gather activity data while participants carry out their daily tasks. An example of the low interference of actigraphy with routine is that the first-night effect of actigraphy is reduced compared to polysomnography (Jean-Louis et al., 1997).

Reliability. The reliability of actigraphy refers to the consistency of the tool for sleep/wake assessment. Two types of reliability are especially relevant for actigraphy, namely alternate-forms reliability and interscorer reliability.

Alternate-forms reliability. Agreement between different actigraphs, software packages and algorithms are referred to as alternate-forms reliability. Even though independent actigraph brands and algorithms have high agreement with polysomnography, the inter-device and inter-algorithm agreement needs to be tested as well. One study (Meltzer, Walsh, Traylor, & Westin, 2012) found similar agreement with polysomnography for the two devices Ambulatory Monitoring Motionlogger Sleep Watch and the Philips Respironics Mini-Mitter Actiwatch-2, but inter-device reliability was poor. This indicates that the different brands need further comparison to establish the alternate-forms reliability of actigraphy.

***Interscorer reliability*.** Scorers have the ability to manipulate or set their rest intervals manually. This raises the question of agreement between scorers. Nonetheless, as stated in Berger et al. (2008), strict procedures can provide a reliable means of processing raw actigraphic data. This was illustrated in Chow et al. (2016), in which scorers followed a detailed procedure and between-scorer agreement was high.

To improve both forms of reliability, researchers must apply similar methods and be transparent about them. There is still a need for standardized procedures for setting and editing the rest interval in actigraphy (Ancoli-Israel et al., 2003; Meltzer et al., 2012) that researchers can use and cite.

Current Thesis and Objectives

Actigraphy is widely used in sleep assessment, yet there is a need for standardized guidelines in actigraphy research (Ancoli-Israel et al., 2015; Sadeh, 2011; Sadeh & Acebo, 2002) to allow for between-study comparability. One aspect of actigraphy research that require standardization is the processing of actigraphic data.

This thesis consists of two studies. The objective of Study 1 is to perform a systematic literature review. We will examine how researchers process their actigraphic data and report their process. In the review, we seek to identify common practices for processing of actigraphic data and investigate whether standardized guidelines for setting the rest interval exist. We will attempt to develop a standardized manual for setting rest intervals based on results from the review. The objective of Study 2 is to empirically test the reliability of this novel manual by comparing results from three independent scorers and assessing how sleep outcomes change after applying the procedure.

Study 1: Literature Review

In this exploratory literature review, we investigated how researchers process their actigraphic data and how they report their process. We did this to chart the tendencies and common practices for setting and editing rest intervals in the field of actigraphic research. In the review, we also identified if any established guidelines for setting or editing rest intervals exist. When such guidelines did not exist, we developed a novel manual for this procedure based on the results of the review.

Method

The basis for our literature search was six major databases consisting of peer-reviewed journals. We included the cross-disciplinary databases Web of Science, SCOPUS, Wiley and Science Direct to ensure the inclusion of articles from a wide spectrum of research fields. Further, Psychnet and PubMed were included. These databases comprise journals in the fields of psychology, medicine and other health sciences. All searches were performed on the same date, April 1, 2018.

The literature search was limited to publications from the past 10 years. The 10-year limit was set to avoid overlap with previous systematic reviews (Ancoli-Israel et al., 2003; Berger et al, 2008; Sadeh, 2002). We also chose the limit to capture the modern use of actigraphy and possible technological advances.

Table 1.1

Keywords Applied in Literature Search

	*Web of Science	SCOPUS	Wiley	Psychnet	Science Direct	*PubMed
Search criteria	Actigraphy AND Sleep in Topic	Actigraphy in Keywords AND Sleep in Abstract	Actigraphy in Keywords AND Sleep in Abstract	Actigraphy in Keywords AND Sleep in Abstract	Actigraphy in Keywords AND Sleep in Abstract	Actigraphy in MeSH Major Topic AND Sleep in Abstract
Number of hits	1944	1514	148	20	333	301

**Note.* The search engines in Web of Science and PubMed had different search options compared to the other databases. Instead of “keyword” and “abstract” options, these

databases offered to search in “topic” and “major topic”, and thus have different search specifications. We attempted to perform as similar searches as possible for all search engines.

Exclusion criteria. The total number of research articles that resulted from the literature search was 4,260 (Figure 1.1). All articles were imported to EndNote X8. After removing duplicates, 2,566 articles remained.

Our exclusion criteria were:

a) Articles with non-human samples.
b) Articles with samples including participants younger than age 12. We chose this threshold because children under the age of 12 may not be eligible to complete their own sleep diary or consistently press the event marker. Research on this group may benefit from a tailored manual for setting the rest interval in actigraphy.
c) Studies assessing sleep in Parkinson’s disease and restless leg syndrome were removed due to involuntary movements creating a potential need for specialized algorithms and procedures in this population (Maglione et al., 2013).
d) Articles assessing sleep using other instruments than actigraphy (e.g., polysomnography, sensor in mattress or placed in the room, questionnaires, ambulatory blood pressure monitoring, sleep logs).
e) Articles using consumer-targeted activity watches instead of research-targeted accelerometers were removed due to differences from actigraphy in polysomnography validation studies (Baron et al., 2017; Mantua, Gravel, & Spencer, 2016).
f) Studies where the actigraph was placed on other locations than the wrist (i.e., ankle or waist) were excluded due to the possibility of differences in activity patterns for different placement locations (Littner et al., 2003).
g) Studies seeking to compare actigraphy with sleep diaries or polysomnography. We assume that these studies did not process their raw actigraphic data because the raw actigraphic data was directly compared to other sleep measures.

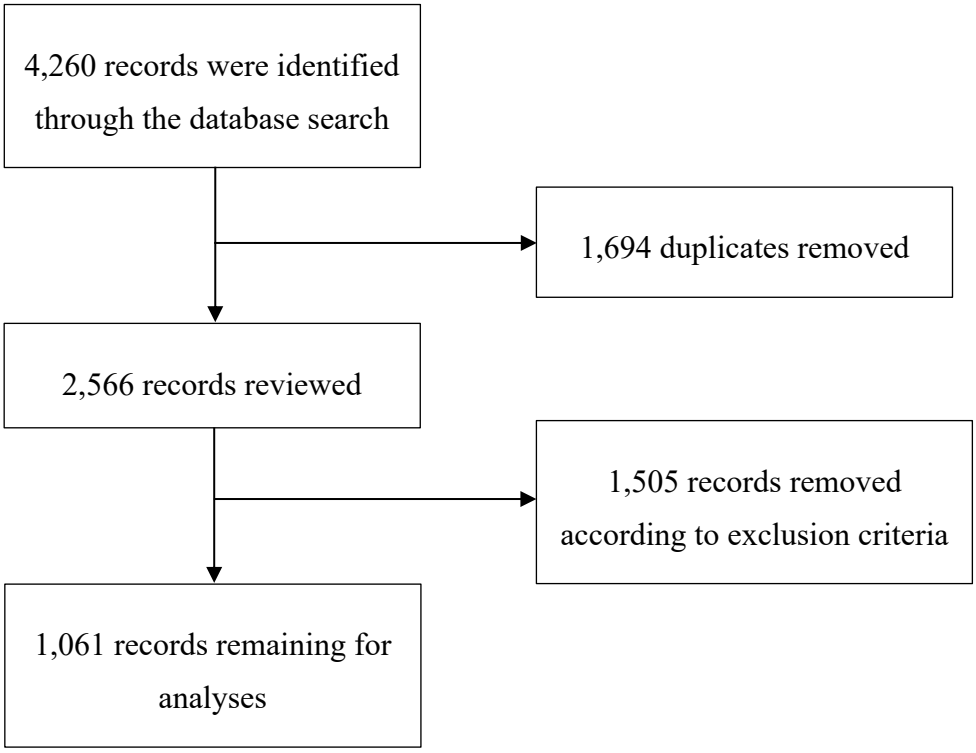


Figure 1.1: Number of records included and excluded in each step of the study selection.

Extracting information. The method sections of all remaining articles (N = 1,061) were examined for material about rest interval setting, algorithm application, the use of event markers and sleep diaries, and the degree to which this was reported. Furthermore, to ensure we collected all relevant data, we applied a simple search within the article comprising the keywords, “algorithm”, “software”, “diary”, “sleep log”, “button”, “event marker”, “marker” and “actigraphy”. These words often appear along with the description of actigraphy data processing. “Algorithm” and “software” describe the software processing, whilst “diary” or “sleep log”, and “event marker” “marker” or “button” refer to the subjective measures of sleep that can be used in setting the rest interval. Finally, we searched for the word “actigraphy” to detect important information about the actigraphic data in all sections of the article.

For each article, we noted whether sleep diaries and/or event markers were present. This information was coded into Yes/No conditions. We also noted how the actigraphic data process was reported in the articles and the reported degree of corroboration of sleep diaries and/or event markers into the actigraphic data. Information about how researchers reported the software and algorithms applied and validation study citations for the algorithm were

extracted. Finally, we determined whether articles reported using technicians or professionals to score the actigraphic data and if intraclass correlations for scorers were reported.

After coding each article, we became familiar with common practices. We clustered articles that had similar reporting of data processing methods.

Analyses. Information extracted in the literature review was imported into IBM SPSS Statistics 25. We initially extracted descriptive statistics for sleep diary and event marker use, and the identified clusters were coded into a categorical variable in SPSS. To extract the number of articles and sleep diary/event marker use, we ran descriptive analyses.

Results

In this literature review we found inconsistent practices in actigraphic data processing. We identified clusters of articles describing how researchers report the processing of their actigraphic process; specifically, how they set rest intervals, how they analyse the data and if they collected event markers and/or sleep diaries.

The practice of actigraphic processing varies widely. We found two main types of articles; one in which sleep diary and/or event markers were collected, and one in which no additional data sources were collected. Practices varied within each group. Articles that collected sleep diaries and/or event markers were further divided into three clusters. The first cluster consisted of articles that did not report any interaction between the sleep diary and/or the event marker and the actigraphic data; the second contained articles that reported corroboration of sleep diaries and/or event markers into the actigraphic dataset, but not how this corroboration was performed in detail. The third cluster was composed of articles that either reported or cited a stepwise procedure for setting the rest interval.

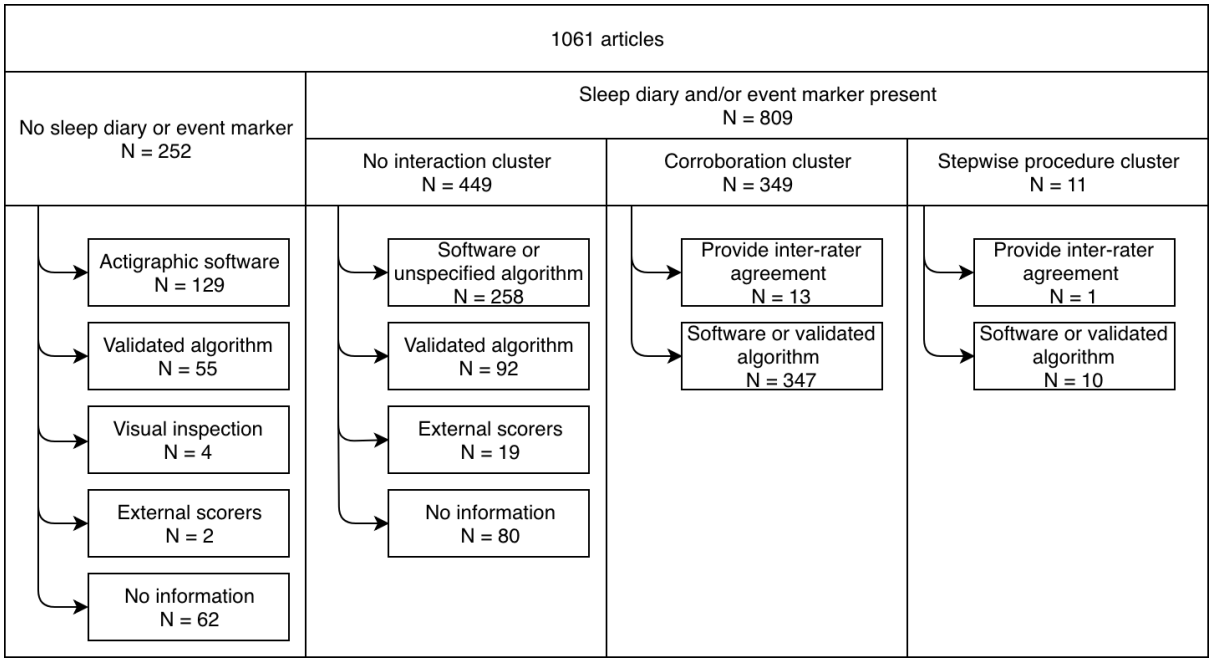


Figure 1.2. Overview of clusters. The two main partitions and the three clusters of interaction between sleep diaries and/or event markers and actigraphic data are illustrated.

Research articles without sleep diaries or event markers. A total of 252 research articles (23.75%) from our literature review did not report collecting sleep diaries and/or event markers (Figure 1.2). Of these articles, 129 reported data processing via a specific or unspecific actigraphic software, and 55 reported a validated algorithm used to extract sleep variables and cited the validation study for that algorithm. Only four articles reported having visually inspected their actigraphic data and set their rest intervals based on a subjective evaluation. External scorers were employed to process the data in two of these articles, but the process they applied was not reported. Finally, 62 articles did not contain any information about how their actigraphic data was processed.

Research articles with sleep diary and/or event marker. In all, 809 research articles (76.25%) from our literature review reported collecting sleep diaries and/or event markers (Figure 1.2), although 449 of them collected sleep diaries and/or event markers but presented no information about how these inputs were used in the actigraphic scoring. Similarly, 258 either reported the software they applied or that they used sleep diaries and/or event markers with their actigraphic data but did not specify how. These studies typically reported software brand but no algorithm, or the use of unspecified software or algorithms. Of the remaining articles, 92 cited a validated algorithm for sleep analysis, 19 reported

having technicians or professionals scoring their data or reported intraclass correlation, and 80 articles did not report any specific process details.

A cluster of 349 out of the 809 articles with sleep diaries and/or event marker described the corroboration of the sleep diary or event marker data with software analyses of activity, sleep and wake. In this cluster, 13 studies also reported inter-rater correlation of their procedure. All articles in this cluster either cited a validated algorithm or at least a specific actigraphic software brand.

The last cluster of 11 articles provided or cited a stepwise procedure for setting the rest interval. One of the articles in this group provided a validated, inter-rater tested procedure for setting the rest interval (Chow et al., 2016). Furthermore, some articles referred to a validated procedure providing interscorer correlations for outcome variables, but not for rest intervals (Patel et al., 2015). The remaining articles in this group provided stepwise and detailed explanations of how they integrated sleep diaries and/or event markers with their actigraphic data, but that procedure is not reported as validated or inter-rater tested.

Discussion

In this review, we examined how the processing of actigraphic data was reported, how set rest intervals were set and how the data was analysed in 1,061 actigraphy studies. We found large variations in the practice of data processing. In addition, we searched for validated procedures for the setting of rest intervals. We found no established procedure that governed common practice for actigraphic data processing.

A major observation is that most actigraphic studies collect sleep diaries and/or event markers simultaneously with the actigraphic data. This is in concordance with actigraphy data scoring recommendations by Ancoli-Israel et al. (2015) that scorers have at least one supplemental source of data in addition to the actigraphic data when setting the rest interval. However, the number of studies that collected event markers was considerably lower than the number of studies that collected sleep diaries. This implies that the preferred, or available, supplemental data source for actigraphy over the past 10 years has been the sleep diary.

There was great variation in data processing reporting practices. Many studies cited a validated algorithm for actigraphic data analyses, but a majority did not mention which algorithm was applied. This also held true for software reporting, as many papers reported that their analyses were conducted using a specific software, but a majority of these did not specify the brand or version of the software. Furthermore, there were large variations in the detailing of the descriptions of how the rest intervals were set, including the report of

corroboration of supplemental sources of data. The inconsistencies that appeared in our review are in line with a previous review (Berger et al., 2008) that found no common practice for reporting actigraphic data processes.

In our review, we found that researchers report processing actigraphic data differently. Furthermore, we did not find an established manual for setting rest intervals. Thus, we could not identify any common practice, indicating a need to establish common guidelines. We did find procedures that were inter-rater tested, but these were rarely cited in the reviewed articles and thus cannot be said to have gained traction in the field of actigraphy. To address this issue, we proposed a manual for setting rest intervals based on existing literature and the results from this review.

Development of a Novel Manual for Setting Rest Intervals

Based on the literature review, we developed a manual for a stepwise procedure with a distinct screening process for defining rest intervals in an actigraphy software. In the literature review, we identified two stepwise procedures for setting the rest intervals. One of the identified studies provided an inter-rater tested, stepwise procedure for setting the rest interval (Chow et al., 2016) relying on light, activity and event markers. It does not apply sleep diary entries or an initially set rest interval to guide scoring, nor does it provide criteria for exclusion of rest intervals. The second procedure that was identified in the literature review (Patel et al., 2015) suggested varying thresholds of accepted agreement between sleep diaries, event markers, activity and light data. This study did not define any exclusion criteria of rest intervals or report inter-rater agreement. Later studies with the same author cited this procedure.

In addition to the studies identified in the review, we found two relevant studies when searching for guidelines specifically. One study (Boudebesse et al., 2014) assessed agreement with polysomnography for multiple different approaches for setting the rest interval. This was itself not one stepwise procedure, but it provided information about the strengths and weaknesses of each approach. Finally, the MESA study (Bild et al., 2002) developed, but has not published, a stepwise procedure for setting the rest interval, assessing event marker, sleep diary, activity and light. No scientific publication has, to the best of our knowledge, tested the reliability of this procedure.

The existing procedures applied different combinations of both objective and subjective data sources to guide editing or setting of rest intervals. Objective inputs included initially estimated rest intervals from the validated algorithm, activity counts and light data.

Subjective inputs include self-reported lights off/on or attempts to fall asleep gleaned from sleep diaries and event markers indicating trying to fall asleep and waking up. We wanted our manual to be applicable for all researchers independent of what supplemental data they chose to collect. Therefore, we included all these data sources in our manual.

There are two possible ways to define rest intervals in actigraphy. The first is to set the rest interval manually in the software. The other is to run an analysis where a validated algorithm defines initial rest intervals that can either be validated or changed. In our manual we chose to run an initial sleep analyses and integrate the initially defined rest onset and offsets into the manual. By initially running a validated algorithm, the scorers can save time by not making changes to rest intervals that are validated by other data sources.

Procedures for actigraphic data editing applied different thresholds of accepted agreement between data sources. Agreement within a threshold refers to the accepted distance in time between one input and another. Thresholds ranged from 10 minutes (Chow et al., 2016; Eidelman, Gershon, Kaplan, McGlinchey, & Harvey, 2012), to 15 minutes (Bild et al., 2002; Patel et al., 2015) to 30 minutes (Boudebesse et al., 2013). Patel et al. (2015) applied both a 15-minute and 30-minute threshold. Chow and colleagues (2016) assessed their procedure by investigating their interscorer agreement and successfully scored rest intervals using an arbitrary 10-minute threshold. Only two inputs were assessed at the same time in this study. In our procedure, we sought to set the rest interval by initially assessing inputs three by three. Therefore, we chose a threshold of 15 minutes and required that all three inputs must fall within 15 minutes of one other in order for the rest interval to be considered valid. In some stages of our manual, inputs were assessed two by two. For the sake of simplicity, we chose to keep the 15-minute threshold throughout the manual.

The proposed procedure follows the example of previous research granting the event marker precedence over the sleep diary (Lauderdale, Knutson, Yan, Liu, & Rathouz, 2008; Pesonen et al., 2010). The event marker is argued to be less prone to human error than the sleep diary (Ustinov & Lichstein, 2013) since participants are not required to remember what time they pressed the button. The diary, on the other hand, requires participants to check the time before falling asleep and remember it until the following morning, making it more prone to memory bias than the event marker. Therefore, a present event marker is placed in a higher rated zone than the sleep diary. However, the sleep diary is still a valuable tool (Sadeh & Acebo, 2002), and we chose to include it in our manual because the validity of actigraphy increases when it is analysed in conjunction with sleep diaries (Kushida et al., 2001)

Actigraphy studies usually collect information over a large number of nights, but an inspection of all collected nights is resource intensive. There is a need for a manual that is both meticulous and time saving. A unique aspect of this manual that we did not find in the literature is a screening process that identifies rest intervals that do not require editing. The three inputs applied in the screening process are event markers, sleep diaries and rest intervals initially calculated by the algorithm. These inputs are static, predefined points of time set by the participant or the actigraph/software. This automated screening process will save the scorers hours of visual inspection of rest intervals that are valid.

When using actigraphy, there is always a risk of having to exclude invalid data. As our literature review uncovered no guidelines for when rest intervals should be excluded, we proposed in our manual that rest intervals should be excluded if they cannot be set or validated in any steps of the manual.

Proposed manual.

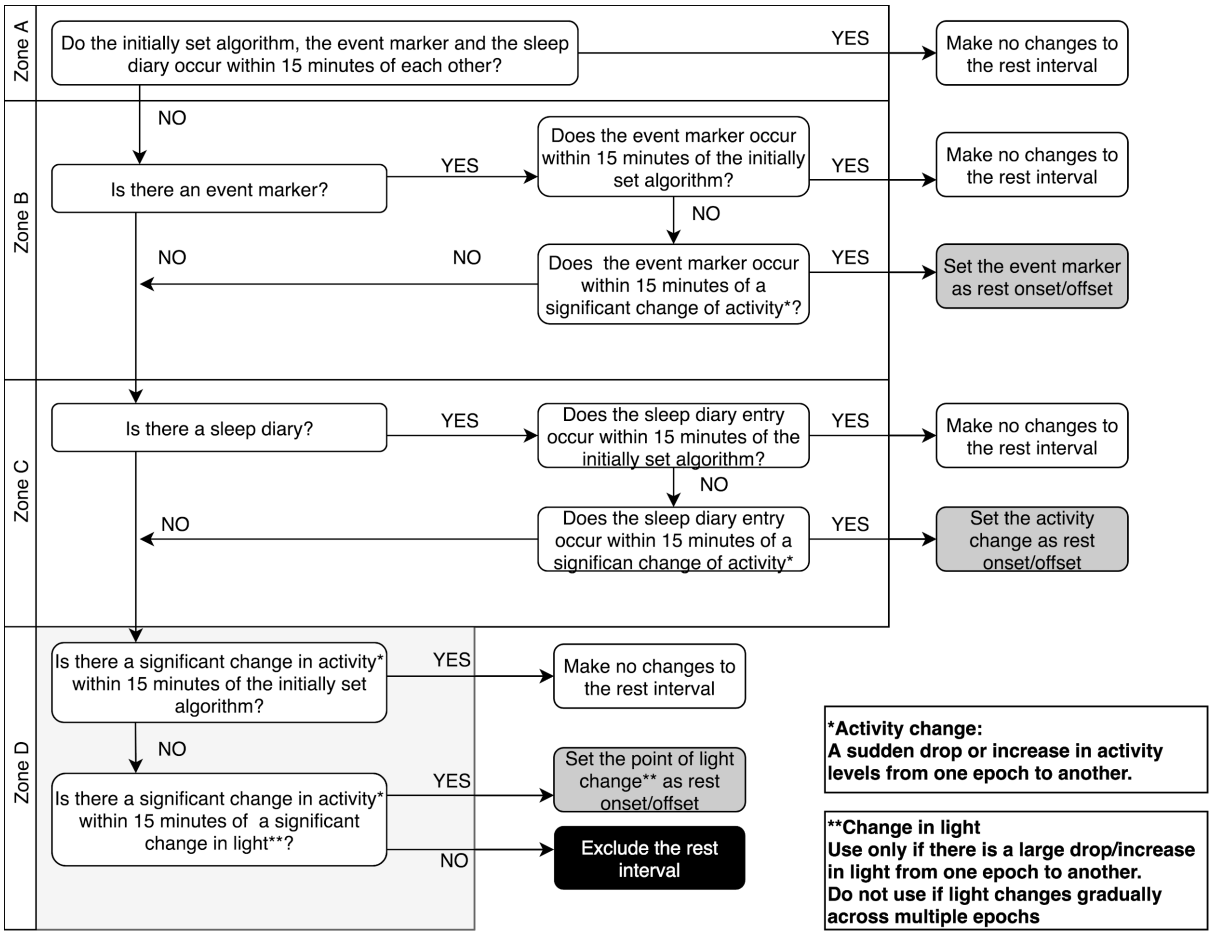


Figure 1.3: Procedure for manual correction of actigraphic rest intervals.

Before applying the manual to the actigraphic data, researchers will need to run an initial sleep analysis, then use the rest intervals estimated in this analysis to set new rest intervals. Therefore, to use this manual, scorers must make a conscious decision about which validated algorithm to use and apply it to the dataset.

The first step of the procedure (Figure 1.3) is the automatic screening process that identifies rest intervals that do not require editing. This analysis can be carried out by most available statistical software (i.e., Microsoft Excel or SPSS Statistics). A rest interval does not require visual inspection if the compared inputs occur within 15 minutes of each other. The screening process starts in zone A, where entries of event markers, sleep diaries and the algorithmically defined rest intervals are compared. If the event marker or sleep diary is missing, the screening process takes place respectively in zone B, comparing event marker and algorithmically defined rest interval, or in zone C, comparing sleep diary and algorithmically defined rest interval.

Intervals that are not validated in the screening process need to be manually assessed in order to set the rest interval. The first zone for manual assessment is zone B (Figure 1.3). Here, the scorer assesses the event marker entry and corroborates it with a visual inspection of activity decrease/increase. The rest interval onset/offset is set to the event marker entry if it falls within 15 minutes of a significant change in activity. If the event marker entry occurs outside the 15-minute threshold, or the event marker is not present, the sleep diary is assessed in zone C (Figure 1.3). If the diary entry falls within 15 minutes of a significant activity change, the point of significant activity change is set as the rest onset/offset.

If neither the event marker entry nor the sleep diary entry occurs within 15 minutes of activity change, or if the event marker and sleep diary are missing, researchers are restricted to zone D of the manual (Figure 1.3). In this zone, the initially defined rest intervals from the algorithm are compared to changes in activity and light. Data should be excluded if these do not fall within 15 minutes of each other. To avoid biases when manually scoring rest intervals using zone D, we applied stipulations to the activity and light level criterion: if there is a sudden drop/increase in activity or light from one epoch to the next, and this change occurs within 15 minutes of the other variables, the initially defined rest interval is considered validated by activity and/or light. Specifically, for light, if the changes are more gradual across multiple epochs, the light condition is considered invalid and should not be applied (Patel et al., 2015).

Discussion of the Manual

We developed a novel manual for setting the rest interval in actigraphy. It is based upon a hierarchy, and the purpose was to provide a standardized method for setting the rest intervals. Its organization is based upon two assumptions: at the top of the hierarchy there is more information available to the scorer than at the bottom and that at the top of the hierarchy the researcher is more likely to define the correct rest interval, compared with lower parts of the procedure. Before applying the manual, researchers should make a conscious choice as to which algorithm they choose to use. The algorithm should be reported, and researchers should make sure it is validated to ensure good quality of their research (Ancoli-Israel et al., 2015).

When setting the rest interval in zone B, the event marker is set as the rest onset or offset. In zone C, activity change defines the rest onset or offset. We chose to set activity as the marker for rest instead of the sleep diary due to the possible inaccuracies in the sleep diaries. If the activity drop occurs within 15 minutes of the sleep diary entry, this point in time may be more precise than the diary entry due to the possible memory bias experienced by the participant.

In all zones of the manual except zone A, a drop or increase in activity is assessed by the scorer, a variable that requires subjective interpretation. When a scorer assesses the changes in activity, he or she tries to identify the last drop in activity before the sleep period and determines the significance of the activity drop by visually inspecting the actogram. Therefore, we made sure activity is always assessed in conjunction with other inputs, either subjective inputs from sleep diary or event marker or from the initially set rest interval or light.

Drop/increase in light is a key input in the assessment of the rest interval in zone D. This input should be included with caution in the process of defining rest intervals, as scorers subjectively assess the changes in light and evaluate whether the significance of these changes. Therefore, light is a vulnerable variable, especially in countries where natural light exposure varies greatly across seasons. Light may change due to reasons other than a person turning the lights off trying to fall asleep or waking up. For example, individuals other than the participants may control the light, or clothing may cover the wrist watch. Also, in shift work, the light conditions may vary according to the participants' work schedule, meaning light would not be indicative of sleep behaviour. Despite the vulnerability of the light condition, it may be helpful. For example, Chow and colleagues (2013) successfully used the

light variable as a help criterion and obtained a high inter-rater reliability (Cronbach's alpha was .975 for bedtime and .995 for rise time) in defining the rest interval.

In zone D, scorers can set rest intervals in a manualized way when event markers and sleep diaries are missing or invalid. Here, only inputs from the actigraph are used to set a rest interval. This zone is necessary because we identified many actigraphy studies lacking event markers and sleep diaries in the literature review. Our manual should serve all researchers applying actigraphy.

In the literature review, we found no procedures for setting rest intervals with a distinct exclusion criterion. We argue that if there is no way to set the rest onset or offset by assessing agreement between at least two data sources (algorithmically predefined rest interval, event marker, sleep diary, activity or light), the interval should be excluded. We base this argument on the fact that such a rest interval would be based on one data source that is in disagreement with other sources of information. Thus, a scorer would have to guess which single data source is the most accurate for estimating the rest interval. This stands in contrast to studies that use procedures to keep all rest intervals, regardless of disagreement between objective and subjective data sources (i.e., Patel et al., 2015).

In sum, this manual for setting the rest interval was developed as a straightforward and stepwise tool. It has a unique screening procedure and distinct criteria for exclusion of rest intervals. Studies that use this manual and cite their process will achieve higher transparency and comparability with other studies using the manual. We acknowledge that inputs that require subjective evaluation may increase the risk of between-scorer variation. Hence, the manual needed to be applied to an actigraphic dataset and tested for interscorer agreement.

Study 2: Empirical Testing of the Procedure

In this study, we tested the reliability of the manual we developed in Study 1. We applied the manual to an actigraphic dataset from a study investigating effects of sleep deprivation in healthy subjects using actigraphy (Saksvik-Lehouillier, Langvik, Saksvik, Sørengaard, & Olsen, 2018). We assessed interscorer agreement and changes in sleep outcomes that resulted from applying the manual to the dataset.

Method

Participants. A total of 55 healthy subjects, 11 male (20%) and 44 female (80%), were included in the SLEEPIC study (Saksvik-Lehouillier et al., 2018). Their mean age was 22.69 (*SD* = 3.02, range 19-33). Participants were recruited through a convenience sample using social media, university lectures and information on bulletin boards throughout campus at the Norwegian University of Science and Technology.

Procedure.

Data collection. Data was collected in 5 waves across 10-day periods. The participants wore an actigraphic wrist watch (Philips Actiwatch Spectrum PRO) on their non-dominant wrist and completed a personal sleep diary (Bjorvatn, 2010) for 10 consecutive days. They were instructed to remove the actigraph only before bathing or using a sauna. The participants were asked to press an event button on the actigraph to mark “lights off” when they were going to sleep, and again when they woke up in the morning. In addition, all participant received a leaflet with this information. Data was collected in 15-second epochs, with a medium sensitivity threshold of 40 activity counts. The data was analysed by the default algorithm in the Actiware version 6.0.9 software, an algorithm validated by Oakley (1997) and Kushida (2001).

The sleep diary was developed by Bjorvatn (2010) at Haukeland University Hospital in Bergen. In the morning the participants noted what time they went to bed, turned the lights off and the time lapse between lights off and falling asleep the evening before. They also noted wake-up-time, rise time and a rating of the previous night’s sleep. In addition, they recorded the number of awakenings during the night, the duration of these awakenings and information about the use of sleep medication and alcohol consumption. In the evening, the participants registered the number of naps and perceived function during the day. Completing the sleep diary was estimated to take 5 minutes each day.

Application of the manual. Three independent scorers applied the novel manual for setting the rest interval developed in Study 1 to the SLEEPIC data set. The manual was

developed by two of the three scorers (HSF and SBA). Scorer 1 (AMN) received training in the procedure of the manual, and all scorers applied it to the dataset independently. The initial screening process of the manual was conducted on the data before the scorers applied the manual. This calculation was carried out using IBM SPSS Statistics 25. Further, the scorers manually assessed the remaining intervals and noted in which zone each rest interval fell. By noting the zone, the scorer indicated whether a rest interval was determined by using the event marker in zone B, the diary in zone C or using the activity and light variables in zone D. This was noted on a 5-point Likert scale (1- zone A, 2- zone B, 3- zone C, 4- zone D and 5- excluded). If scorers excluded either a rest interval onset or offset, the entire rest interval was excluded from data analysis in the software. It is necessary to exclude the entire rest interval because a rest interval needs a defined start and end in order to appear in software.

Analyses. All statistical analyses were conducted using IBM SPSS Statistics 25. Initial analyses were performed, including descriptive analyses of the raw actigraphic data and of the screening process by which rest interval on- and offsets that did not require manual inspection were identified.

Furthermore, we assessed agreement between scorers. Firstly, we assessed in which zones scorers assessed each rest interval on- and offset. Thereafter, we assessed intraclass correlation (ICC) according to published guidelines (Landers, 2015). This was conducted by running a reliability analysis and choosing the intraclass correlation coefficient in SPSS. Because we had three fixed scorers, we chose the two-way mixed ICC model. Correlations between scorers was conducted using Pearson correlation and internal consistency using Cronbach's alpha. We also investigated alpha if an item was excluded to differentiate between scorers.

We also assessed disagreement between scorers. We isolated the cases where scorers disagreed upon the time of rest onset or offset and assessed the mean difference between scorers by conducting a paired-sample *t*-test. This meant we investigated the degree of disagreement between scorers only in cases where they applied the manual to the data differently and if these differences were of statistical significance.

Following the assessment of agreement between scorers, we selected one scorer (HSF) and compared sleep outcome measures before and after the data had been edited using the manual. Paired-sample *t*-tests were conducted to evaluate whether the application of the manual made a statistical difference to the sleep data for each sleep variable (rest interval duration, total sleep time, sleep onset latency, sleep efficiency and wake after sleep onset).

To assess how the manual would perform in a dataset with a full set of event markers and sleep diaries, we extracted a subsample from our total sample of nights. This subsample consisted of rest intervals with both event marker and sleep diaries available. We considered the number of rest intervals that were identified in the screening process and how the remaining rest intervals were distributed in the zones.

Results

Initial analyses.

Description of raw actigraphic data. The raw dataset consisted of 537 actigraphically measured nights, a total of 1,074 cases of bed time and rise time. Participants were instructed to press the event marker at lights off and when waking up in the morning. In three out of five waves of data collection, participants were mistakenly instructed to press the wrong button on the actigraph. Therefore, the number of missing event markers was higher than in a typical actigraphy study. Event markers were present for 143 rest interval onsets (394 missing) and 49 rest interval offsets (488 missing). Sleep diaries were present for all rest interval onsets and offsets.

Screening process. For rest *onset*, the screening procedure automatically identified 199 out of 537 (37.1%) rest onset cases, leaving 338 cases to be processed using the manual. In the screening process, the accepted rest onsets were distributed in the categories as follows: 59 cases were identified in zone A, 14 cases in zone B and 126 in zone C. Thus, of 143 event markers, 73 automatically validated the rest interval onset in zones A and B. Of the 537 rest onset entries from sleep diaries, 185 automatically validated the rest interval onset in zones A and C.

Turning to rest interval *offset*, 343 out of 537 (63.9%) cases were identified in the screening process, meaning 194 cases remained to be processed using the manual. The accepted rest offsets were distributed in the following manner: 35 cases in zone A, 1 case in zone B and 307 cases in zone C. Subsequently, 36 of the 49 event markers automatically validated the rest interval onset in zones A and B, and 342 of the 537 rest onset entries from sleep diaries automatically validated the rest interval onset in zones A and C.

Agreement between scorers.

Distribution of rest intervals in zones. The scorers categorized all points of time on the previously described 5-point Likert scale. In every step of the manual, scorers needed to assess whether certain inputs were within 15 minutes of each other. To assess agreement, we present the descriptive data from the categorization in Table 2.1.

Table 2.1

Distribution of Cases Assessed in Zones by Scorer

	Rest Interval Onset			Rest Interval Offset		
	Scorer 1	Scorer 2	Scorer 3	Scorer 1	Scorer 2	Scorer 3
Zone A	0	0	0	0	0	0
Zone B	30 (8.88%)	43 (12.72%)	55 (16.27)	0	2 (1.03)	3 (1.55%)
Zone C	126 (37.27)	179 (52.96%)	178 (52.66)	111 (57.22%)	123 (63.4)	125 (64.43%)
Zone D	182 (53.85)	107 (31.66%)	99 (29.29)	82 (42.27%)	61 (31.44)	58 (29.90%)
Excluded	0	9 (2.66%)	6 (1.78%)	1 (0.52%)	8 (4.12)	8 (4.12%)
Sum	338	338	338	194	194	194

Note. The given percentages represent the percentage of the total number of cases for evenings and mornings that were not accepted in the initial screening process (338 rest interval onsets, 194 rest interval offsets).

Intraclass correlation. The intraclass correlation analysis showed a high degree of reliability between scorers for rest interval onset. Average measure ICC was .976, 95% CI [.972, .979] and the single measure ICC was .930, 95% CI [.920, .940], ($F(522,1044) = 41.11$, $p < .001$).

The average measure ICC for rest interval offset was .998, 95% CI [.998, .999] and single measure ICC was .995, 95% CI [.994-.996], ($F(525,1050) = 598.32$, $p < .001$). Correlations between scorers two-by-two and alpha if item excluded are reported in Table 2.2.

Table 2.2

Pearson Correlations Between Scorers for Rest Onset and Offset

		Scorer 1	Scorer 2	Scorer 3
Rest interval onset	Alpha if item excluded	.971	.958	.962
	Scorer 1	1	.926	.920
	Scorer 2		1	.944
	Scorer 3			1
Rest interval offset	Alpha if item excluded	.997	.997	.998
	Scorer 1	1	.996	.994
	Scorer 2		1	.994
	Scorer 3			1

Difference between scorers in rest intervals where scorers disagree. To further assess the potential inaccuracies of the manual, we isolated the rest interval onsets and offsets for which the scorers disagreed. Scorers 1 and 2 differed on 172 rest interval onset cases and 62 rest interval offset cases. Scorer 1 and 3 differed in 177 rest interval onset cases and 71 rest interval offset cases. Similarly, Scorers 2 and 3 had differing responses in 176 rest interval offset cases and 75 rest interval offset cases. The differences between scorers are reported in Table 2.3.

Table 2.3

Mean Differences Between Scorers Regarding Changes in Rest Intervals

			95% confidence interval		
	Mean difference	*SD*	Lower	Upper	*t*-value
Rest interval onset					
Scorer 1 and 2	00:15:36	00:42:58	00:09:07	00:22:04	$t(171) = 4.76, p < .001$
Scorer 1 and 3	00:14:00	00:46:55	00:07:02	00:20:57	$t(176) = 3.97, p < .001$
Scorer 2 and 3	00:00:21	00:29:32	-00:04:02	00:04:45	$t(175) = .159, p = .873$
Rest interval offset					
Scorer 1 and 2	-00:00:57	00:25:12	-00:07:21	00:05:26	$t(61) = -.297, p = .767$
Scorer 1 and 3	-00:01:30	00:28:48	-00:08:19	00:05:18	$t(70) = -.443, p = .659$
Scorer 2 and 3	-00:00:31	00:27:22	-00:06:49	00:05:46	$t(74) = -.168, p = .867$

Outcome measures from one scorer. The results presented below are comparisons of the sleep variables initially calculated by the algorithm and one of the scorers. We chose Scorer 2 (HSF) because she correlated most highly with the other scorers for rest interval onset and offset and had the lowest alpha if an item was removed. Prior to applying the manual, there were 537 actigraphic nights. The total number of nights after data editing was 520 for Scorer 2. Thus 3.17% of the entire dataset was excluded.

Rest intervals. The initially defined mean rest interval duration was 08:15:06 (hh:mm:ss) (*SD* = 02:16:28, range = 03:03:45 - 21:55:15). After applying the procedure, the mean rest interval duration was 07:37:20 (*SD* = 01:47:24, range = 03:03:45 - 13:50:00). The paired-sample *t*-test showed a significant difference between the initially defined rest interval duration and the new rest interval duration, $t(518) = 8.64$, $p < .001$ (two-tailed). The mean

decrease in rest interval duration was 36m 19s after manual correction, with a 95% confidence interval ranging from 00:28:04 to 00:44:34.

Out of the 520 rest intervals, Scorer 2 made changes to 224 rest intervals (43.08%). In 3 cases, the rest interval duration was shortened by 10 or more hours, and in 14 cases the rest interval duration was reduced by 5-10 hours. Furthermore, 15 rest intervals were shortened by 3-5 hours, and 1 rest interval was elongated in duration by 3-5 hours. Also, 52 rest intervals were shortened and 5 were elongated by 1-3 hours. The remainder of the rest intervals that were changed by Scorer 2 (134 intervals) were modified by -1 to 1 hours.

We performed a paired-sample *t*-test on a subsample of the rest intervals, extracting the rest intervals that Scorer 2 had redefined. These were compared to their corresponding rest intervals from the uncorrected data. The mean decrease in rest interval duration compared to initially set rest intervals for the subsample was 01:24:49 $t(223) = 9.69$, $p < .001$ (two tailed), 95% confidence interval ranging from 01:07:33 to 01:42:04.

Variables calculated by the algorithm. Total sleep time from the initial algorithm was 06:42:10 (*SD* = 01:41:14, range: 00:16:00-18:14:00). After applying the procedure, mean TST was 06:36:43 (*SD* = 01:35:09, range 02:37:15 - 12:15:30). The paired-sample *t*-test showed a significant difference in TST, $t(518) = 3.88$, $p < .001$ (two-tailed). The mean decrease in TST after manual correction was 6m 50s with a 95% confidence interval ranging from 00:03:22 to 00:10:18.

Sleep onset latency was initially calculated to 34.82 minutes (*SD* = 54.54, range: 0m - 494.5m) by the algorithm. In the corrected dataset, sleep onset latency was calculated to 14.73 minutes (*SD* = 20.02, range: 0m -174m). The paired-sample *t*-test showed a significant difference in sleep onset latency, $t(518) = 8.27$, $p < .001$ (two-tailed). The mean decrease in sleep onset latency after manual correction was 19.69 minutes with a 95% confidence interval ranging from 15.02 to 24.38.

Sleep efficiency was initially calculated to 83.00% (*SD* = 10.24%, range: 4.69% - 97.57%) by the algorithm. After applying the procedure, sleep efficiency was calculated to 86.85% (*SD* = 6.2%, range: 47.14% - 97.57%). The paired-sample *t*-test showed a significant difference in sleep efficiency, $t(518) = 9.86$, $p < .001$ (two-tailed). The mean increase in sleep efficiency after manual correction was 3.85% minutes with a 95% confidence interval ranging from 3.08% to 4.62%.

Wake after sleep onset was initially calculated to 29.59 minutes (*SD* = 22.53m, range: 0m - 243.75m) by the algorithm, shifting to 25.66 minutes (*SD* = 13.76m, range: 3.5m -

92.5m) after applying the procedure. The paired-sample *t*-test showed a significant difference in wake after sleep onset, $t(518) = 4.78$, $p < .001$. (two-tailed). Similar to sleep efficiency, the mean decrease in wake after sleep onset after manual correction was 3.63 minutes with a 95% confidence interval ranging from 2.14 to 5.12.

Subset analysis. We analysed a subset consisting of rest on- and offset times in which both event marker and sleep diary were present. The subset consisted of 148 rest onset and 39 rest offset cases. For rest onset, 79 cases (55.24%) were approved in the screening process: 59 cases were approved in zone A, 14 in zone B and 6 in zone C, leaving 69 for inspection (see Table 2.4).

For rest offset, 45 cases (91.84%) were approved in the screening process. In zone A, 35 cases were approved, followed by 1 in zone B and 9 in zone C, leaving 4 for inspection. The remaining rest intervals were manually assessed in the different zones of the manual (see Table 2.4).

Table 2.4

Distribution of a Subsample of Rest Onset and Offset with Both Event Markers and Sleep Diaries After Screening

Zone	Rest Onset	Rest Offset
A	0	0
B	43	2
C	9	0
D	9	2
Excluded	3	0
Total	69	4

Discussion

In Study 2, we applied the manual for setting rest intervals developed in Study 1 to a data set of 537 actigraphic nights. The purpose of applying the procedure was to validate or edit predefined rest intervals set by an algorithm. A substantial portion of the intervals was successfully approved in the automatic screening process (542 rest interval on/offsets

approved in total, leaving 532 rest interval on/offsets for procedural processing). Furthermore, the agreement between scorers was high, and applying the procedure produced significant changes compared to the unprocessed dataset for all sleep estimates.

From our initial analyses, it became apparent that the number of missing event markers was high (394 missing for rest inset and 488 missing for rest offset). The quantity of event markers directly affects the screening process. Therefore, due to missing event markers, relatively few rest intervals were accepted. For this particular study, this was an advantage. It allowed us to carefully test all of the zones of the manual. However, future researchers applying our manual will save time when utilising a full sample with event markers, as illustrated by the subsample consisting of rest onsets and offsets with present event markers and sleep diaries. In this subsample, the screening process identified 55.24% of the rest onsets and 91.84% of the rest offsets that did not need to be changed. Thus, by rigorously collecting sleep diary and event markers from participants, a large proportion of the rest intervals will be screened out by using the manual.

Agreement between scorers. Overall, our results indicate high agreement between scorers. The results from the intraclass correlation analysis shows that the scorers' settings of rest intervals were highly similar (α =.975 for rest onset and α =.998 for rest offset). Our results are similar to the findings of Chow and colleagues (2016) in their empirical testing of their procedure for setting of rest intervals in actigraphy (Cronbach's alpha of .975 for bedtime and .995 for rise time). In addition, correlations between scorers were high. To critically test the results of the ICC and correlations, we isolated the rest onsets and offsets that scorers disagreed upon to test the degree and significance of the disagreement. The results of this analysis indicate that there were no significant differences between scorers for rest offset. For rest onset, there were no differences between Scorers 2 and 3, but Scorer 1 differed significantly from the two others. In these cases, however, the standard deviations were much higher than the mean differences, even though the differences were non-significant. This can be attributed to the outliers of disagreement that contributed to the dispersion, but not to the significance of the differences. Disagreement between scorers is an expression of the subjectivity required to set rest intervals that are not accepted in the screening process. Thus, disagreement occurs when scorers assess the significance of changes in activity and light. A plausible scenario explaining this effect is that one scorer evaluated a change in activity or light as significant and used it to validate rest onset or offset, while the other scorers did not approve that particular activity/light change as a significant marker for

rest onset or offset. This is also true for exclusion of rest intervals, where scorers subjectively assess whether the interval should be excluded. Our results suggest a need for a more rigid definition of activity change. The greatest variation between scorers' distribution of rest on- and offset was in zone D, where they rely upon subjective assessment of activity and light. Variation between scorers can be amended by rigorous collection of event markers and sleep diaries, thus reducing the number of intervals edited without any supplemental data sources.

Two of the scorers (2 and 3) had higher agreement than the third. This is evident in the intraclass correlation, where Scorers 2 and 3 had the highest correlations. In addition, Cronbach's' alpha was highest if Scorer 1 was removed. The comparison of the mean difference for rest interval onset where scorers disagreed indicate that Scorer 1 differed significantly from Scorers 2 and 3, who were the researchers who developed the manual. This implies that the application of the manual can be affected by how familiar the scorers are with the manual. Scorers should be carefully instructed regarding the thresholds for making changes to rest intervals.

Agreement between scorers was slightly lower for rest onset than offset throughout our results. This was also the case in the procedure development conducted by Chow et al. (2016). There are several possible reasons for this imbalance. We would argue that the likelihood of the algorithm to define the correct rest onset is lower than setting the correct offset. Existing algorithms are known to misinterpret sedentary behaviour as rest or sleep (Morgenthaler et al., 2007; Whiting & Murdock, 2016). Differentiating rest from sleep can be particularly challenging in the evening because people tend to engage in sedentary behaviour before going to bed, creating difficulty when scorers assess rest intervals, especially if sleep diaries or event markers are missing.

The sleep diary input may also be a reason for lower agreement between scorers for rest onset than offset. This can be explained by the memory bias in participants when completing their sleep diary in the morning, leaving them to guess when they fell asleep. In our proposed manual, the event marker is given precedence over the sleep diary. Thus, the issue with sleep diaries was especially apparent in our study sample due to the large amount of missing event markers. Missing markers leave the scorers to correct the rest interval in the zone considering the sleep diary.

Outcome measures from one scorer. All sleep variables changed significantly after using the novel manual. These new sleep variables were compared to those initially defined by the algorithm prior to applying the manual. The principle of the proposed manual is that

scorers change the rest interval, and thus we observed significant differences before and after applying the manual. The most evident change to the raw actigraphic data was that the delineation of the rest interval in almost all incidents was shortened, generating shorter rest intervals along with shorter total sleep time compared to the initially defined rest interval. This was particularly true for the rest interval onsets that consistently occurred, with few exceptions, later than the actigraphically estimated rest interval onsets. This was a direct consequence of the participants´ self-reported rest onset occurring later in the evening than the initially defined rest interval. In some cases, the activity and light inputs also indicated later rest interval onset than initially estimated. The manual contributed to a significant noise reduction in the dataset, which was notable considering the many rest intervals that were changed by several hours.

Changes also occurred in the actigraphic outcome variables of total sleep time, sleep onset latency, rest sleep efficiency and wake after sleep onset compared to those initially defined sleep estimates by the algorithm. Given that the rest interval was shortened in a majority of the cases, shorter total sleep time was not surprising. This change was small but significant. Actigraphy is known to overestimate total sleep time compared to polysomnography (Kushida et al., 2001; Morgenthaler et al., 2007), and applying our proposed manual shortened the total sleep time compared to the initially estimated sleep time. However, until this manual is validated against polysomnography, we cannot ascertain whether the observed changes in total sleep time occur where the actigraph misinterprets wake as sleep.

Actigraphy is also known to underestimate sleep onset latency (Morgenthaler et al., 2007; Tonetti, Pasquini, Fabbri, Belluzzi, & Natale, 2008), and applying our manual significantly reduced sleep onset latency. Sleep onset latency was estimated based on two calculations, namely rest onset and sleep onset. By using the manual, we moved only the point of rest onset; therefore, sleep onset latency decreased compared to the initially set sleep onset latency. We argue that to optimize sleep onset latency in actigraphy, the accuracy of sleep onset also needs to be improved. Sleep onset is estimated by the algorithm, meaning the issue of correctly defining sleep onset latency circles back to the actigraph and the algorithm’s misinterpretation of sedentary behaviour as sleep.

Sleep efficiency was significantly higher and wake after sleep onset significantly lower after applying the manual. These changes can be explained by the shortening of the delineation of the rest intervals resulting from the manual, where sleep onset and offset are

not directly altered, especially considering that parts of the rest intervals in the evening that were removed could contain false sleep estimates with high counts of wake and thus skew both sleep efficiency and wake after sleep onset for this period. Specifically, wake after sleep onset was calculated within the boundaries of sleep onset and sleep offset. Given the modest change in total sleep time, a substantial change in wake after sleep onset was not expected. Thus, in addition to our manual, it is the algorithm's ability to correctly distinguish sleep from wake that would further improve these sleep estimates.

In sum, our objective was to improve the boundaries within which the algorithm sleep analysis is conducted. Thus, common errors in actigraphically measured sleep are not ameliorated. Such errors include low specificity, which refers to the actigraphs' ability to detect wake. What is amended for is the miscalculation of rest interval onset and offset and thus false sleep epochs within these intervals.

Our manual was tested on a non-clinical sample by the developers of the manual and has not been validated against polysomnography. Future research should aim to validate this manual against polysomnography as well as in other specific and relevant samples, such as insomniacs. Furthermore, other researchers should apply the manual to their datasets and investigate their agreement. Finally, to ensure the best feasibility and quality of the proposed manual, it should be tested using other actigraph brands and other software packages and algorithms.

Conclusion

This study might be a helpful supplement to an already established field of actigraphy research. In the literature review, we found great variation in data processing and reporting practices. We conclude that researchers should strive to follow and cite established protocols for use of actigraphy to allow between-study comparison. We also found no established procedure for setting the rest interval. Our manual can serve as a contribution to one specific part of such a protocol, namely the setting of the rest interval. To the best of our knowledge, this is the only procedure with an automatic screening process that will save researchers time when setting the rest interval compared to existing procedures.

When testing our manual, we achieved high inter-rater agreement (α = .975 for rest onset, α = .998 for rest offset), and thus our manual provides a homogenous correction of rest intervals. On average, the rest interval was shortened by 36 minutes and 19 seconds, and there were significant changes in all sleep estimates. Removal of outliers showed that applying our manual removed a large amount of noise in our dataset. Our subset analysis

indicates that researchers with full sets of event markers and sleep diaries can swiftly validate a large number of their rest intervals. It also indicates that not all rest intervals will be automatically approved, creating a need for our manual even when researchers rigorously collect event markers and sleep diaries.

We hope that the unique screening process, along with the high interscorer agreement, the combination of subjective and objective measures, and its feasibility, make this manual a promising candidate for common practice that will gain a foothold in the actigraphic research field.

References (Blackwell et al., 2008)

Action-W User's Guide. (Version 2.0.). Ambulatory Monitoring. *Inc. Ardsley NY*.

Agnew Jr, H., Webb, W. B., & Williams, R. L. (1966). The First Night Effect: An Eeg Studyof Sleep. *Psychophysiology, 2*(3), 263-266. doi:10.1111/j.1469-8986.1966.tb02650.x

American Academy of Sleep Medicine. (2014). International classification of sleep disorders–third edition (ICSD-3). *Darien, IL: American Academy of Sleep Medicine*.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). . *Washington, DC: Author*.

Ancoli-Israel, S., Cole, R., Alessi, C., Chambers, M., Moorcroft, W., & Pollak, C. P. (2003). The role of actigraphy in the study of sleep and circadian rhythms. *Sleep, 26*(3), 342-392. doi:10.1093/sleep/26.3.342

Ancoli-Israel, S., Martin, J. L., Blackwell, T., Buenaver, L., Liu, L. Q., Meltzer, L. J., . . . Taylor, D. J. (2015). The SBSM Guide to Actigraphy Monitoring: Clinical and Research Applications. *Behavioral Sleep Medicine, 13*, 4-38. doi:10.1080/15402002.2015.1046356

Baron, K. G., Duffecy, J., Berendsen, M. A., Cheung, I. N., Lattie, E., & Manalo, N. C. (2017). Feeling validated yet? A scoping review of the use of consumer-targeted wearable and mobile technology to measure and improve sleep. *Sleep Medicine Reviews*. doi:10.1016/j.smrv.2017.12.002

Basner, M., Brink, M., & Elmenhorst, E. M. (2012). Critical appraisal of methods for the assessment of noise effects on sleep. *Noise and Health, 14*(61), 321-329. doi:10.4103/1463-1741.104902

Berger, A. M., Wielgus, K. K., Young-McCaughan, S., Fischer, P., Farr, L., & Lee, K. A. (2008). Methodological challenges when using actigraphy in research. *Journal of Pain and Symptom Management, 36*(2), 191-199. doi:10.1016/j.jpainsymman.2007.10.008

Berry, R. B., & Wagner, M. H. (2014). *Sleep Medicine Pearls E-Book*: Elsevier Health Sciences.

Bild, D. E., Bluemke, D. A., Burke, G. L., Detrano, R., Diez Roux, A. V., Folsom, A. R., . . . Liu, K. (2002). Multi-ethnic study of atherosclerosis: objectives and design. *American Journal of Epidemiology, 156*(9), 871-881. doi:10.1093/aje/kwf113

Bjorvatn, B. (2010). Søvndagbok. Retrieved from https://helse-bergen.no/seksjon/sovno/Documents/sovndagbok_ny_2010.pdf

Blackwell, T., Paudel, M., Redline, S., Ancoli-Israel, S., Stone, K. L., & Osteoporotic Fractures in Men Study Group. (2017). A novel approach using actigraphy to quantify the level of disruption of sleep by in-home polysomnography: the MrOS sleep study: Sleep disruption by polysomnography. *Sleep Medicine, 32*, 97-104. doi:10.1016/j.sleep.2016.11.019

Blackwell, T., Redline, S., Ancoli-Israel, S., Schneider, J. L., Surovec, S., Johnson, N. L., . . . Study of Osteoporotic Fractures Research Group. (2008). Comparison of sleep parameters from actigraphy and polysomnography in older women: the SOF study. *Sleep, 31*(2), 283-291. doi:10.1093/sleep/31.2.283

Borb, A. A., & Achermann, P. (1999). Sleep homeostasis and models of sleep regulation. *Journal of Biological Rhythms, 14*(6), 559-570. doi:10.1177/074873099129000894

Borbély, A. A. (1982). A two process model of sleep regulation. *Human Neurobiology, 1*(3), 195-204.

Boyne, K., Sherry, D. D., Gallagher, P. R., Olsen, M., & Brooks, L. J. (2013). Accuracy of computer algorithms and the human eye in scoring actigraphy. *Sleep and Breathing, 17*(1), 411-417. doi:10.1007/s11325-012-0709-z

Carney, C. E., Buysse, D. J., Ancoli-Israel, S., Edinger, J. D., Krystal, A. D., Lichstein, K. L., & Morin, C. M. (2012). The consensus sleep diary: standardizing prospective sleep self-monitoring. *Sleep, 35*(2), 287-302. doi:10.5665/sleep.1642

Chow, C. M., Wong, S. N., Shin, M., Maddox, R. G., Feilds, K. L., Paxton, K., . . . Steinbeck, K. (2016). Defining the rest interval associated with the main sleep period in actigraph scoring. *Nature and Science of Sleep, 8*, 321-328. doi:10.2147/nss.s114969

Cole, H. V., Kripke, D. F., Gruen, W., & Gillin, J. C. (1992). Automatic sleep/wake identification from wrist activity. *Sleep, 15*(5), 461-469. doi:10.1093/sleep/15.5.461

Crowley, S. J., Acebo, C., & Carskadon, M. A. (2007). Sleep, circadian rhythms, and delayed phase in adolescence. *Sleep Medicine, 8*(6), 602-612. doi:10.1016/j.sleep.2006.12.002

Czeisler, C. A., Richardson, G. S., Zimmerman, J. C., Moore-Ede, M. C., & Weitzman, E. D. (1981). Entrainment of Human Orcadian Rhythms by Light - Dar Cycles: A Reassessment. *Photochemistry and Photobiology, 34*(2), 239-247. doi:10.1111/j.1751-1097.1981.tb08993.x

de Souza, L., Benedito-Silva, A. A., Pires, M. L. N., Poyares, D., Tufik, S., & Calil, H. M. (2003). Further validation of actigraphy for sleep studies. *Sleep, 26*(1), 81-85. doi:10.1093/sleep/26.1.81

Deboer, T. (2018). Sleep homeostasis and the circadian clock: Do the circadian pacemaker and the sleep homeostat influence each other's functioning? *Neurobiology of Sleep and Circadian Rhythms*. doi:10.1016/j.nbscr.2018.02.003

Eidelman, P., Gershon, A., Kaplan, K., McGlinchey, E., & Harvey, A. G. (2012). Social support and social strain in inter-episode bipolar disorder. *Bipolar Disorders, 14*(6), 628-640. doi:10.1111/j.1399-5618.2012.01049.x

El Baz, M., Quera-Salva, M., Oakley, N., Lecendreux, M., & Gajdos, P. (1998). Evaluation of actiwatch actimeter vs polysomnography in 29 patients with obstructive sleep apnea syndrome. *J Sleep Res, 7*(Suppl 2), 75.

Fuller, P. M., Gooley, J. J., & Saper, C. B. (2006). Neurobiology of the sleep-wake cycle: sleep architecture, circadian regulation, and regulatory feedback. *Journal of Biological Rhythms, 21*(6), 482-493. doi:10.1177/0748730406294627

Grandin, L. D., Alloy, L. B., & Abramson, L. Y. (2006). The social zeitgeber theory, circadian rhythms, and mood disorders: review and evaluation. *Clinical psychology review, 26*(6), 679-694. doi:10.1016/j.cpr.2006.07.001

Grote, L., & Zou, D. (2017). Pulse Wave Analysis During Sleep. In M. H. Kryger, T. Roth, & W. C. Dement (Eds.), *Principles and Practice of Sleep Medicine*. Philadelphia: Elsevier.

Huang, Z.-L., Urade, Y., & Hayaishi, O. (2011). The role of adenosine in the regulation of sleep. *Current topics in medicinal chemistry, 11*(8), 1047-1057. doi:10.2174/156802611795347654

Jean-Louis, G., Kripke, D. F., Mason, W. J., Elliott, J. A., & Youngstedt, S. D. (2001). Sleep estimation from wrist movement quantified by different actigraphic modalities. *Journal of Neuroscience Methods, 105*(2), 185-191. doi:10.1016/S0165-0270(00)00364-2

Jean-Louis, G., Von Gizycki, H., Zizi, F., Hauri, P., Spielman, A., & Taub, H. (1997). The actigraph data analysis software: II. A novel approach to scoring and interpreting sleep-wake activity. *Perceptual and Motor Skills, 85*(1), 219-226. doi:10.2466/pms.1997.85.1.219

Kaplan, K. A., Talbot, L. S., Gruber, J., & Harvey, A. G. (2012). Evaluating sleep in bipolar disorder: Comparison between actigraphy, polysomnography, and sleep diary. *Bipolar Disorders, 14*(8), 870-879. doi:10.1111/bdi.12021

Kim, M. J., Lee, G. H., Kim, C. S., Kim, W. S., Chung, Y. S., Chung, S., & Lee, S. A. (2013). Comparison of three actigraphic algorithms used to evaluate sleep in patients with obstructive sleep apnea. *Sleep and Breathing, 17*(1), 297-304. doi:10.1007/s11325-012-0689-z

Klerman, E. B., Gershengorn, H. B., Duffy, J. F., & Kronauer, R. E. (2002). Comparisons of the variability of three markers of the human circadian pacemaker. *Journal of Biological Rhythms, 17*(2), 181-193. doi:10.1177/074873002129002474

Kushida, C. A., Chang, A., Gadkary, C., Guilleminault, C., Carrillo, O., & Dement, W. C. (2001). Comparison of actigraphic, polysomnographic, and subjective assessment of sleep parameters in sleep-disordered patients. *Sleep Medicine, 2*(5), 389-396. doi:10.1016/S1389-9457(00)00098-8

Kushida, C. A., Littner, M. R., Morgenthaler, T., Alessi, C. A., Bailey, D., Coleman Jr, J., . . . Kramer, M. (2005). Practice parameters for the indications for polysomnography and related procedures: an update for 2005. *Sleep, 28*(4), 499-523. doi:10.1093/sleep/28.4.499

Landers, R. (2015). Computing Intraclass Correlations (ICC) as Estimates of Interrater Reliability in SPSS. *The Winnower*.

Lauderdale, D. S., Knutson, K. L., Yan, L. L., Liu, K., & Rathouz, P. J. (2008). Sleep duration: how well do self-reports reflect objective measures? The CARDIA Sleep Study. *Epidemiology (Cambridge, Mass.), 19*(6), 838-845. doi:10.1097/EDE.0b013e318187a7b0

Littner, M., Kushida, C. A., Anderson, W. M., Bailey, D., Berry, R. B., Davila, D. G., . . . Loube, D. (2003). Practice parameters for the role of actigraphy in the study of sleep and circadian rhythms: an update for 2002. *Sleep, 26*(3), 337-341. doi:10.1093/sleep/26.3.337

Maglione, J. E., Liu, L., Neikrug, A. B., Poon, T., Natarajan, L., Calderon, J., . . . Loredo, J. S. (2013). Actigraphy for the assessment of sleep measures in Parkinson's disease. *Sleep, 36*(8), 1209-1217. doi:10.5665/sleep.2888

Mai, E., & Buysse, D. J. (2008). Insomnia: prevalence, impact, pathogenesis, differential diagnosis, and evaluation. *Sleep medicine clinics, 3*(2), 167-174. doi:10.1016/j.jsmc.2008.02.001

Mantua, J., Gravel, N., & Spencer, R. (2016). Reliability of sleep measures from four personal health monitoring devices compared to research-based actigraphy and polysomnography. *Sensors, 16*(5), 646. doi:10.3390/s16050646

Marino, M., Li, Y., Rueschman, M. N., Winkelman, J. W., Ellenbogen, J., Solet, J. M., . . . Buxton, O. M. (2013). Measuring sleep: accuracy, sensitivity, and specificity of wrist actigraphy compared to polysomnography. *Sleep, 36*(11), 1747-1755. doi:10.5665/sleep.3142

McCall, C., & McCall, W. V. (2012). Comparison of actigraphy with polysomnography and sleep logs in depressed insomniacs. *Journal of Sleep Research, 21*(1), 122-127. doi:10.1111/j.1365-2869.2011.00917.x

Meltzer, L. J., Walsh, C. M., Traylor, J., & Westin, A. M. (2012). Direct comparison of two new actigraphs and polysomnography in children and adolescents. *Sleep, 35*(1), 159-166. doi:10.5665/sleep.1608

Monk, T. H., REYNOLDS III, C. F., Kupfer, D. J., Buysse, D. J., Coble, P. A., Hayes, A. J., . . . Ritenour, A. M. (1994). The Pittsburgh sleep diary. *Journal of Sleep Research, 3*(2), 111-120. doi:10.1111/j.1365-2869.1994.tb00114.x

Moore-Ede, M. C., Sulzman, F. M., & Fuller, C. A. (1982). *The clocks that time us: physiology of the circadian timing system*: Harvard Univ Pr.

Morairty, S. R., Dittrich, L., Pasumarthi, R. K., Valladao, D., Heiss, J. E., Gerashchenko, D., & Kilduff, T. S. (2013). A role for cortical nNOS/NK1 neurons in coupling homeostatic sleep drive to EEG slow wave activity. *Proceedings of the National Academy of Sciences, 110*(50), 20272-20277. doi:10.1073/pnas.1314762110

Morgenthaler, T., Alessi, C., Friedman, L., Owens, J., Kapur, V., Boehlecke, B., . . . Lee-Chiong, T. (2007). Practice parameters for the use of actigraphy in the assessment of sleep and sleep disorders: an update for 2007. *Sleep, 30*(4), 519-529. doi:10.1093/sleep/30.4.519

Oakley, N. R. (1997). Validation with polysomnography of the sleep-watch sleep/wake scoring algorithm used by the actiwatch activity monitoring system. *Technical report to Mini Mitter Co., Inc.*

Pallesen, S., Nordhus, I. H., Nielsen, G. H., Havik, O. E., Kvale, G., Johnsen, B. H., & Skjøtskift, S. (2001). Prevalence of insomnia in the adult Norwegian population. *Sleep, 24*(7), 771-779. doi:10.1093/sleep/24.7.771

Patel, S. R., Weng, J., Rueschman, M., Dudley, K. A., Loredo, J. S., Mossavar-Rahmani, Y., . . . Wang, R. (2015). Reproducibility of a standardized actigraphy scoring algorithm for sleep in a US Hispanic/Latino population. *Sleep, 38*(9), 1497-1503. doi:10.5665/sleep.4998

Pesonen, A. K., Räikkönen, K., Paavonen, E. J., Heinonen, K., Komsi, N., Lahti, J., . . . Strandberg, T. (2010). Sleep duration and regularity are associated with behavioral problems in 8-year-old children. *International Journal of Behavioral Medicine, 17*(4), 298-305. doi:10.1007/s12529-009-9065-1

Riemann, D., Berger, M., & Voderholzer, U. (2001). Sleep and depression—results from psychobiological studies: an overview. *Biological Psychology, 57*(1-3), 67-103. doi:10.1016/S0301-0511(01)00090-4

Sack, R. L., Auckley, D., Auger, R. R., Carskadon, M. A., Wright Jr, K. P., Vitiello, M. V., & Zhdanova, I. V. (2007). Circadian rhythm sleep disorders: part I, basic principles, shift work and jet lag disorders. *Sleep, 30*(11), 1460-1483. doi:doi:10.1093/sleep/30.11.1460

Sadeh, A. (2011). The role and validity of actigraphy in sleep medicine: An update. *Sleep Medicine Reviews, 15*(4), 259-267. doi:10.1016/j.smrv.2010.10.001

Sadeh, A., Dan, O., & Bar-Haim, Y. (2011). Online assessment of sustained attention following sleep restriction. *Sleep Medicine, 12*(3), 257-261. doi:10.1016/j.sleep.2010.02.001

Sadeh, A., Hauri, P. J., Kripke, D. F., & Lavie, P. (1995). The role of actigraphy in the evaluation of sleep disorders. *Sleep, 18*(4), 288-302. doi:DOI 10.1093/sleep/18.4.288

Sadeh, A., Sharkey, M., & Carskadon, M. A. (1994). Activity-based sleep-wake identification: an empirical test of methodological issues. *Sleep, 17*(3), 201-207. doi:10.1093/sleep/17.3.201

Saksvik, I. B., Bjorvatn, B., Harvey, A. G., Waage, S., Harris, A., & Pallesen, S. (2011). Adaptation and readaptation to different shift work schedules measured with sleep diary and actigraphy. *Journal of Occupational Health Psychology, 16*(3), 331-344. doi:10.1037/a0022770

Saksvik-Lehouillier, I., Langvik, E., Saksvik, S. B., Sørengaard, T. A., & Olsen, A. (2018). Cognitive and Affective Functioning as a Result of Work Onset after Partial Sleep Deprivation. Retrieved from https://www.researchgate.net/publication/327572903_Cognitive_and_Affective_Functioning_as_a_Result_of_Work_Onset_after_Partial_Sleep_Deprivation

Siegel, J. M. (2003). Why we sleep. *Scientific American, 289*(5), 92-97. doi:10.1038/scientificamerican1103-92

Sitnick, S. L., Goodlin-Jones, B. L., & Anders, T. F. (2008). The use of actigraphy to study sleep disorders in preschoolers: some concerns about detection of nighttime awakenings. *Sleep, 31*(3), 395. doi:10.1093/sleep/31.3.395

Stephan, F. K. (2002). The "other" circadian system: food as a Zeitgeber. *Journal of Biological Rhythms, 17*(4), 284-292. doi:10.1177/074873040201700402

Talbot, L. S., McGlinchey, E. L., Kaplan, K. A., Dahl, R. E., & Harvey, A. G. (2010). Sleep deprivation in adolescents and adults: changes in affect. *Emotion, 10*(6), 831. doi:10.1037/a0020138

Tonetti, L., Pasquini, F., Fabbri, M., Belluzzi, M., & Natale, V. (2008). Comparison of two different actigraphs with polysomnography in healthy young subjects. *Chronobiology International, 25*(1), 145-153. doi:10.1080/07420520801897228

Tsuno, N., Besset, A., & Ritchie, K. (2005). Sleep and depression. *The Journal of clinical psychiatry, 66*(10), 1254-1269. doi:DOI 10.4088/JCP.v66n1008

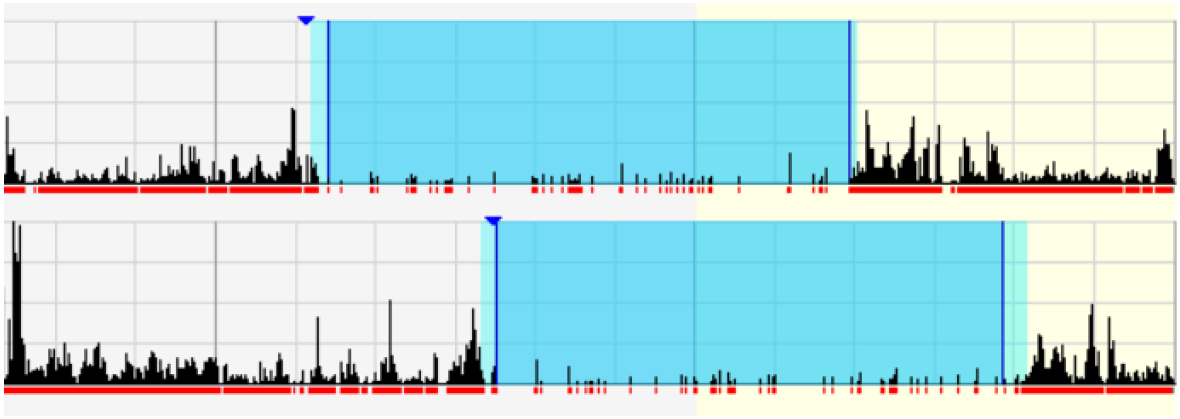
Ustinov, Y., & Lichstein, K. L. (2013). Actigraphy Reliability with Normal Sleepers. *Behavioral Sleep Medicine, 11*(5), 313-320. doi:10.1080/15402002.2012.688779

Whiting, W. L., & Murdock, K. K. (2016). Emerging adults' sleep patterns and attentional capture: the pivotal role of consistency. *Cognitive Processing, 17*(2), 155-162. doi:10.1007/s10339-016-0754-9

World Health Organization. (1993). The ICD-10 classification of mental and behavioural disorders: diagnostic criteria for research.

Appendix

Attachment 1: Examples of Actograms



The black bars indicate activity. The solid square indicates rest, while the larger dark square indicates sleep. The triangle on the top of the actogram represents the event marker being pushed by the participant.

Attachment 2: List of Reviewed Articles

The reviewed articles are listed in the partitions «Without» and «with» sleep diaries and/or event markers. The articles with sleep diaries and/or event markers are further listed in the clusters «No interaction», «Corroboration» and «Stepwise procedure», illustrated in Figure 1.2.

Research articles without sleep diaries or event markers

Reference	Sleep diary	Event marker
Adachi, M., Staisiunas, P. G., Knutson, K. L., Beveridge, C., Meltzer, D. O., & Arora, V. M. (2013). Perceived control and sleep in hospitalized older adults: A sound hypothesis? *Journal of Hospital Medicine, 8*(4), 184-190.	No	No
Ahlberg, K., Savolainen, A., Paju, S., Hublin, C., Partinen, M., Könönen, M., & Ahlberg, J. (2008). Bruxism and sleep efficiency measured at home with wireless devices. *Journal of Oral Rehabilitation,35*(8), 567-571.	No	No
Allen, A. H., Park, J. E., Adhami, N., Sirounis, D., Tholin, H., Dodek, P., ... & Ayas, N. (2014). Impact of work schedules on sleep duration of critical care nurses. *American Journal of Critical Care*, *23*(4), 290-295.	No	No
Allsop, D. J., Bartlett, D. J., Johnston, J., Helliwell, D., Winstock, A., McGregor, I. S., & Lintzeris, N. (2015). The effects of lithium carbonate supplemented with nitrazepam on sleep disturbance during cannabis abstinence. *Journal of Clinical Sleep Medicine*, *11*(10), 1153-1162.	No	No
Amofah, H. A., Broström, A., Fridlund, B., Bjorvatn, B., Haaverstad, R., Hufthammer, K. O., ... & Cardelir Investigators. (2016). Sleep in octogenarians during the postoperative phase after transcatheter or surgical aortic valve replacement. *European Journal of Cardiovascular Nursing*, *15*(2), 168-177.	No	No
Ancuelle, V., Zamudio, R., Mendiola, A., Guillen, D., Ortiz, P. J., Tello, T., & Vizcarra, D. (2015). Effects of an adapted mattress in musculoskeletal pain and sleep quality in institutionalized elders. *Sleep Science*, *8*(3), 115-120.	No	No
Anderson, K. N., Hatfield, C., Kipps, C., Hastings, M., & Hodges, J. R. (2009). Disrupted sleep and circadian patterns in frontotemporal dementia. *European journal of neurology*, *16*(3), 317-323.	No	No
Arora, T., & Taheri, S. (2015). Associations among late chronotype, body mass index and dietary behaviors in young adolescents. *International Journal of Obesity*, *39*(1), 39-45.	No	No
Arora, V. M., Georgitis, E., Siddique, J., Vekhter, B., Woodruff, J. N., Humphrey, H. J., & Meltzer, D. O. (2008). Association of workload of on-call medical interns with on-call sleep duration, shift duration, and participation in educational activities. *Jama*, *300*(10), 1146-1153.	No	No
BaHammam, A. S., Alaseem, A. M., Alzakri, A. A., & Sharif, M. M. (2013). The effects of Ramadan fasting on sleep patterns and daytime sleepiness: An objective assessment. *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences*, *18*(2), 127-131.	No	No
BaHammam, A. S., Almushailhi, K., Pandi-Perumal, S. R., & Sharif, M. M. (2014). Intermittent fasting during R amadan: does it affect sleep?. *Journal of sleep research*, *23*(1), 35-43.	No	No
Baillet, M., Dilharreguy, B., Pérès, K., Dartigues, J. F., Mayo, W., & Catheline, G. (2017). Activity/rest cycle and disturbances of structural backbone of cerebral networks in aging. *Neuroimage*, *146*, 814-820.	No	No
Bakken, L. N., Kim, H. S., Finset, A., & Lerdal, A. (2014). Subjective sleep quality in relation to objective sleep estimates: comparison, gender differences and changes between the acute phase and the six-month follow-up after stroke. *Journal of advanced nursing*, *70*(3), 639-650.	No	No
Bakken, L. N., Kim, H. S., Finset, A., & Lerdal, A. (2012). Stroke patients' functions in personal activities of daily living in relation to sleep and socio-demographic and clinical variables in the acute phase after first-time stroke and at six months of follow-up. *Journal of clinical nursing*, *21*(13-14), 1886-1895.	No	No

Reference	Sleep diary	Event marker
Banihashemi, N., Robillard, R., Yang, J., Carpenter, J. S., Hermens, D. F., Naismith, S. L., ... & Hickie, I. B. (2016). Quantifying the effect of body mass index, age, and depression severity on 24-h activity patterns in persons with a lifetime history of affective disorders. *BMC psychiatry*, *16*(1), 317.	No	No
Barber, L. K., & Cucalon, M. S. (2017). Modifying the Sleep Treatment Education Program for Students to include technology use (STEPS-TECH): Intervention effects on objective and subjective sleep outcomes. *Stress and Health*, *33*(5), 684	No	No
Basner, M., Dinges, D. F., Mollicone, D., Ecker, A., Jones, C. W., Hyder, E. C., ... & Morukov, B. V. (2013). Mars 520-d mission simulation reveals protracted crew hypokinesis and alterations of sleep duration and timing. *Proceedings of the National Academy of Sciences*, *110*(7), 2635-2640.	No	No
Beddoe, A. E., Lee, K. A., Weiss, S. J., Powell Kennedy, H., & Yang, C. P. P. (2010). Effects of mindful yoga on sleep in pregnant women: a pilot study. *Biological research for nursing*, *11*(4), 363-370.	No	No
Lazreg, T. B., Laatiri, I., & Dogui, M. (2011). Circadian activity–rest and sleep–wake rhythms in blind adolescents and adults. *Biological rhythm research*, *42*(3), 219-229.	No	No
Bender, B. G., Ballard, R., Canono, B., Murphy, J. R., & Leung, D. Y. (2008). Disease severity, scratching, and sleep quality in patients with atopic dermatitis. *Journal of the American Academy of Dermatology*, *58*(3), 415-420.	No	No
Bergdahl, L., Broman, J. E., Berman, A. H., Haglund, K., von Knorring, L., & Markström, A. (2017). Sleep patterns in a randomized controlled trial of auricular acupuncture and cognitive behavioral therapy for insomnia. *Complementary therapies in clinical practice*, *28*, 220-226.	No	No
Berkman, L. F., Buxton, O., Ertel, K., & Okechukwu, C. (2010). Managers' practices related to work–family balance predict employee cardiovascular risk and sleep duration in extended care settings. *Journal of occupational health psychology*, *15*(3), 316-329.	No	No
Berkman, L. F., Liu, S. Y., Hammer, L., Moen, P., Klein, L. C., Kelly, E., ... & Buxton, O. M. (2015). Work–family conflict, cardiometabolic risk, and sleep duration in nursing employees. *Journal of occupational health psychology*, *20*(4), 420-433.	No	No
Bernhofer, E. I., Higgins, P. A., Daly, B. J., Burant, C. J., & Hornick, T. R. (2014). Hospital lighting and its association with sleep, mood and pain in medical inpatients. *Journal of advanced nursing*, *70*(5), 1164-1173.	No	No
Bhattacharyya, M. R., Molloy, G. J., & Steptoe, A. (2008). Depression is associated with flatter cortisol rhythms in patients with coronary artery disease. *Journal of psychosomatic research*, *65*(2), 107-113.	No	No
Bhatti, P., Mirick, D. K., Randolph, T. W., Gong, J., Buchanan, D. T., & Davis, S. (2016). Oxidative Dna damage during sleep periods among nightshift workers. *Occupational and Environmental Medicine*, *73*(8), 537-544.	No	No
Blake, C., Cunningham, J., Power, C. K., Horan, S., Spencer, O., & Fullen, B. M. (2016). The impact of a cognitive behavioral pain management program on sleep in patients with chronic pain: results of a pilot study. *Pain Medicine*, *17*(2), 360-369.	No	No
Bloch, B., Reshef, A., Vadas, L., Haliba, Y., Ziv, N., Kremer, I., & Haimov, I. (2010). The effects of music relaxation on sleep quality and emotional measures in people living with schizophrenia. *Journal of music therapy*, *47*(1), 27-52.	No	No
Bordley, J., Agustin, A. G., Ahmed, M. A., Khalid, R., Paluso, A. M., Kobza, B. S., ... & Khan, A. (2017). Restoration of resident sleep and wellness with block scheduling. *Medical education*, *51*(12), 1241-1249.	No	No
Boubekri, M., Cheung, I. N., Reid, K. J., Wang, C. H., & Zee, P. C. (2014). Impact of windows and daylight exposure on overall health and sleep quality of office workers: a case-control pilot study. *Journal of clinical sleep medicine*, *10*(6), 603-611.	No	No
Bravo, R., Matito, S., Cubero, J., Paredes, S. D., Franco, L., Rivero, M., ... & Barriga, C. (2013). Tryptophan-enriched cereal intake improves nocturnal sleep, melatonin, serotonin, and total antioxidant capacity levels and mood in elderly humans. *Age*, *35*(4), 1277-1285.	No	No

Reference	Sleep diary	Event marker
Bromley, L. E., Booth III, J. N., Kilkus, J. M., Imperial, J. G., & Penev, P. D. (2012). Sleep restriction decreases the physical activity of adults at risk for type 2 diabetes. *Sleep*, *35*(7), 977-984.	No	No
Bromundt, V., Köster, M., Georgiev-Kill, A., Opwis, K., Wirz-Justice, A., Stoppe, G., & Cajochen, C. (2011). Sleep–wake cycles and cognitive functioning in schizophrenia. *The British Journal of Psychiatry*, *198*(4), 269-276.	No	No
Brown, D. T., Westbury, J. L., & Schüz, B. (2015). Sleep and agitation in nursing home residents with and without dementia. *International psychogeriatrics*, *27*(12), 1945-1955.	No	No
Bunce, S. C., Harris, J. D., Bixler, E. O., Taylor, M., Muelly, E., Deneke, E., ... & Meyer, R. E. (2015). Possible evidence for re-regulation of HPA axis and brain reward systems over time in treatment in prescription opioid-dependent patients. *Journal of addiction medicine*, *9*(1), 53-60.	No	No
Buxton, O. M., Lee, S., Beverly, C., Berkman, L. F., Moen, P., Kelly, E. L., ... & Almeida, D. M. (2016). Work-family conflict and employee sleep: evidence from IT workers in the Work, Family and Health Study. *Sleep*, *39*(10), 1911-1918.	No	No
Carpenter, J. S., Abelmann, A. C., Hatton, S. N., Robillard, R., Hermens, D. F., Bennett, M. R., ... & Hickie, I. B. (2017). Pineal volume and evening melatonin in young people with affective disorders. *Brain imaging and behavior*, *11*(6), 1741-1750.	No	No
Casida, J. M., Davis, J. E., Shpakoff, L., & Yarandi, H. (2014). An exploratory study of the patients' sleep patterns and inflammatory response following cardiopulmonary bypass (CPB). *Journal of clinical nursing*, *23*(15-16), 2332-2342.	No	No
Cavanaugh, K., Read, L., Dreyfus, J., Johnson, M., & McNamara, J. (2016). Association of poor sleep with behavior and quality of life in children and adolescents with cystic fibrosis. *Sleep and Biological Rhythms*, *14*(2), 199-204.	No	No
Chaoul, A., Milbury, K., Spelman, A., Basen-Engquist, K., Hall, M. H., Wei, Q., ... & Babiera, G. V. (2018). Randomized trial of Tibetan yoga in patients with breast cancer undergoing chemotherapy. *Cancer*, *124*(1), 36-45.	No	No
Chen, J. H., Lauderdale, D. S., & Waite, L. J. (2016). Social participation and older adults' sleep. *Social Science & Medicine*, *149*, 164-173.	No	No
Chen, P. Y., Tsai, P. S., Chen, N. H., Chaung, L. P., Lee, C. C., Chen, C. C., ... & Chiu, H. Y. (2015). Trajectories of sleep and its predictors in the first year following traumatic brain injury. *Journal of head trauma rehabilitation*, *30*(4), 50-55.	No	No
Clarke, L. L., Wilson, S., & Kirwan, J. R. (2013). Using Actigraphy to Measure Sleep Patterns in Rheumatoid Arthritis: A Pilot Study in Patients Taking Night-Time Prednisone. *Musculoskeletal care*, *11*(3), 179-185.	No	No
Colagiuri, B., McGuinness, K., Boakes, R. A., & Butow, P. N. (2012). Warning about side effects can increase their occurrence: an experimental model using placebo treatment for sleep difficulty. *Journal of Psychopharmacology*, *26*(12), 1540-1547.	No	No
Coleman, E. A., Goodwin, J. A., Coon, S. K., Richards, K., Enderlin, C., Kennedy, R., ... & Barlogie, B. (2011). Fatigue, sleep, pain, mood and performance status in patients with Multiple myeloma. *Cancer nursing*, *34*(3), 219-277.	No	No
Crain, T. L., Hammer, L. B., Bodner, T., Kossek, E. E., Moen, P., Lilienthal, R., & Buxton, O. M. (2014). Work–family conflict, family-supportive supervisor behaviors (FSSB), and sleep outcomes. *Journal of occupational health psychology*, *19*(2), 155-167.	No	No
Dallaspezia, S., Locatelli, C., Lorenzi, C., Pirovano, A., Colombo, C., & Benedetti, F. (2016). Sleep homeostatic pressure and PER3 VNTR gene polymorphism influence antidepressant response to sleep deprivation in bipolar depression. *Journal of affective disorders*, *192*, 64-69.	No	No
Darukhanavala, A., Booth, J. N., Bromley, L., Whitmore, H., Imperial, J., & Penev, P. D. (2011). Changes in insulin secretion and action in adults with familial risk for type 2 diabetes who curtail their sleep. *Diabetes care*, *34*(10), 2259-2264.	No	No

Reference	Sleep diary	Event marker
Dawson, J., Boyle, J., Stanley, N., Johnsen, S., Hindmarch, I., & Skene, D. J. (2008). Benzodiazepine-induced reduction in activity mirrors decrements in cognitive and psychomotor performance. *Human Psychopharmacology: Clinical and Experimental*, *23*(7), 605-613.	No	No
De Rui, M., Middleton, B., Sticca, A., Gatta, A., Amodio, P., Skene, D. J., & Montagnese, S. (2015). Sleep and circadian rhythms in hospitalized patients with decompensated cirrhosis: effect of light therapy. *Neurochemical research*, *40*(2), 284-292.	No	No
Dennis, J., Dawson, B., Heasman, J., Rogalski, B., & Robey, E. (2016). Sleep patterns and injury occurrence in elite Australian footballers. *Journal of science and medicine in sport*, *19*(2), 113-116.	No	No
Desai, S. V., Feldman, L., Brown, L., Dezube, R., Yeh, H. C., Punjabi, N., ... & Cofrancesco, J. (2013). Effect of the 2011 vs 2003 duty hour regulation–compliant models on sleep duration, trainee education, and continuity of patient care among internal medicine house staff: a randomized trial. *JAMA internal medicine*, *173*(8), 649-655.	No	No
Dobrosielski, D. A., Phan, P., Miller, P., Bohlen, J., Douglas-Burton, T., & Knuth, N. D. (2016). Associations between vasodilatory capacity, physical activity and sleep among younger and older adults. *European journal of applied physiology*, *116*(3), 495-502.	No	No
Dockray, S., Bhattacharyya, M. R., Molloy, G. J., & Steptoe, A. (2008). The cortisol awakening response in relation to objective and subjective measures of waking in the morning. *Psychoneuroendocrinology*, *33*(1), 77-82.	No	No
Dowling, G. A., Burr, R. L., Van Someren, E. J., Hubbard, E. M., Luxenberg, J. S., Mastick, J., & Cooper, B. A. (2008). Melatonin and Bright-Light Treatment for Rest–Activity Disruption in Institutionalized Patients with Alzheimer's Disease. *Journal of the American Geriatrics Society*, *56*(2), 239-246.	No	No
Drogos, L. L., Gill, S. J., Tyndall, A. V., Raneri, J. K., Parboosingh, J. S., Naef, A., ... & Poulin, M. J. (2016). Evidence of association between sleep quality and APOE ε4 in healthy older adults: A pilot study. *Neurology*, *87*(17), 1836-1842.	No	No
Du-Quiton, J., Wood, P. A., Burch, J. B., Grutsch, J. F., Gupta, D., Tyer, K., ... & Hrushesky, W. J. (2010). Actigraphic assessment of daily sleep–activity pattern abnormalities reflects self-assessed depression and anxiety in outpatients with advanced non-small cell lung cancer. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, *19*(2), 180-189.	No	No
Duclos, C., Dumont, M., Arbour, C., Paquet, J., Blais, H., Menon, D. K., ... & Gosselin, N. (2017). Parallel recovery of consciousness and sleep in acute traumatic brain injury. *Neurology*, *88*(3), 268-275.	No	No
Duclos, C., Dumont, M., Blais, H., Paquet, J., Laflamme, E., de Beaumont, L., ... & Gosselin, N. (2014). Rest-activity cycle disturbances in the acute phase of moderate to severe traumatic brain injury. *Neurorehabilitation and neural repair*, *28*(5), 472-482.	No	No
Durning, S. J., Kelly, W., Costanzo, M. E., Artino Jr, A. R., Vleuten, C. V. D., Beckman, T. J., ... & Schuwirth, L. (2015). Relationship of neuroimaging to typical sleep times during a clinical reasoning task: a pilot study. *Military medicine*, *180*(4), 129-135.	No	No
Eggermont, L. H., & Scherder, E. J. (2008). Ambulatory but Sedentary: Impact on Cognition and the Rest–Activity Rhythm in Nursing Home Residents With Dementia. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *63*(5), 279-287.	No	No
Engwall, M., Fridh, I., Jutengren, G., Bergbom, I., Sterner, A., & Lindahl, B. (2017). The effect of cycled lighting in the intensive care unit on sleep, activity and physiological parameters: A pilot study. *Intensive and Critical Care Nursing*, *41*, 26-32.	No	No
Ertel, K. A., Berkman, L. F., & Buxton, O. M. (2011). Socioeconomic status, occupational characteristics, and sleep duration in African/Caribbean immigrants and US White health care workers. *Sleep*, *34*(4), 509-518.	No	No
Fernandes-Junior, S. A., Ruiz, F. S., Antonietti, L. S., Tufik, S., & de Mello, M. T. (2016). Sleep, fatigue and quality of life: a comparative analysis among night shift workers with and without children. *PloS one*, *11*(7), e0158580-e0158580.	No	No

Reference	Sleep diary	Event marker
Fernandes Jr, S. A.., Antonietti, L. S., Saba, A., de Faria, A. P., Esteves, A. M., Tufik, S., & de Mello, M. T. (2013). The impact of shift work on Brazilian train drivers with different chronotypes: a comparative analysis through objective and subjective criteria. *Medical principles and practice*, *22*(4), 390-396.	No	No
Fowler, P. M., Paul, D. J., Tomazoli, G., Farooq, A., Akenhead, R., & Taylor, L. (2017). Evidence of sub-optimal sleep in adolescent Middle Eastern academy soccer players which is exacerbated by sleep intermission proximal to dawn. *European journal of sport science*, *17*(9), 1110-1118.	No	No
Franck, L., Wray, J., Gay, C., Dearmun, A. K., Alsberge, I., & Lee, K. A. (2014). Where do parents sleep best when children are hospitalized? A pilot comparison study. *Behavioral sleep medicine*, *12*(4), 307-316.	No	No
Franco, L., Sánchez, C., Bravo, R., Rodríguez, A. B., Barriga, C., Romero, E., & Cubero, J. (2012). The sedative effect of non-alcoholic beer in healthy female nurses. *PloS one*, *7*(7), e37290.	No	No
Fung, C. H., Martin, J. L., Dzierzewski, J. M., Jouldjian, S., Josephson, K., Park, M., & Alessi, C. (2013). Prevalence and symptoms of occult sleep disordered breathing among older veterans with insomnia. *Journal of Clinical Sleep Medicine*, *9*(11), 1173-1178.	No	No
Gardani, M., Morfiri, E., Thomson, A., O'Neill, B., & McMillan, T. M. (2015). Evaluation of sleep disorders in patients with severe traumatic brain injury during rehabilitation. *Archives of physical medicine and rehabilitation*, *96*(9), 1691-1697.	No	No
Garrido, M., Castaño, M. Y., Biehl-Printes, C., Gomez, M. A., Branco, J. C., Tomas-Carus, P., & Rodriguez, A. B. (2017). Effects of a respiratory functional training program on pain and sleep quality in patients with fibromyalgia: A pilot study. *Complementary therapies in clinical practice*, *28*, 116-121.	No	No
Garrido, M., Gonzalez-Gomez, D., Lozano, M., Barriga, C., Paredes, S. D., & Moratinos, A. B. R. (2013). A Jerte Valley cherry product provides beneficial effects on sleep quality. Influence on aging. *The journal of nutrition, health & aging*, *17*(6), 553-560.	No	No
Garrido, M., Paredes, S. D., Cubero, J., Lozano, M., Toribio-Delgado, A. F., Muñoz, J. L., ... & Rodríguez, A. B. (2010). Jerte Valley cherry-enriched diets improve nocturnal rest and increase 6-sulfatoxymelatonin and total antioxidant capacity in the urine of middle-aged and elderly humans. *Journals of Gerontology Series A: Biomedical Sciences and Medical Sciences*, *65*(9), 909-914.	No	No
Geerdink, M., Walbeek, T. J., Beersma, D. G., Hommes, V., & Gordijn, M. C. (2016). Short blue light pulses (30 min) in the morning support a sleep-advancing protocol in a home setting. *Journal of biological rhythms*, *31*(5), 483-497.	No	No
Ghabril, M., Jackson, M., Gotur, R., Weber, R., Orman, E., Vuppalanchi, R., & Chalasani, N. (2017). Most individuals with advanced cirrhosis have sleep disturbances, which are associated with poor quality of life. *Clinical Gastroenterology and Hepatology*, *15*(8), 1271-1278.	No	No
Ghadami, M. R., Khaledi-Paveh, B., Nasouri, M., & Khazaie, H. (2015). PTSD-related paradoxical insomnia: an actigraphic study among veterans with chronic PTSD. *Journal of injury and violence research*, *7*(2), 54-58.	No	No
Giménez, M. C., Geerdinck, L. M., Versteylen, M., Leffers, P., Meekes, G. J., Herremans, H., ... & Schlangen, L. J. (2017). Patient room lighting influences on sleep, appraisal and mood in hospitalized people. *Journal of sleep research*, *26*(2), 236-246.	No	No
González-Cuevas, M., Romero, O., Toledo, M., Quintana, M., Cambrodí, R., Santamarina, E., ... & Salas-Puig, X. (2017). Effect of adjunctive perampanel on the quality of sleep and daytime somnolence in patients with epilepsy. *Epilepsy & behavior case reports*, *7*, 13-15.	No	No
Grierson, A. B., Hickie, I. B., Naismith, S. L., Hermens, D. F., Scott, E. M., & Scott, J. (2016). Circadian rhythmicity in emerging mood disorders: state or trait marker?. *International journal of bipolar disorders*, *4*(1), 3-9.	No	No
Grutsch, J. F., Ferrans, C., Wood, P. A., Du-Quiton, J., Quiton, D. F. T., Reynolds, J. L., ... & Braun, D. P. (2011). The association of quality of life with potentially remediable disruptions of circadian sleep/activity rhythms in patients with advanced lung cancer. *BMC cancer*, *11*(1), 193-215.	No	No

Reference	Sleep diary	Event marker
Gudberg, C., Wulff, K., & Johansen-Berg, H. (2015). Sleep-dependent motor memory consolidation in older adults depends on task demands. *Neurobiology of aging*, *36*(3), 1409-1416.	No	No
Hacker, E. D., Kapella, M. C., Park, C., Ferrans, C. E., & Larson, J. L. (2015, July). Sleep patterns during hospitalization following hematopoietic stem cell transplantation. In *Oncology nursing forum*, *42*(4), 371-379..	No	No
Haeffel, G. J. (2017). Don't sleep on it: Less sleep reduces risk for depressive symptoms in cognitively vulnerable undergraduates. *Journal of personality and social psychology*, *113*(6), 925-938.	No	No
Haney, A., Buysse, D. J., Rosario, B. L., Chen, Y. F., & Okun, M. L. (2014). Sleep disturbance and cardiometabolic risk factors in early pregnancy: a preliminary study. *Sleep medicine*, *15*(4), 444-450.	No	No
Harrison, E. M., Gorman, M. R., & Mednick, S. C. (2011). The effect of narrowband 500 nm light on daytime sleep in humans. *Physiology & behavior*, *103*(2), 197-202.	No	No
Hartescu, I., Morgan, K., & Stevinson, C. D. (2015). Increased physical activity improves sleep and mood outcomes in inactive people with insomnia: a randomized controlled trial. *Journal of sleep research*, *24*(5), 526-534.	No	No
Hartwell, E. E., Pfeifer, J. G., McCauley, J. L., Moran-Santa Maria, M., & Back, S. E. (2014). Sleep disturbances and pain among individuals with prescription opioid dependence. *Addictive behaviors*, *39*(10), 1537-1542.	No	No
Hiramoto, K., Fujiwara, Y., Ochi, M., Okuyama, M., Tanigawa, T., Yamagami, H., ... & Arakawa, T. (2015). Effects of esomeprazole on sleep in patients with gastroesophageal reflux disease as assessed on actigraphy. *Internal Medicine*, *54*(6), 559-565.	No	No
Hjelm, C., Strömberg, A., Årestedt, K., & Broström, A. (2013). Association between sleep-disordered breathing, sleep–wake pattern, and cognitive impairment among patients with chronic heart failure. *European journal of heart failure*, *15*(5), 496-504.	No	No
Hoaki, N., Terao, T., Wang, Y., Goto, S., Tsuchiyama, K., & Iwata, N. (2011). Biological aspect of hyperthymic temperament: light, sleep, and serotonin. *Psychopharmacology*, *213*(2-3), 633-638.	No	No
Howell, J., Strong, B. M., Weisenberg, J., Kakade, A., Gao, Q., Cuddihy, P., ... & Maurer, M. S. (2010). Maximum daily 6 minutes of activity: an index of functional capacity derived from actigraphy and its application to older adults with heart failure. *Journal of the American Geriatrics Society*, *58*(5), 931-936.	No	No
Hurdiel, R., Watier, T., Honn, K., Pezé, T., Zunquin, G., & Theunynck, D. (2017). Effects of a 12-week physical activities programme on sleep in female university students. *Research in Sports Medicine*, *25*(2), 191-196.	No	No
Hwang, J. Y., Choi, J. W., Kang, S. G., Hwang, S. H., Kim, S. J., & Lee, Y. J. (2017). Comparison of the effects of quetiapine XR and lithium monotherapy on actigraphy-measured circadian parameters in patients with bipolar II depression. *Journal of clinical psychopharmacology*, *37*(3), 351-354.	No	No
Imbach, L. L., Valko, P. O., Li, T., Maric, A., Symeonidou, E. R., Stover, J. F., ... & Baumann, C. R. (2015). Increased sleep need and daytime sleepiness 6 months after traumatic brain injury: a prospective controlled clinical trial. *Brain*, *138*(3), 726-735.	No	No
Ito, Y., Takahashi, S., Shen, M., Yamaguchi, K., & Satoh, M. (2014). Effects of L-serine ingestion on human sleep. *SpringerPlus*, *3*(1), 456-460.	No	No
Iwata, H., Mori, E., Tsuchiya, M., Sakajo, A., Saeki, A., Maehara, K., ... & Maekawa, T. (2015). Objective sleep of older primiparous J apanese women during the first 4 months postpartum: An actigraphic study. *International journal of nursing practice*, *21*, 2-9.	No	No
Jacobson, S. A., Dwyer, P. C., Machan, J. T., & Carskadon, M. A. (2008). Quantitative analysis of rest-activity patterns in elderly postoperative patients with delirium: support for a theory of pathologic wakefulness. *Journal of Clinical Sleep Medicine*, *4*(2), 137-142.	No	No
Jha, L. K., Maradey-Romero, C., Gadam, R., Hershcovici, T., Fass, O. Z., Quan, S. F., ... & Fass, R. (2015). The effect of antireflux treatment on the frequency of awakenings from sleep in patients with gastroesophageal reflux disease. *Neurogastroenterology & Motility*, *27*(2), 237-245.	No	No

Reference	Sleep diary	Event marker
Jones, J. E., Muza, S. R., Fulco, C. S., Beidleman, B. A., Tapia, M. L., & Cymerman, A. (2008). Intermittent hypoxic exposure does not improve sleep at 4300 m. *High altitude medicine & biology*, *9*(4), 281-287.	No	No
Kadoya, M., Koyama, H., Kurajoh, M., Kanzaki, A., Kakutani-Hatayama, M., Okazaki, H., ... & Inaba, M. (2015). Sleep, cardiac autonomic function, and carotid atherosclerosis in patients with cardiovascular risks: HSCAA study. *Atherosclerosis*, *238*(2), 409-414.	No	No
Kadoya, M., Koyama, S., Morimoto, A., Miyoshi, A., Kakutani, M., Hamamoto, K., ... & Yamamoto, T. (2017). Serum macro TSH level is associated with sleep quality in patients with cardiovascular risks–HSCAA study. *Scientific reports*, *7*, 44387.	No	No
Kaul, P., Passafiume, J., Sargent, R. C., & O'Hara, B. F. (2010). Meditation acutely improves psychomotor vigilance, and may decrease sleep need. *Behavioral and brain Functions*, *6*(1), 47.	No	No
Keller, L. K., Grünewald, B., Vetter, C., Roenneberg, T., & Schulte-Körne, G. (2017). Not later, but longer: sleep, chronotype and light exposure in adolescents with remitted depression compared to healthy controls. *European child & adolescent psychiatry*, *26*(10), 1233-1244.	No	No
Khazaie, H., Ghadami, M. R., Knight, D. C., Emamian, F., & Tahmasian, M. (2013). Insomnia treatment in the third trimester of pregnancy reduces postpartum depression symptoms: a randomized clinical trial. *Psychiatry research*, *210*(3), 901-905.	No	No
Khazaie, H., Nasouri, M., & Ghadami, M. R. (2016). Prazosin for trauma nightmares and sleep disturbances in combat veterans with post-traumatic stress disorder. *Iranian journal of psychiatry and behavioral sciences*, *10*(3), e2603.	No	No
Kilkus, J. M., Booth, J. N., Bromley, L. E., Darukhanavala, A. P., Imperial, J. G., & Penev, P. D. (2012). Sleep and eating behavior in adults at risk for type 2 diabetes. *Obesity*, *20*(1), 112-117.	No	No
Killer, S. C., Svendsen, I. S., Jeukendrup, A. E., & Gleeson, M. (2017). Evidence of disturbed sleep and mood state in well-trained athletes during short-term intensified training with and without a high carbohydrate nutritional intervention. *Journal of sports sciences*, *35*(14), 1402-1410.	No	No
Kim, H. J., Lee, Y., & Sohng, K. Y. (2016). The effects of footbath on sleep among the older adults in nursing home: A quasi-experimental study. *Complementary therapies in medicine*, *26*, 40-46.	No	No
Kim, S. J., Lee, Y. J., Lee, Y. J. G., & Cho, S. J. (2014). Effect of quetiapine XR on depressive symptoms and sleep quality compared with lithium in patients with bipolar depression. *Journal of affective disorders*, *157*, 33-40.	No	No
Kirksey, M. A., Yoo, D., Danninger, T., Stundner, O., Ma, Y., & Memtsoudis, S. G. (2015). Impact of melatonin on sleep and pain after total knee arthroplasty under regional anesthesia with sedation: a double-blind, randomized, placebo-controlled pilot study. *The Journal of arthroplasty*, *30*(12), 2370-2375.	No	No
Knutson, K. L., Galli, G., Zhao, X., Mattingly, M., Cizza, G., & NIDDK Sleep Extension Study. (2011). No association between leptin levels and sleep duration or quality in obese adults. *Obesity*, *19*(12), 2433-2435.	No	No
Ko, J. S., Readal, N., Ball, M. W., Han, M., & Pierorazio, P. M. (2016). Call schedule and sleep patterns of urology residents following the 2011 ACGME reforms. *Urology practice*, *3*(2), 147-152.	No	No
Koch, B. C., Nagtegaal, J. E., Hagen, E. C., ter Wee, P. M., & Kerkhof, G. A. (2010). Different melatonin rhythms and sleep–wake rhythms in patients on peritoneal dialysis, daytime hemodialysis and nocturnal hemodialysis. *Sleep medicine*, *11*(3), 242-246.	No	No
Koch, B. C., Nagtegaal, J. E., Hagen, E. C., Van Der Westerlaken, M. M., Boringa, J. B., Kerkhof, G. A., & Ter Wee, P. M. (2009). The effects of melatonin on sleep–wake rhythm of daytime haemodialysis patients: a randomized, placebo-controlled, cross-over study (EMSCAP study). *British journal of clinical pharmacology*, *67*(1), 68-75.	No	No
Kodama, A., Kume, Y., Tsugaruya, M., & Ishikawa, T. (2016). Deriving the reference value from the circadian motor active patterns in the "non-dementia" population, compared to the "dementia" population: What is the amount of physical activity conducive to the good circadian rhythm. *Chronobiology international*, *33*(8), 1056-1063.	No	No

Reference	Sleep diary	Event marker
Koike, Y., Hoshitani, M., Tabata, Y., Seki, K., Nishimura, R., & Kano, Y. (2012). Effects of vibroacoustic therapy on elderly nursing home residents with depression. *Journal of Physical Therapy Science*, *24*(3), 291-294.	No	No
Koldobskiy, D., Diaz-Abad, M., Scharf, S. M., Brown, J., & Verceles, A. C. (2014). Long-term acute care patients weaning from prolonged mechanical ventilation maintain circadian rhythm. *Respiratory care*, *59*(4), 518-524.	No	No
Kong, D., Soon, C. S., & Chee, M. W. (2012). Functional imaging correlates of impaired distractor suppression following sleep deprivation. *Neuroimage*, *61*(1), 50-55.	No	No
Krawczak, E. M., Minuzzi, L., Simpson, W., Hidalgo, M. P., & Frey, B. N. (2016). Sleep, daily activity rhythms and postpartum mood: A longitudinal study across the perinatal period. *Chronobiology international*, *33*(7), 791-801.	No	No
Kubo, T., Takahashi, M., Liu, X., Ikeda, H., Togo, F., Shimazu, A., ... & Uesugi, J. (2016). Fatigue and sleep among employees with prospective increase in work time control: a 1-year observational study with objective assessment. *Journal of occupational and environmental medicine*, *58*(11), 1066-1072.	No	No
Kölling, S., Steinacker, J. M., Endler, S., Ferrauti, A., Meyer, T., & Kellmann, M. (2016). The longer the better: Sleep–wake patterns during preparation of the World Rowing Junior Championships. *Chronobiology international*, *33*(1), 73-84.	No	No
Kölling, S., Treff, G., Winkert, K., Ferrauti, A., Meyer, T., Pfeiffer, M., & Kellmann, M. (2017). The effect of westward travel across five time zones on sleep and subjective jet-lag ratings in athletes before and during the 2015's World Rowing Junior Championships. *Journal of sports sciences*, *35*(22), 2240-2248.	No	No
Lazreg, T. B., Laatiri, I., & Dogui, M. (2011). Circadian activity–rest and sleep–wake rhythms in blind adolescents and adults. *Biological rhythm research*, *42*(3), 219-229.	No	No
Leeder, J., Glaister, M., Pizzoferro, K., Dawson, J., & Pedlar, C. (2012). Sleep duration and quality in elite athletes measured using wristwatch actigraphy. *Journal of sports sciences*, *30*(6), 541-545.	No	No
Lim, A. S., Ellison, B. A., Wang, J. L., Yu, L., Schneider, J. A., Buchman, A. S., ... & Saper, C. B. (2014). Sleep is related to neuron numbers in the ventrolateral preoptic/intermediate nucleus in older adults with and without Alzheimer's disease. *Brain*, *137*(10), 2847-2861.	No	No
Lim, A. S., Fleischman, D. A., Dawe, R. J., Yu, L., Arfanakis, K., Buchman, A. S., & Bennett, D. A. (2016). Regional neocortical gray matter structure and sleep fragmentation in older adults. *Sleep*, *39*(1), 227-235.	No	No
Lim, A. S., Kowgier, M., Yu, L., Buchman, A. S., & Bennett, D. A. (2013). Sleep fragmentation and the risk of incident Alzheimer's disease and cognitive decline in older persons. *Sleep*, *36*(7), 1027-1032.	No	No
Lim, A. S., Yu, L., Costa, M. D., Buchman, A. S., Bennett, D. A., Leurgans, S. E., & Saper, C. B. (2011). Quantification of the fragmentation of rest-activity patterns in elderly individuals using a state transition analysis. *Sleep*, *34*(11), 1569-1581.	No	No
Lim, A. S., Yu, L., Costa, M. D., Leurgans, S. E., Buchman, A. S., Bennett, D. A., & Saper, C. B. (2012). Increased fragmentation of rest-activity patterns is associated with a characteristic pattern of cognitive impairment in older individuals. *Sleep*, *35*(5), 633-640.	No	No
Lindseth, G., & Murray, A. (2016). Dietary macronutrients and sleep. *Western journal of nursing research*, *38*(8), 938-958.	No	No
Lindseth, G., Lindseth, P., & Thompson, M. (2013). Nutritional effects on sleep. *Western journal of nursing research*, *35*(4), 497-513.	No	No
Ma, C. C., Burchfiel, C. M., Charles, L. E., Dorn, J. M., Andrew, M. E., Gu, J. K., ... & Mnatsakanova, A. (2013). Associations of objectively measured and self-reported sleep duration with carotid artery intima media thickness among police officers. *American journal of industrial medicine*, *56*(11), 1341-1351.	No	No
Manoach, D. S., Thakkar, K. N., Stroynowski, E., Ely, A., McKinley, S. K., Wamsley, E., ... & Stickgold, R. (2010). Reduced overnight consolidation of procedural learning in chronic medicated schizophrenia is related to specific sleep stages. *Journal of psychiatric research*, *44*(2), 112-120.	No	No

Reference	Sleep diary	Event marker
Matsangas, P., Shattuck, N. L., & McCauley, M. E. (2015). Sleep duration in rough sea conditions. *Aerospace medicine and human performance*, *86*(10), 901-906.	No	No
Matthews, K. A., Dahl, R. E., Owens, J. F., Lee, L., & Hall, M. (2012). Sleep duration and insulin resistance in healthy black and white adolescents. *Sleep*, *35*(10), 1353-1358.	No	No
Matthews, K. A., Hall, M., & Dahl, R. E. (2014). Sleep in Healthy Black and White Adolescents. *Pediatrics*, *133*(5), e1189-e1196.	No	No
Matthews, K. A., Hall, M. H., Cousins, J., & Lee, L. (2016). Getting a good night's sleep in adolescence: do Strategies for coping with stress matter?. *Behavioral sleep medicine*, *14*(4), 367-377.	No	No
Matthews, K. A., Strollo Jr, P. J., Hall, M., Mezick, E. J., Kamarck, T. W., Owens, J. F., ... & Reis, S. E. (2011). Associations of Framingham risk score profile and coronary artery calcification with sleep characteristics in middle-aged men and women: Pittsburgh SleepSCORE study. *Sleep*, *34*(6), 711-716.	No	No
Mazzotti, D. R., Guindalini, C., Moraes, W. A. D. S., Andersen, M. L., Cendoroglo, M. S., Ramos, L. R., & Tufik, S. (2014). Human longevity is associated with regular sleep patterns, maintenance of slow wave sleep, and favorable lipid profile. *Frontiers in aging neuroscience*, *6*, 134.	No	No
McCormick, F., Kadzielski, J., Landrigan, C. P., Evans, B., Herndon, J. H., & Rubash, H. E. (2012). Surgeon fatigue: a prospective analysis of the incidence, risk, and intervals of predicted fatigue-related impairment in residents. *Archives of Surgery*, *147*(5), 430-435.	No	No
Melamud, L., Golan, D., Luboshitzky, R., Lavi, I., & Miller, A. (2012). Melatonin dysregulation, sleep disturbances and fatigue in multiple sclerosis. *Journal of the neurological sciences*, *314*(1-2), 37-40.	No	No
Mendozzi, L., Tronci, F., Garegnani, M., & Pugnetti, L. (2010). Sleep disturbance and fatigue in mild relapsing remitting multiple sclerosis patients on chronic immunomodulant therapy: an actigraphic study. *Multiple Sclerosis Journal*, *16*(2), 238-247.	No	No
Miller, M. A., Rothenberger, S. D., Hasler, B. P., Donofry, S. D., Wong, P. M., Manuck, S. B., ... & Roecklein, K. A. (2015). Chronotype predicts positive affect rhythms measured by ecological momentary assessment. *Chronobiology international*, *32*(3), 376-384.	No	No
Miller, N. L., Tvaryanas, A. P., & Shattuck, L. G. (2012). Accommodating adolescent sleep-wake patterns: the effects of shifting the timing of sleep on training effectiveness. *Sleep*, *35*(8), 1123-1136.	No	No
Missildine, K. (2008). Sleep and the sleep environment of older adults in acute care settings. *Journal of gerontological nursing*, *34*(6), 15-21.	No	No
Missildine, K., Bergstrom, N., Meininger, J., Richards, K., & Foreman, M. D. (2010). Sleep in hospitalized elders: a pilot study. *Geriatric nursing*, *31*(4), 263-271.	No	No
Miura, A., Myouken, S., Yamada, M., Fujihara, C., Miura, K., Kashima, H., ... & Fukuba, Y. (2016). Effects of aerobic exercise in early evening onthe following nocturnal sleep and its haemodynamic response. *Research in Sports Medicine*, *24*(1), 16-29.	No	No
Miyata, S., Noda, A., Iwamoto, K., Kawano, N., Okuda, M., & Ozaki, N. (2013). Poor sleep quality impairs cognitive performance in older adults. *Journal of sleep research*, *22*(5), 535-541.	No	No
Moraleda, V., Prados, G., Martínez, M. P., Sánchez, A. I., Sabio, J. M., & Miró, E. (2017). Sleep quality, clinical and psychological manifestations in women with systemic lupus erythematosus. *International journal of rheumatic diseases*, *20*(10), 1541-1550.	No	No
Morita, E., Imai, M., Okawa, M., Miyaura, T., & Miyazaki, S. (2011). A before and after comparison of the effects of forest walking on the sleep of a community-based sample of people with sleep complaints. *BioPsychoSocial medicine*, *5*(1), 13-20.	No	No
Muns, I. W., Lad, Y., Guardiola, I. G., & Thimgan, M. (2017). Classification of Rest and Active Periods in Actigraphy Data Using PCA. *Procedia Computer Science*, *114*, 275-280.	No	No

Reference	Sleep diary	Event marker
Mustian, K. M., Sprod, L. K., Janelsins, M., Peppone, L. J., Palesh, O. G., Chandwani, K., ... & Morrow, G. R. (2013). Multicenter, Randomized Controlled Trial of Yoga for Sleep Quality Among Cancer Survivors. *Journal of Clinical Oncology*, *31*, 3233-3241.	No	No
MyllymÄki, T., KyrÖlÄinen, H., Savolainen, K., Hokka, L., Jakonen, R., Juuti, T., ... & Rusko, H. (2011). Effects of vigorous late-night exercise on sleep quality and cardiac autonomic activity. *Journal of sleep research*, *20*(1pt2), 146-153.	No	No
Myllymäki, T., Rusko, H., Syväoja, H., Juuti, T., Kinnunen, M. L., & Kyröläinen, H. (2012). Effects of exercise intensity and duration on nocturnal heart rate variability and sleep quality. *European journal of applied physiology*, *112*(3), 801-809.	No	No
Myoji, Y., Fujita, K., Mawatari, M., & Tabuchi, Y. (2015). Changes in sleep–wake rhythms, subjective sleep quality and pain among patients undergoing total hip arthroplasty. *International journal of nursing practice*, *21*(6), 764-770.	No	No
Maaskant, M., van de Wouw, E., van Wijck, R., Evenhuis, H. M., & Echteld, M. A. (2013). Circadian sleep–wake rhythm of older adults with intellectual disabilities. *Research in developmental disabilities*, *34*(4), 1144-1151.	No	No
Nagayoshi, M., Lutsey, P. L., Benkeser, D., Wassel, C. L., Folsom, A. R., Shahar, E., ... & Redline, S. (2016). Association of sleep apnea and sleep duration with peripheral artery disease: The Multi-Ethnic Study of Atherosclerosis (MESA). *Atherosclerosis*, *251*, 467-475.	No	No
Nakazaki, C., Noda, A., Koike, Y., Yamada, S., Murohara, T., & Ozaki, N. (2012). Association of insomnia and short sleep duration with atherosclerosis risk in the elderly. *American journal of hypertension*, *25*(11), 1149-1155.	No	No
Natale, V., Drejak, M., Erbacci, A., Tonetti, L., Fabbri, M., & Martoni, M. (2012). Monitoring sleep with a smartphone accelerometer. *Sleep and Biological Rhythms*, *10*(4), 287-292.	No	No
Neikrug, A. B., Rissling, M., Trofimenko, V., Liu, L., Natarajan, L., Lawton, S., ... & Ancoli-Israel, S. (2012). Bright light therapy protects women from circadian rhythm desynchronization during chemotherapy for breast cancer. *Behavioral sleep medicine*, *10*(3), 202-216.	No	No
Neylan, T. C., Metzler, T. J., Henn-Haase, C., Blank, Y., Tarasovsky, G., McCaslin, S. E., ... & Marmar, C. R. (2010). Prior night sleep duration is associated with psychomotor vigilance in a healthy sample of police academy recruits. *Chronobiology International*, *27*(7), 1493-1508.	No	No
Obayashi, K., Saeki, K., & Kurumatani, N. (2014). Association between light exposure at night and insomnia in the general elderly population: the HEIJO-KYO cohort. *Chronobiology international*, *31*(9), 976-982.	No	No
Obayashi, K., Saeki, K., Iwamoto, J., Okamoto, N., Tomioka, K., Nezu, S., ... & Kurumatani, N. (2014). Effect of exposure to evening light on sleep initiation in the elderly: a longitudinal analysis for repeated measurements in home settings. *Chronobiology international*, *31*(4), 461-467.	No	No
Okamoto-Mizuno, K., & Tsuzuki, K. (2010). Effects of season on sleep and skin temperature in the elderly. *International journal of biometeorology*, *54*(4), 401-409.	No	No
Olsen, C., Pedersen, I., Bergland, A., Enders-Slegers, M. J., Jøranson, N., Calogiuri, G., & Ihlebæk, C. (2016). Differences in quality of life in home-dwelling persons and nursing home residents with dementia–a cross-sectional study. *BMC geriatrics*, *16*(1), 137-147.	No	No
Olson, R., Crain, T. L., Bodner, T. E., King, R., Hammer, L. B., Klein, L. C., ... & Buxton, O. M. (2015). A workplace intervention improves sleep: Results from the randomized controlled Work, Family, and Health Study. *Sleep Health*, *1*(1), 55-65.	No	No
Ono, S., Komada, Y., Kamiya, T., & Shirakawa, S. (2008). A pilot study of the relationship between bowel habits and sleep health by actigraphy measurement and fecal flora analysis. *Journal of physiological anthropology*, *27*(3), 145-151.	No	No
Ostrin, L. A., Abbott, K. S., & Queener, H. M. (2017). Attenuation of short wavelengths alters sleep and the ip RGC pupil response. *Ophthalmic and Physiological Optics*, *37*(4), 440-450.	No	No

Reference	Sleep diary	Event marker
Otake, M., Miyata, S., Noda, A., Koike, Y., Hara, Y., Sugiura, M., ... & Nakashima, T. (2011). Monitoring sleep-wake rhythm with actigraphy in patients on continuous positive airway pressure therapy. *Respiration*, *82*(2), 136-141.	No	No
Owens, S., Hunte, H., Sterkel, A., Johnson, D. A., & Johnson-Lawrence, V. (2017). Association Between Discrimination and Objective and Subjective Sleep Measures in the MIDUS Adult Sample. *Psychosomatic medicine*, *79*(4), 469-478.	No	No
Pace-Schott, E. F., Rubin, Z. S., Tracy, L. E., Spencer, R. M., Orr, S. P., & Verga, P. W. (2015). Emotional trait and memory associates of sleep timing and quality. *Psychiatry research*, *229*(3), 999-1010.	No	No
Paech, G. M., Crowley, S. J., & Eastman, C. I. (2017). Sleep and cognitive performance of African-Americans and European-Americans before and during circadian misalignment produced by an abrupt 9-h delay in the sleep/wake schedule. *PloS one*, *12*(10), e0186843.	No	No
Palesh, O., Zeitzer, J. M., Conrad, A., Giese-Davis, J., Mustian, K. M., Popek, V., ... & Spiegel, D. (2008). Vagal regulation, cortisol, and sleep disruption in women with metastatic breast cancer. *Journal of Clinical Sleep Medicine*, *4*(05), 441-449.	No	No
Pallin, M., O'hare, E., Zaffaroni, A., Boyle, P., Fagan, C., Kent, B., ... & McNicholas, W. T. (2014). Comparison of a novel non-contact biomotion sensor with wrist actigraphy in estimating sleep quality in patients with obstructive sleep apnoea. *Journal of sleep research*, *23*(4), 475-484.	No	No
Paudel, M. L., Taylor, B. C., Ancoli-Israel, S., Blackwell, T., Stone, K. L., Tranah, G., ... & Osteoporotic Fractures in Men (MrOS) Study Group. (2010). Rest/activity rhythms and mortality rates in older men: MrOS Sleep Study. *Chronobiology international*, *27*(2), 363-377.	No	No
Paudel, M. L., Taylor, B. C., Diem, S. J., Stone, K. L., Ancoli-Israel, S., Redline, S., ... & Osteoporotic Fractures in Men Study Group. (2008). Association between depressive symptoms and sleep disturbances in community-dwelling older men. *Journal of the American Geriatrics Society*, *56*(7), 1228-1235.	No	No
Paudel, M. L., Taylor, B. C., Vo, T. N., Kats, A. M., Schousboe, J. T., Lui, L. Y., ... & Yaffe, K. (2017). Sleep disturbances and risk of hospitalization and inpatient days among older women. *Sleep*, *40*(4), zsx037.	No	No
Payne, J. K., Held, J., Thorpe, J., & Shaw, H. (2008). Effect of exercise on biomarkers, fatigue, sleep disturbances, and depressive symptoms in older women with breast cancer receiving hormonal therapy. In *Oncology nursing forum*, *35*(4), 635-642.	No	No
Pereira, D., & Elfering, A. (2014). Social stressors at work, sleep quality and psychosomatic health complaints—a longitudinal ambulatory field study. *Stress and Health*, *30*(1), 43-52.	No	No
Pereira, D., Bucher, S., & Elfering, A. (2016). Daily impaired detachment and short-term effects of impaired sleep quality on next-day commuting near-accidents–an ambulatory diary study. *Ergonomics*, *59*(8), 1121-1131.	No	No
Pereira, D., Gross, S., & Elfering, A. (2016). Social stressors at work, sleep, and recovery. *Applied psychophysiology and biofeedback*, *41*(1), 93-101.	No	No
Pereira, D., Meier, L. L., & Elfering, A. (2013). Short-term effects of social exclusion at work and worries on sleep. *Stress and Health*, *29*(3), 240-252.	No	No
Pereira, D., Semmer, N. K., & Elfering, A. (2014). Illegitimate tasks and sleep quality: an ambulatory study. *Stress and Health*, *30*(3), 209-221.	No	No
Peterson, L. M., Miller, K. G., Wong, P. M., Anderson, B. P., Kamarck, T. W., Matthews, K. A., ... & Manuck, S. B. (2017). Sleep duration partially accounts for race differences in diurnal cortisol dynamics. *Health Psychology*, *36*(5), 502-511.	No	No
Petrov, M. E., Kim, Y., Lauderdale, D. S., Lewis, C. E., Reis, J. P., Carnethon, M. R., ... & Glasser, S. P. (2014). Objective sleep, a novel risk factor for alterations in kidney function: the CARDIA study. *Sleep medicine*, *15*(9), 1140-1146.	No	No

Reference	Sleep diary	Event marker
Petrov, M. E. R., Kim, Y., Lauderdale, D., Lewis, C. E., Reis, J. P., Carnethon, M. R., ... & Glasser, S. J. (2013). Longitudinal associations between objective sleep and lipids: the CARDIA study. *Sleep*, *36*(11), 1587-1595.	No	No
Pham, L. V., Meinzen, C., Arias, R. S., Schwartz, N. G., Rattner, A., Miele, C. H., ... & Polotsky, V. Y. (2017). Cross-sectional comparison of sleep-disordered breathing in native peruvian highlanders and lowlanders. *High altitude medicine & biology*, *18*(1), 11-19.	No	No
Pjrek, E., Frey, R., Naderi-Heiden, A., Strnad, A., Kowarik, A., Kasper, S., & Winkler, D. (2012). Actigraphic measurements in opioid detoxification with methadone or buprenorphine. *Journal of clinical psychopharmacology*, *32*(1), 75-82.	No	No
Poh, C. H., Allen, L., Malagon, I., Gasiorowska, A., Navarro-Rodriguez, T., Powers, J., ... & Fass, R. (2010). Riser's reflux–an eye-opening experience. *Neurogastroenterology & Motility*, *22*(4), 387-394.	No	No
Poh, C. H., Gasiorowska, A., Allen, L., Navarro-Rodriguez, T., Mizyed, I., Powers, J., ... & Malagon, I. (2010). Reassessment of the principal characteristics of gastroesophageal reflux during the recumbent period using integrated actigraphy-acquired information. *The American journal of gastroenterology*, *105*(5), 1024-1031.	No	No
Pohl, D., Arevalo, F., Singh, E., Freeman, J., Tutuian, R., & Castell, D. O. (2013). Swallowing activity assessed by ambulatory impedance-pH monitoring predicts awake and asleep periods at night. *Digestive diseases and sciences*, *58*(4), 1049-1053.	No	No
Poryazova, R., Tartarotti, S., Khatami, R., Baumann, C. R., Valko, P., Kallweit, U., ... & Bassetti, C. L. (2011). Sodium oxybate in narcolepsy with cataplexy: Zurich sleep center experience. *European neurology*, *65*(3), 175-182.	No	No
Ram-Vlasov, N., Tzischinsky, O., Green, A., & Shochat, T. (2016). Creativity and habitual sleep patterns among art and social sciences undergraduate students. *Psychology of Aesthetics, Creativity, and the Arts*, *10*(3), 270-277.	No	No
Ray, K., Chatterjee, A., Panjwani, U., Kumar, S., Sahu, S., Ghosh, S., ... & Anand, J. P. (2012). Modafinil improves event related potentials P300 and contingent negative variation after 24 h sleep deprivation. *Life sciences*, *91*(3-4), 94-99.	No	No
Ray, M. A., Youngstedt, S. D., Zhang, H., Robb, S. W., Harmon, B. E., Jean-Louis, G., ... & Burch, J. B. (2014). Examination of wrist and hip actigraphy using a novel sleep estimation procedure. *Sleep Science*, *7*(2), 74-81.	No	No
Reilly-Spong, M., Park, T., & Gross, C. R. (2013). Poor sleep in organ transplant recipients: self-reports and actigraphy. *Clinical transplantation*, *27*(6), 901-913.	No	No
Rissling, M. B., Dennis, P. A., Watkins, L. L., Calhoun, P. S., Dennis, M. F., Beckham, J. C., ... & Ulmer, C. S. (2016). Circadian contrasts in heart rate variability associated with posttraumatic stress disorder symptoms in a young adult cohort. *Journal of traumatic stress*, *29*(5), 415-421.	No	No
Roane, B. M., Van Reen, E., Hart, C. N., Wing, R., & Carskadon, M. A. (2015). Estimating sleep from multisensory armband measurements: validity and reliability in teens. *Journal of sleep research*, *24*(6), 714-721.	No	No
Russcher, M., Koch, B. C., Nagtegaal, J. E., van Ittersum, F. J., Pasker-de Jong, P. C., Hagen, E. C., ... & Gaillard, C. A. (2013). Long-term effects of melatonin on quality of life and sleep in haemodialysis patients (Melody study): a randomized controlled trial. *British journal of clinical pharmacology*, *76*(5), 668-679.	No	No
Saito, H., Cherasse, Y., Suzuki, R., Mitarai, M., Ueda, F., & Urade, Y. (2017). Zinc-rich oysters as well as zinc-yeast-and astaxanthin-enriched food improved sleep efficiency and sleep onset in a randomized controlled trial of healthy individuals. *Molecular nutrition & food research*, *61*(5), 1600882.	No	No
Salwen, J. K., Smith, M. T., & Finan, P. H. (2017). Mid-treatment sleep duration predicts clinically significant knee osteoarthritis pain reduction at 6 months: effects from a behavioral sleep medicine clinical trial. *Sleep*, *40*(2), zsw064.	No	No
Samancioglu, A., Akinci, E., Osun, A., Ganiusmen, O., Ozkan, U., & Temiz, C. (2017). Actigraphic Analysis of Patients with Cervical Disc Herniation. *Turkish neurosurgery*, *27*(1), 104-113.	No	No

Reference	Sleep diary	Event marker
Sandoval, L. F., Huang, K., O'neill, J. L., Gustafson, C. J., Hix, E., Harrison, J., ... & Feldman, S. R. (2014). Measure of atopic dermatitis disease severity using actigraphy. *Journal of cutaneous medicine and surgery*, *18*(1), 49-55.	No	No
Sands, M. R., Lauderdale, D. S., Liu, K., Knutson, K. L., Matthews, K. A., Eaton, C. B., ... & Loucks, E. B. (2012). Short sleep duration is associated with carotid intima-media thickness among men in the coronary artery risk development in young adults (CARDIA) study. *Stroke*, *43*(11), 2858-2864.	No	No
Sargent, C., Lastella, M., Halson, S. L., & Roach, G. D. (2016). The validity of activity monitors for measuring sleep in elite athletes. *Journal of science and medicine in sport*, *19*(10), 848-853.	No	No
Sawamoto, R., Nozaki, T., Furukawa, T., Tanahashi, T., Morita, C., Hata, T., ... & Sudo, N. (2014). Higher sleep fragmentation predicts a lower magnitude of weight loss in overweight and obese women participating in a weight-loss intervention. *Nutrition & diabetes*, *4*(10), e144.	No	No
Sawamoto, R., Nozaki, T., Furukawa, T., Tanahashi, T., Morita, C., Hata, T., ... & Sudo, N. (2016). A change in objective sleep duration is associated with a change in the serum adiponectin level of women with overweight or obesity undergoing weight loss intervention. *Obesity science & practice*, *2*(2), 180-188.	No	No
Scatena, M., Dittoni, S., Maviglia, R., Frusciante, R., Testani, E., Vollono, C., ... & Farina, B. (2012). An integrated video-analysis software system designed for movement detection and sleep analysis. Validation of a tool for the behavioural study of sleep. *Clinical Neurophysiology*, *123*(2), 318-323.	No	No
Scott, J., Naismith, S., Grierson, A., Carpenter, J., Hermens, D., Scott, E., & Hickie, I. (2016). Sleep–wake cycle phenotypes in young people with familial and non-familial mood disorders. *Bipolar disorders*, *18*(8), 642-649.	No	No
Sharif, M. M., & BaHammam, A. S. (2013). Sleep estimation using BodyMedia's SenseWear™ armband in patients with obstructive sleep apnea. *Annals of thoracic medicine*, *8*(1), 53-57.	No	No
Spira, A. P., Stone, K., Beaudreau, S. A., Ancoli-Israel, S., & Yaffe, K. (2009). Anxiety symptoms and objectively measured sleep quality in older women. *The American Journal of Geriatric Psychiatry*, *17*(2), 136-143.	No	No
Stebelová, K., Molčan, Ľ., Okuliarová, M., Hanuliak, P., Hartman, P., Hraška, J., & Zeman, M. (2015). The influence of indoor lighting with low blue light dose on urine 6-sulphatoxymelatonin concentrations and sleep efficiency of healthy volunteers. *Biological rhythm research*, *46*(1), 137-145.	No	No
Stone, K. L., Ensrud, K. E., & Ancoli-Israel, S. (2008). Sleep, insomnia and falls in elderly patients. *Sleep medicine*, *9*(1), 18-22.	No	No
Suh, M., Barksdale, D. J., & Logan, J. G. (2014). Morning blood pressure surge and nighttime blood pressure in relation to nocturnal sleep pattern and arterial stiffness. *Journal of Cardiovascular Nursing*, *29*(2), 10-17.	No	No
Sultan, A., Choudhary, V., & Parganiha, A. (2017). Monitoring of rest-activity rhythm in cancer patients paves the way for the adoption of patient-specific chronotherapeutic approach. *Biological Rhythm Research*, *48*(2), 189-205.	No	No
Suppiah, H. T., Low, C. Y., Choong, G. C. W., & Chia, M. (2016). Restricted and unrestricted sleep schedules of Asian adolescent, high-level student athletes: effects on sleep durations, marksmanship and cognitive performance. *Biological Rhythm Research*, *47*(4), 505-518.	No	No
Takahara, M., Mizuno, K., Hirose, K., Sakai, K., Nishii, K., Onozuka, M., ... & Shirakawa, S. (2008). Continuous recording of autonomic nervous activity at nighttime effectively explains subjective sleep reports in postmenopausal women. *Sleep and Biological Rhythms*, *6*(4), 215-221.	No	No
Takao, T., Tsujimura, A., Yamamoto, K., Fukuhara, S., Nakayama, J., Matsuoka, Y., ... & Nonomura, N. (2011). Solifenacin may improve sleep quality in patients with overactive bladder and sleep disturbance. *Urology*, *78*(3), 648-652.	No	No
Tanev, K. S., Winokur, A., & Pitman, R. K. (2017). Sleep Patterns and Neuropsychiatric Symptoms in Hospitalized Patients With Dementia. *The Journal of neuropsychiatry and clinical neurosciences*, *29*(3), 248-253.	No	No

Reference	Sleep diary	Event marker
Tippin, J., Aksan, N., Dawson, J., Anderson, S. W., & Rizzo, M. (2016). Sleep remains disturbed in patients with obstructive sleep apnea treated with positive airway pressure: a three-month cohort study using continuous actigraphy. *Sleep medicine*, *24*, 24-31.	No	No
Todd, O. M., Gelrich, L., MacLullich, A. M., Driessen, M., Thomas, C., & Kreisel, S. H. (2017). Sleep disruption at home as an independent risk factor for postoperative delirium. *Journal of the American Geriatrics Society*, *65*(5), 949-957.	No	No
Towns, S. J., Zeitzer, J., Kamper, J., Holcomb, E., Silva, M. A., Schwartz, D. J., & Nakase-Richardson, R. (2016). Implementation of actigraphy in acute traumatic brain injury (TBI) neurorehabilitation admissions: a veterans administration TBI model systems feasibility study. *PM&R*, *8*(11), 1046-1054.	No	No
Tranah, G. J., Blackwell, T., Ancoli-Israel, S., Paudel, M. L., Ensrud, K. E., Cauley, J. A., ... & Study of Osteoporotic Fractures Research Group. (2010). Circadian activity rhythms and mortality: the study of osteoporotic fractures. *Journal of the American Geriatrics Society*, *58*(2), 282-291.	No	No
Trento, M., Broglio, F., Riganti, F., Basile, M., Borgo, E., Kucich, C., ... & Ghigo, E. (2008). Sleep abnormalities in type 2 diabetes may be associated with glycemic control. *Acta diabetologica*, *45*(4), 225-229.	No	No
Troxel, W. M., Lee, L., Hall, M., & Matthews, K. A. (2014). Single-parent family structure and sleep problems in black and white adolescents. *Sleep medicine*, *15*(2), 255-261.	No	No
Tu, K. M., Erath, S. A., & El-Sheikh, M. (2015). Peer victimization and adolescent adjustment: The moderating role of sleep. *Journal of abnormal child psychology*, *43*(8), 1447-1457.	No	No
Valembois, L., Oasi, C., Pariel, S., Jarzebowski, W., Lafuente-Lafuente, C., & Belmin, J. (2015). Wrist actigraphy: A simple way to record motor activity in elderly patients with dementia and apathy or aberrant motor behavior. *The journal of nutrition, health & aging*, *19*(7), 759-764.	No	No
VanBuskirk, K., Roesch, S., Afari, N., & Wetherell, J. L. (2014). Physical activity of patients with chronic pain receiving acceptance and commitment therapy or cognitive behavioural therapy. *Behaviour Change*, *31*(2), 131-143.	No	No
Walsh, C. M., Blackwell, T., Tranah, G. J., Stone, K. L., Ancoli-Israel, S., Redline, S., ... & Yaffe, K. (2014). Weaker circadian activity rhythms are associated with poorer executive function in older women. *Sleep*, *37*(12), 2009-2016.	No	No
Wang, D., Wong, K. K., Dungan II, G. C., Buchanan, P. R., Yee, B. J., & Grunstein, R. R. (2008). The validity of wrist actimetry assessment of sleep with and without sleep apnea. *Journal of Clinical Sleep Medicine*, *4*(05), 450-455.	No	No
Wang, X., & Youngstedt, S. D. (2014). Sleep quality improved following a single session of moderate-intensity aerobic exercise in older women: Results from a pilot study. *Journal of sport and health science*, *3*(4), 338-342.	No	No
Wehrens, S. M., Christou, S., Isherwood, C., Middleton, B., Gibbs, M. A., Archer, S. N., ... & Johnston, J. D. (2017). Meal timing regulates the human circadian system. *Current Biology*, *27*(12), 1768-1775.	No	No
Weinstock, T. G., Wang, X., Rueschman, M., Ismail-Beigi, F., Aylor, J., Babineau, D. C., ... & Redline, S. (2012). A controlled trial of CPAP therapy on metabolic control in individuals with impaired glucose tolerance and sleep apnea. *Sleep*, *35*(5), 617-625.	No	No
Weiss, A., Xu, F., Storfer-Isser, A., Thomas, A., Ievers-Landis, C. E., & Redline, S. (2010). The association of sleep duration with adolescents' fat and carbohydrate consumption. *Sleep*, *33*(9), 1201-1209.	No	No
West, S. D., Kohler, M., Nicoll, D. J., & Stradling, J. R. (2009). The effect of continuous positive airway pressure treatment on physical activity in patients with obstructive sleep apnoea: a randomised controlled trial. *Sleep medicine*, *10*(9), 1056-1058.	No	No
Westerberg, C. E., Lundgren, E. M., Florczak, S. M., Mesulam, M. M., Weintraub, S., Zee, P. C., & Paller, K. A. (2010). Sleep influences the severity of memory disruption in amnestic mild cognitive impairment: results from sleep self-assessment and continuous activity monitoring. *Alzheimer disease and associated disorders*, *24*(4), 325-333.	No	No

Reference	Sleep diary	Event marker
Willette-Murphy, K., Lee, K. A., Dodd, M., West, C., Aouizerat, B. E., Paul, S., ... & Miaskowski, C. (2009). Relationship between sleep and physical activity in female family caregivers at the initiation of patients' radiation therapy. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, *38*(3), 367-374.	No	No
Winkler, D., Pjrek, E., Lanzenberger, R., Baldinger, P., Eitel, D., Kasper, S., & Frey, R. (2014). Actigraphy in patients with treatment-resistant depression undergoing electroconvulsive therapy. *Journal of psychiatric research*, *57*, 96-100.	No	No
Wirth, M. D., Hébert, J. R., Hand, G. A., Youngstedt, S. D., Hurley, T. G., Shook, R. P., ... & Blair, S. N. (2015). Association between actigraphic sleep metrics and body composition. *Annals of epidemiology*, *25*(10), 773-778.	No	No
Witkowski, S., Trujillo, L. T., Sherman, S. M., Carter, P., Matthews, M. D., & Schnyer, D. M. (2015). An examination of the association between chronic sleep restriction and electrocortical arousal in college students. *Clinical Neurophysiology*, *126*(3), 549-557.	No	No
Wolfe, J., Kar, K., Perry, A., Reynolds, C., Gradisar, M., & Short, M. A. (2014). Single night video-game use leads to sleep loss and attention deficits in older adolescents. *Journal of adolescence*, *37*(7), 1003-1009.	No	No
Wong, P. M., Hasler, B. P., Kamarck, T. W., Muldoon, M. F., & Manuck, S. B. (2015). Social jetlag, chronotype, and cardiometabolic risk. *The Journal of Clinical Endocrinology & Metabolism*, *100*(12), 4612-4620.	No	No
Wright, C. E., Schnur, J. B., Montgomery, G. H., & Bovbjerg, D. H. (2010). Psychological factors associated with poor sleep prior to breast surgery: an exploratory study. *Behavioral medicine*, *36*(3), 85-91.	No	No
Yamasaki, A., Kawasaki, Y., Takeda, K., Harada, T., Fukushima, T., Takata, M., ... & Shimizu, E. (2014). The relationships among sleep efficiency, pulmonary functions, and quality of life in patients with asthma. *International journal of general medicine*, *7*, 505-512.	No	No
Yamauchi, M., Jacono, F. J., Fujita, Y., Kumamoto, M., Yoshikawa, M., Campanaro, C. K., ... & Kimura, H. (2014). Effects of environment light during sleep on autonomic functions of heart rate and breathing. *Sleep and Breathing*, *18*(4), 829-835.	No	No
Yennurajalingam, S., Tayjasanant, S., Balachandran, D., Padhye, N. S., Williams, J. L., Liu, D. D., ... & Bruera, E. (2016). Association between daytime activity, fatigue, sleep, anxiety, depression, and symptom burden in advanced cancer patients: a preliminary report. *Journal of palliative medicine*, *19*(8), 849-856.	No	No
Yi, C. H., Lei, W. Y., Hung, J. S., Liu, T. T., Orr, W. C., & Chen, C. L. (2016). Sleep disturbance and enhanced esophageal capsaicin sensitivity in patients with gastroesophageal reflux disease. *Journal of gastroenterology and hepatology*, *31*(12), 1940-1945.	No	No
Yin, X., Gou, M., Xu, J., Dong, B., Yin, P., Masquelin, F., ... & Xu, S. (2017). Efficacy and safety of acupuncture treatment on primary insomnia: a randomized controlled trial. *Sleep medicine*, *37*, 193-200.	No	No
Yoh, K., Nishikawa, H., Enomoto, H., Iwata, Y., Kishino, K., Shimono, Y., ... & Aizawa, N. (2016). Comparison of sleep disorders in chronic hepatitis C patients treated with interferon-based therapy and direct acting antivirals using actigraphy. *Hepatology Research*, *46*(13), 1358-1366.	No	No
Zhu, M. L., Ouyang, Q., Shen, H. G., & Zhu, Y. X. (2016). Field study on the objective evaluation of sleep quality and sleeping thermal environment in summer. *Energy and Buildings*, *133*, 843-852.	No	No
Zollman, F. S., Larson, E. B., Wasek-Throm, L. K., Cyborski, C. M., & Bode, R. K. (2012). Acupuncture for treatment of insomnia in patients with traumatic brain injury: a pilot intervention study. *The Journal of head trauma rehabilitation*, *27*(2), 135-142.	No	No
Zuurbier, L. A., Ikram, M. A., Luik, A. I., Hofman, A., Van Someren, E. J., Vernooij, M. W., & Tiemeier, H. (2015). Cerebral small vessel disease is related to disturbed 24-h activity rhythms: a population-based study. *European journal of neurology*, *22*(11), 1482-1487.	No	No

Research articles with sleep diary and/or event marker

Reference	Sleep diary	Event marker
Articles that did not report any interaction between the sleep diary and/or the event marker and the actigraphic data		
Abulafia, C., Duarte-Abritta, B., Villarreal, M. F., Ladrón-de-Guevara, M. S., García, C., Sequeyra, G., ... & Vigo, D. E. (2017). Relationship between Cognitive and Sleep–wake Variables in Asymptomatic Offspring of Patients with Late-onset Alzheimer's Disease. *Frontiers in aging neuroscience*, *9*, 93.	Yes	No
Afonso, P., Brissos, S., Figueira, M. L., & Paiva, T. (2011). Schizophrenia patients with predominantly positive symptoms have more disturbed sleep–wake cycles measured by actigraphy. *Psychiatry Research*, *189*(1), 62-66.	Yes	No
Afonso, P., Figueira, M. L., & Paiva, T. (2014). Sleep–wake patterns in schizophrenia patients compared to healthy controls. *The World Journal of Biological Psychiatry*, *15*(7), 517-524.	Yes	No
Afonso, P., Figueira, M. L., & Paiva, T. (2011). Sleep-promoting action of the endogenous melatonin in schizophrenia compared to healthy controls. *International journal of psychiatry in clinical practice*, *15*(4), 311-315.	Yes	Yes
Agarwal, R., & Light, R. P. (2008). Physical activity and hemodynamic reactivity in chronic kidney disease. *Clinical Journal of the American Society of Nephrology*, *3*(6), 1660-1668.	Yes	No
Agarwal, R., & Light, R. P. (2010). The effect of measuring ambulatory blood pressure on nighttime sleep and daytime activity—implications for dipping. *Clinical Journal of the American Society of Nephrology*, *5*(2), 281-285.	Yes	No
Agarwal, R., & Light, R. P. (2011). Sleep and activity in chronic kidney disease: a longitudinal study. *Clinical Journal of the American Society of Nephrology*, *6*(6), 1258-1265.	Yes	No
Akatsu, H., Ewing, S., Stefanick, M., Fink, H., Stone, K., Barrett-Connor, E., ... & Osteoporotic Fractures in Men (MrOS) Research Group. (2014). Association between thyroid function and objective and subjective sleep quality in older men: the osteoporotic fractures in men (MrOS) study. *Endocrine Practice*, *20*(6), 576-586.	Yes	No
Alakuijala, A., Sarkanen, T., & Partinen, M. (2016). Hypocretin-1 levels associate with fragmented sleep in patients with narcolepsy type 1. *Sleep*, *39*(5), 1047-1050.	Yes	No
Albouy, G., Vandewalle, G., Sterpenich, V., Rauchs, G., Desseilles, M., Balteau, E., ... & Maquet, P. (2013). Sleep stabilizes visuomotor adaptation memory: a functional magnetic resonance imaging study. *Journal of sleep research*, *22*(2), 144-154.	Yes	No
Alessi, C., Martin, J. L., Fiorentino, L., Fung, C. H., Dzierzewski, J. M., Rodriguez Tapia, J. C., ... & Mitchell, M. N. (2016). Cognitive behavioral therapy for insomnia in older veterans using nonclinician sleep coaches: randomized controlled trial. *Journal of the American Geriatrics Society*, *64*(9), 1830-1838.	Yes	No
Alessi, C. A., Martin, J. L., Webber, A. P., Alam, T., Littner, M. R., Harker, J. O., & Josephson, K. R. (2008). More daytime sleeping predicts less functional recovery among older people undergoing inpatient post-acute rehabilitation. *Sleep*, *31*(9), 1291-1300.	Yes	No
Amirian, I., Andersen, L. T., Rosenberg, J., & Gögenur, I. (2015). Working night shifts affects surgeons' biological rhythm. *The American Journal of Surgery*, *210*(2), 389-395.	Yes	No
Amirian, I., Andersen, L. T., Rosenberg, J., & Gögenur, I. (2014). Laparoscopic skills and cognitive function are not affected in surgeons during a night shift. *Journal of surgical education*, *71*(4), 543-550.	Yes	No
Anderson, K. N., Pilsworth, S., Jamieson, S., Ray, J., Shneerson, J. M., & Lennox, G. G. (2008). Sleep disturbance in adults with Angelman syndrome. *Sleep and Biological Rhythms*, *6*(2), 95-101.	Yes	No
Ankers, D., & Jones, S. H. (2009). Objective assessment of circadian activity and sleep patterns in individuals at behavioural risk of hypomania. *Journal of clinical psychology*, *65*(10), 1071-1086.	Yes	No
Antczak, J., Poleszczyk, A., Wichniak, A., Rakowicz, M., & Parnowski, T. (2017). The influence of the repetitive transcranial magnetic stimulation on sleep quality in depression. *Psychiatria polska*, *51*(5), 845-857.	Yes	No

Reference	Sleep diary	Event marker
Arias, P., Madinabeitia-Mancebo, E., Santiago, M., Corral-Bergantino, Y., & Robles-Garcia, V. (2016). Effects of early or late-evening fatiguing physical activity on sleep quality in non-professional sportsmen. *The Journal of sports medicine and physical fitness*, *56*(5), 597-605.	Yes	Yes
Arnulf, I., Brion, A., Pottier, M., & Golmard, J. L. (2011). Ring the bell for Matins: circadian adaptation to split sleep by cloistered monks and nuns. *Chronobiology international*, *28*(10), 930-941.	Yes	No
Aronsohn, R. S., Whitmore, H., Van Cauter, E., & Tasali, E. (2010). Impact of untreated obstructive sleep apnea on glucose control in type 2 diabetes. *American journal of respiratory and critical care medicine*, *181*(5), 507-513.	Yes	No
Astill, R. G., Verhoeven, D., Vijzelaar, R. L., & Van Someren, E. J. (2013). Chronic stress undermines the compensatory sleep efficiency increase in response to sleep restriction in adolescents. *Journal of sleep research*, *22*(4), 373-379.	Yes	No
Atalla, A., Carlisle, T. W., Simonds, A. K., Cowie, M. R., & Morrell, M. J. (2017). Sleepiness and activity in heart failure patients with reduced ejection fraction and central sleep-disordered breathing. *Sleep medicine*, *34*, 217-223.	Yes	No
Bagley, E. J., Tu, K. M., Buckhalt, J. A., & El-Sheikh, M. (2016). Community violence concerns and adolescent sleep. *Sleep health*, *2*(1), 57-62.	Yes	No
Baker, E., Richdale, A., Short, M., & Gradisar, M. (2013). An investigation of sleep patterns in adolescents with high-functioning autism spectrum disorder compared with typically developing adolescents. *Developmental neurorehabilitation*, *16*(3), 155-165.	Yes	No
Baker, E. K., & Richdale, A. L. (2017). Examining the behavioural sleep-wake rhythm in adults with autism spectrum disorder and no comorbid intellectual disability. *Journal of autism and developmental disorders*, *47*(4), 1207-1222.	Yes	No
Baker, E. K., & Richdale, A. L. (2015). Sleep patterns in adults with a diagnosis of high-functioning autism spectrum disorder. *Sleep*, *38*(11), 1765-1774.	Yes	No
Baker, E. K., Richdale, A. L., Hazi, A., & Prendergast, L. A. (2017). Assessing the Dim Light Melatonin Onset in Adults with Autism Spectrum Disorder and No Comorbid Intellectual Disability. *Journal of autism and developmental disorders*, *47*(7), 2120-2137.	Yes	No
Banks, S., Van Dongen, H. P., Maislin, G., & Dinges, D. F. (2010). Neurobehavioral dynamics following chronic sleep restriction: dose-response effects of one night for recovery. *Sleep*, *33*(8), 1013-1026.	Yes	No
Barger, L. K., Flynn-Evans, E. E., Kubey, A., Walsh, L., Ronda, J. M., Wang, W., ... & Czeisler, C. A. (2014). Prevalence of sleep deficiency and use of hypnotic drugs in astronauts before, during, and after spaceflight: an observational study. *The Lancet Neurology*, *13*(9), 904-912.	Yes	No
Barger, L. K., Sullivan, J. P., Vincent, A. S., Fiedler, E. R., McKenna, L. M., Flynn-Evans, E. E., ... & Lockley, S. W. (2012). Learning to live on a Mars day: fatigue countermeasures during the Phoenix Mars Lander mission. *Sleep*, *35*(10), 1423-1435.	Yes	No
Barmar, B., Dang, Q., Isquith, D., Buysse, D., & Unruh, M. (2009). Comparison of sleep/wake behavior in CKD stages 4 to 5 and hemodialysis populations using wrist actigraphy. *American Journal of Kidney Diseases*, *53*(4), 665-672.	Yes	No
Baron, K. G., Reid, K. J., Kern, A. S., & Zee, P. C. (2011). Role of sleep timing in caloric intake and BMI. *Obesity*, *19*(7), 1374-1381.	Yes	No
Basner, M., Dinges, D. F., Shea, J. A., Small, D. S., Zhu, J., Norton, L., ... & Volpp, K. G. (2017). Sleep and alertness in medical interns and residents: an observational study on the role of extended shifts. *Sleep*, *40*(4).	Yes	No
Bathgate, C. J., Edinger, J. D., & Krystal, A. D. (2017). Insomnia patients with objective short sleep duration have a blunted response to cognitive behavioral therapy for insomnia. *Sleep*, *40*(1).	Yes	No
Baum, K. T., Desai, A., Field, J., Miller, L. E., Rausch, J., & Beebe, D. W. (2014). Sleep restriction worsens mood and emotion regulation in adolescents. *Journal of Child Psychology and Psychiatry*, *55*(2), 180-190.	Yes	No

Reference	Sleep diary	Event marker
Beebe, D. W., Fallone, G., Godiwala, N., Flanigan, M., Martin, D., Schaffner, L., & Amin, R. (2008). Feasibility and behavioral effects of an at-home multi-night sleep restriction protocol for adolescents. *Journal of Child Psychology and Psychiatry*, *49*(9), 915-923.	Yes	No
Beebe, D. W., Simon, S., Summer, S., Hemmer, S., Strotman, D., & Dolan, L. M. (2013). Dietary intake following experimentally restricted sleep in adolescents. *Sleep*, *36*(6), 827-834.	Yes	No
Beebe, D. W., Zhou, A., Rausch, J., Noe, O., & Simon, S. L. (2015). The impact of early bedtimes on adolescent caloric intake varies by chronotype. *Journal of Adolescent Health*, *57*(1), 120-122.	Yes	No
Bei, B., Manber, R., Allen, N. B., Trinder, J., & Wiley, J. F. (2017). Too long, too short, or too variable? Sleep intraindividual variability and its associations with perceived sleep quality and mood in adolescents during naturalistically unconstrained sleep. *Sleep*, *40*(2).	No	Yes
Bei, B., Milgrom, J., Ericksen, J., & Trinder, J. (2010). Subjective perception of sleep, but not its objective quality, is associated with immediate postpartum mood disturbances in healthy women. *Sleep*, *33*(4), 531-538.	No	Yes
Bei, B., Wiley, J. F., Allen, N. B., & Trinder, J. (2015). A cognitive vulnerability model of sleep and mood in adolescents under naturalistically restricted and extended sleep opportunities. *Sleep*, *38*(3), 453-461.	No	Yes
Beijamini, F., & Louzada, F. M. (2012). Are educational interventions able to prevent excessive daytime sleepiness in adolescents?. *Biological rhythm research*, *43*(6), 603-613.	Yes	No
Benedetti, F., Melloni, E. M., Dallaspezia, S., Bollettini, I., Locatelli, C., Poletti, S., & Colombo, C. (2017). Night sleep influences white matter microstructure in bipolar depression. *Journal of affective disorders*, *218*, 380-387.	Yes	No
Berger, A. M., Grem, J. L., Visovsky, C., Marunda, H. A., & Yurkovich, J. M. (2010, November). Fatigue and other variables during adjuvant chemotherapy for colon and rectal cancer. In *Oncology nursing forum*, *37*(6).	Yes	Yes
Berger, A. M., Hertzog, M., Geary, C. R., Fischer, P., & Farr, L. (2012). Circadian rhythms, symptoms, physical functioning, and body mass index in breast cancer survivors. *Journal of Cancer Survivorship*, *6*(3), 305-314.	Yes	Yes
Berger, A. M., Kuhn, B. R., Farr, L. A., Von Essen, S. G., Chamberlain, J., Lynch, J. C., & Agrawal, S. (2009). One-year outcomes of a behavioral therapy intervention trial on sleep quality and cancer-related fatigue. *Journal of Clinical Oncology*, *27*(35), 6033-6040.	Yes	Yes
Bernard, P., Ivers, H., Savard, M. H., & Savard, J. (2016). Temporal relationships between sleep and physical activity among breast cancer patients with insomnia. *Health Psychology*, *35*(12), 1307-1315.	No	Yes
Beveridge, C., Knutson, K., Spampinato, L., Flores, A., Meltzer, D. O., Van Cauter, E., & Arora, V. M. (2015). Daytime physical activity and sleep in hospitalized older adults: association with demographic characteristics and disease severity. *Journal of the American Geriatrics Society*, *63*(7), 1391-1400.	Yes	No
Bhave, M. A., Speth, K. A., Kidwell, K. M., Lyden, A., Alsamarraie, C., Murphy, S. L., & Henry, N. L. (2018). Effect of Aromatase Inhibitor Therapy on Sleep and Activity Patterns in Early-stage Breast Cancer. *Clinical breast cancer*, *18*(2), 168-174.	Yes	No
Biermasz, N. R., Joustra, S. D., Donga, E., Pereira, A. M., van Duinen, N., van Dijk, M., ... & van Dijk, J. G. (2011). Patients previously treated for nonfunctioning pituitary macroadenomas have disturbed sleep characteristics, circadian movement rhythm, and subjective sleep quality. *The Journal of Clinical Endocrinology & Metabolism*, *96*(5), 1524-1532.	Yes	No
Bloomfield, I. L., Espie, C. A., & Evans, J. J. (2010). Do sleep difficulties exacerbate deficits in sustained attention following traumatic brain injury?. *Journal of the International Neuropsychological Society*, *16*(1), 17-25.	Yes	No
Borgers, A. J., Romeijn, N., van Someren, E., Fliers, E., Alkemade, A., & Bisschop, P. H. (2011). Compression of the optic chiasm is associated with permanent shorter sleep duration in patients with pituitary insufficiency. *Clinical endocrinology*, *75*(3), 347-353.	Yes	No

Reference	Sleep diary	Event marker
Brooks, A. T., Krumlauf, M. C., Whiting, B. P., Clark, R. J., & Wallen, G. R. (2012). Are you sleeping? Pilot comparison of self-reported and objective measures of sleep quality and duration in an inpatient alcoholism treatment program. *Substance abuse: research and treatment*, *6*, 135-139.	Yes	No
Brown, C. A., Bostick, G., Bellmore, L., & Kumanayaka, D. (2014). Hand self-Shiatsu for sleep problems in persons with chronic pain: a pilot study. *Journal of integrative medicine*, *12*(2), 94-101.	Yes	No
Brychta, R. J., Arnardottir, N. Y., Johannsson, E., Wright, E. C., Eiriksdottir, G., Gudnason, V., ... & Sveinsson, T. (2016). Influence of day length and physical activity on sleep patterns in older Icelandic men and women. *Journal of Clinical Sleep Medicine*, *12*(02), 203-213.	Yes	No
Brøndsted, A. E., Haargaard, B., Sander, B., Lund-Andersen, H., Jennum, P., & Kessel, L. (2017). The effect of blue-blocking and neutral intraocular lenses on circadian photoentrainment and sleep one year after cataract surgery. *Acta ophthalmologica*, *95*(4), 344-351.	Yes	Yes
Buchanan, D. T., Cain, K., Heitkemper, M., Burr, R., Vitiello, M. V., Zia, J., & Jarrett, M. (2014). Sleep measures predict next-day symptoms in women with irritable bowel syndrome. *Journal of Clinical Sleep Medicine*, *10*(09), 1003-1009.	Yes	No
Budhiraja, R., Parthasarathy, S., Budhiraja, P., Habib, M. P., Wendel, C., & Quan, S. F. (2012). Insomnia in patients with COPD. *Sleep*, *35*(3), 369-375.	Yes	No
Calev, H., Spampinato, L. M., Press, V. G., Meltzer, D. O., & Arora, V. M. (2015). Prevalence of impaired memory in hospitalized adults and associations with in-hospital sleep loss. *Journal of hospital medicine*, *10*(7), 439-445.	Yes	No
Campbell, A., & Neill, A. (2016). Melatonin-rich milk fortified with alpha s1 casein tryptic hydrolysate improves primary insomnia: a randomized placebo controlled trial. *Sleep and Biological Rhythms*, *14*(4), 351-360.	Yes	No
Campbell, C. M., Buenaver, L. F., Finan, P., Bounds, S. C., Redding, M., McCauley, L., ... & Smith, M. T. (2015). Sleep, pain catastrophizing, and central sensitization in knee osteoarthritis patients with and without insomnia. *Arthritis care & research*, *67*(10), 1387-1396.	Yes	No
Campbell, S. S., Stanchina, M. D., Schlang, J. R., & Murphy, P. J. (2011). Effects of a Month-Long Napping Regimen in Older Individuals. *Journal of the American Geriatrics Society*, *59*(2), 224-232.	Yes	No
Carney, S., Koetters, T., Cho, M., West, C., Paul, S. M., Dunn, L., ... & Wara, W. (2011). Differences in sleep disturbance parameters between oncology outpatients and their family caregivers. *Journal of Clinical Oncology*, *29*(8), 1001-1006.	Yes	No
Castro, J., Zanini, M., Gonçalves, B. D. S. B., Coelho, F. M. S., Bressan, R., Bittencourt, L., ... & Tufik, S. (2015). Circadian rest–activity rhythm in individuals at risk for psychosis and bipolar disorder. *Schizophrenia research*, *168*(1-2), 50-55.	Yes	No
Cavalcanti, P., Campos, T., & Araujo, J. (2012). Actigraphic analysis of the sleep–wake cycle and physical activity level in patients with stroke: Implications for clinical practice. *Chronobiology international*, *29*(9), 1267-1272.	Yes	Yes
Chan, W. S. (2017). Delay discounting and response disinhibition moderate associations between actigraphically measured sleep parameters and body mass index. *Journal of sleep research*, *26*(1), 21-29.	Yes	No
Chang, W. P., & Lin, C. C. (2014). Correlation between rest-activity rhythm and survival in cancer patients experiencing pain. *Chronobiology international*, *31*(8), 926-934.	Yes	No
Cheeseman, J. F., Webster, C. S., Pawley, M. D., Francis, M. A., Warman, G. R., & Merry, A. F. (2011). Use of a new task-relevant test to assess the effects of shift work and drug labelling formats on anesthesia trainees' drug recognition and confirmation. *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*, *58*(1), 38-47.	Yes	No
Chen, J. H., Waite, L., Kurina, L. M., Thisted, R. A., McClintock, M., Lauderdale, D. S., & Kritchevsky, S. (2014). Insomnia symptoms and actigraph-estimated sleep characteristics in a nationally representative sample of older adults. *Journals of Gerontology Series A: Biomedical Sciences and Medical Sciences*, *70*(2), 185-192.	No	Yes

Reference	Sleep diary	Event marker
Chen, J. H., Waite, L. J., & Lauderdale, D. S. (2015). Marriage, relationship quality, and sleep among US older adults. *Journal of health and social behavior*, *56*(3), 356-377.	Yes	No
Chen, M. C., Burley, H. W., & Gotlib, I. H. (2012). Reduced sleep quality in healthy girls at risk for depression. *Journal of sleep research*, *21*(1), 68-72.	Yes	No
Chen, W. T., Lee, S. Y., Shiu, C. S., Simoni, J. M., Pan, C., Bao, M., & Lu, H. (2013). Fatigue and sleep disturbance in HIV-positive women: a qualitative and biomedical approach. *Journal of clinical nursing*, *22*(9-10), 1262-1269.	Yes	Yes
Cincotta, A. L., Gehrman, P., Gooneratne, N. S., & Baime, M. J. (2011). The effects of a mindfulness-based stress reduction programme on pre-sleep cognitive arousal and insomnia symptoms: a pilot study. *Stress and Health*, *27*(3), 299-305.	Yes	No
Cizza, G., de Jonge, L., Piaggi, P., Mattingly, M., Zhao, X., Lucassen, E., ... & NIDDK Sleep Extension Study. (2014). Neck circumference is a predictor of metabolic syndrome and obstructive sleep apnea in short-sleeping obese men and women. *Metabolic syndrome and related disorders*, *12*(4), 231-241.	Yes	No
Cizza, G., Piaggi, P., Lucassen, E. A., de Jonge, L., Walter, M., Mattingly, M. S., ... & Rother, K. I. (2013). Obstructive sleep apnea is a predictor of abnormal glucose metabolism in chronically sleep deprived obese adults. *PloS one*, *8*(5), e65400.	Yes	No
Cizza, G., Piaggi, P., Rother, K. I., Csako, G., & Sleep Extension Study Group. (2014). Hawthorne effect with transient behavioral and biochemical changes in a randomized controlled sleep extension trial of chronically short-sleeping obese adults: implications for the design and interpretation of clinical studies. *PLoS One*, *9*(8), e104176.	Yes	No
Clarke, G., McGlinchey, E. L., Hein, K., Gullion, C. M., Dickerson, J. F., Leo, M. C., & Harvey, A. G. (2015). Cognitive-behavioral treatment of insomnia and depression in adolescents: a pilot randomized trial. *Behaviour research and therapy*, *69*, 111-118.	Yes	No
Cochrane, A., Robertson, I. H., & Coogan, A. N. (2012). Association between circadian rhythms, sleep and cognitive impairment in healthy older adults: an actigraphic study. *Journal of neural transmission*, *119*(10), 1233-1239.	Yes	No
Cohen-Zion, M., Shabi, A., Levy, S., Glasner, L., & Wiener, A. (2016). Effects of partial sleep deprivation on information processing speed in adolescence. *Journal of the International Neuropsychological Society*, *22*(4), 388-398.	Yes	No
Connaughton, J., Patman, S., & Pardoe, C. (2014). Are there associations among physical activity, fatigue, sleep quality and pain in people with mental illness? A pilot study. *Journal of psychiatric and mental health nursing*, *21*(8), 738-745.	Yes	No
Corbett, R. W., Middleton, B., & Arendt, J. (2012). An hour of bright white light in the early morning improves performance and advances sleep and circadian phase during the Antarctic winter. *Neuroscience letters*, *525*(2), 146-151.	Yes	No
Cornu, C., Remontet, L., Noel-Baron, F., Nicolas, A., Feugier-Favier, N., Roy, P., ... & Kassaï, B. (2010). A dietary supplement to improve the quality of sleep: a randomized placebo controlled trial. *BMC complementary and alternative medicine*, *10*(1), 29-37.	Yes	No
Cosgrave, J., Haines, R., van Heugten-van der Kloet, D., Purple, R., Porcheret, K., Foster, R., & Wulff, K. (2018). The interaction between subclinical psychotic experiences, insomnia and objective measures of sleep. *Schizophrenia research*, *193*, 204-208.	Yes	No
Costa, G., Anelli, M. M., Castellini, G., Fustinoni, S., & Neri, L. (2014). Stress and sleep in nurses employed in "3× 8" and "2× 12" fast rotating shift schedules. *Chronobiology international*, *31*(10), 1169-1178.	Yes	No
Cousins, J. C., Whalen, D. J., Dahl, R. E., Forbes, E. E., Olino, T. M., Ryan, N. D., & Silk, J. S. (2011). The bidirectional association between daytime affect and nighttime sleep in youth with anxiety and depression. *Journal of pediatric psychology*, *36*(9), 969-979.	No	Yes

Reference	Sleep diary	Event marker
Crowley, S. J., & Eastman, C. I. (2015). Phase advancing human circadian rhythms with morning bright light, afternoon melatonin, and gradually shifted sleep: can we reduce morning bright-light duration?. *Sleep medicine*, *16*(2), 288-297.	Yes	Yes
Crowley, S. J., Molina, T. A., & Burgess, H. J. (2015). A week in the life of full-time office workers: work day and weekend light exposure in summer and winter. *Applied ergonomics*, *46*, 193-200.	Yes	No
Crowley, S. J., Van Reen, E., LeBourgeois, M. K., Acebo, C., Tarokh, L., Seifer, R., ... & Carskadon, M. A. (2014). A longitudinal assessment of sleep timing, circadian phase, and phase angle of entrainment across human adolescence. *PloS one*, *9*(11), e112199.	Yes	Yes
D'Angelo, V., Beccuti, G., Berardelli, R., Karamouzis, I., Zichi, C., Giordano, R., ... & Arvat, E. (2015). Cushing's syndrome is associated with sleep alterations detected by wrist actigraphy. *Pituitary*, *18*(6), 893-897.	Yes	No
Dam, T. T. L., Ewing, S., Ancoli-Israel, S., Ensrud, K., Redline, S., Stone, K., & Osteoporotic Fractures in Men Research Group. (2008). Association between sleep and physical function in older men: the osteoporotic fractures in men sleep study. *Journal of the American Geriatrics Society*, *56*(9), 1665-1673.	Yes	No
Darwent, D., Roach, G., & Dawson, D. (2012). How well do truck drivers sleep in cabin sleeper berths?. *Applied Ergonomics*, *43*(2), 442-446.	Yes	No
Dashti, H. S., Zuurbier, L. A., De Jonge, E., Voortman, T., Jacques, P. F., Lamon-Fava, S., ... & Franco, O. H. (2016). Actigraphic sleep fragmentation, efficiency and duration associate with dietary intake in the Rotterdam Study. *Journal of sleep research*, *25*(4), 404-411.	Yes	No
David, R., Mulin, E., Friedman, L., Le Duff, F., Cygankiewicz, E., Deschaux, O., ... & Zeitzer, J. M. (2012). Decreased daytime motor activity associated with apathy in Alzheimer disease: an actigraphic study. *The American Journal of Geriatric Psychiatry*, *20*(9), 806-814.	Yes	No
de Araújo Fernandes Jr, S., Antonietti, L. S., Saba, A., de Faria, A. P., Esteves, A. M., Tufik, S., & de Mello, M. T. (2013). The impact of shift work on Brazilian train drivers with different chronotypes: a comparative analysis through objective and subjective criteria. *Medical principles and practice*, *22*(4), 390-396.	Yes	No
De Castro-Silva, C., De Bruin, V. M. S., Cunha, G. M. A., Nunes, D. M., Medeiros, C. A. M., & De Bruin, P. F. C. (2010). Melatonin improves sleep and reduces nitrite in the exhaled breath condensate in cystic fibrosis–a randomized, double-blind placebo-controlled study. *Journal of pineal research*, *48*(1), 65-71.	Yes	No
de Lima, C., Vancini, R. L., Arida, R. M., Guilhoto, L. M., de Mello, M. T., Barreto, A. T., ... & Tufik, S. (2011). Physiological and electroencephalographic responses to acute exhaustive physical exercise in people with juvenile myoclonic epilepsy. *Epilepsy & Behavior*, *22*(4), 718-722.	Yes	No
Dedert, E., Lush, E., Chagpar, A., Dhabhar, F. S., Segerstrom, S. C., Spiegel, D., ... & Sephton, S. E. (2012). Stress, coping, and circadian disruption among women awaiting breast cancer surgery. *Annals of behavioral medicine*, *44*(1), 10-20.	Yes	No
Demos, K. E., Hart, C. N., Sweet, L. H., Mailloux, K. A., Trautvetter, J., Williams, S. E., ... & McCaffery, J. M. (2016). Partial sleep deprivation impacts impulsive action but not impulsive decision-making. *Physiology & behavior*, *164*, 214-219.	Yes	Yes
Denis, D., Akhtar, R., Holding, B. C., Murray, C., Panatti, J., Claridge, G., ... & McAdams, T. A. (2017). Externalizing behaviors and callous-unemotional traits: different associations with sleep quality. *Sleep*, *40*(8).	Yes	No
DePietro, R. H., Knutson, K. L., Spampinato, L., Anderson, S. L., Meltzer, D. O., Van Cauter, E., & Arora, V. M. (2017). Association between inpatient sleep loss and hyperglycemia of hospitalization. *Diabetes care*, *40*(2), 188-193.	Yes	No
Dettoni, J. L., Consolim-Colombo, F. M., Drager, L. F., Rubira, M. C., Cavasin de Souza, S. B. P., Irigoyen, M. C., ... & Lorenzi-Filho, G. (2012). Cardiovascular effects of partial sleep deprivation in healthy volunteers. *Journal of applied physiology*, *113*(2), 232-236.	Yes	No

Reference	Sleep diary	Event marker
Dewald-Kaufmann, J. F., Oort, F. J., & Meijer, A. M. (2014). The effects of sleep extension and sleep hygiene advice on sleep and depressive symptoms in adolescents: a randomized controlled trial. *Journal of Child Psychology and Psychiatry*, *55*(3), 273-283.	Yes	No
Dewald-Kaufmann, J. F., Oort, F. J., & Meijer, A. M. (2013). The effects of sleep extension on sleep and cognitive performance in adolescents with chronic sleep reduction: an experimental study. *Sleep medicine*, *14*(6), 510-517.	Yes	No
Dickinson, D. L., Drummond, S. P., & Dyche, J. (2016). Voluntary sleep choice and its effects on Bayesian decisions. *Behavioral sleep medicine*, *14*(5), 501-513.	Yes	No
Dickinson, D. L., Drummond, S. P., & McElroy, T. (2017). The viability of an ecologically valid chronic sleep restriction and circadian timing protocol: An examination of sample attrition, compliance, and effectiveness at impacting sleepiness and mood. *PloS one*, *12*(3), e0174367.	Yes	Yes
Diem, S. J., Blackwell, T. L., Stone, K. L., Yaffe, K., Tranah, G., Cauley, J. A., ... & Ensrud, K. E. (2016). Measures of sleep–wake patterns and risk of mild cognitive impairment or dementia in older women. *The American Journal of Geriatric Psychiatry*, *24*(3), 248-258.	Yes	No
Diez, J. J., Vigo, D. E., Lloret, S. P., Rigters, S., Role, N., Cardinali, D. P., & Chada, D. P. (2011). Sleep habits, alertness, cortisol levels, and cardiac autonomic activity in short-distance bus drivers: differences between morning and afternoon shifts. *Journal of Occupational and Environmental Medicine*, *53*(7), 806-811.	Yes	No
Doan, T., Gay, C. L., Kennedy, H. P., Newman, J., & Lee, K. A. (2014). Nighttime breastfeeding behavior is associated with more nocturnal sleep among first-time mothers at one month postpartum. *Journal of Clinical Sleep Medicine*, *10*(3), 313-319.	Yes	No
Doane, L. D., & Thurston, E. C. (2014). Associations among sleep, daily experiences, and loneliness in adolescence: Evidence of moderating and bidirectional pathways. *Journal of Adolescence*, *37*(2), 145-154.	Yes	Yes
Doane, L. D., Gress-Smith, J. L., & Breitenstein, R. S. (2015). Multi-method assessments of sleep over the transition to college and the associations with depression and anxiety symptoms. *Journal of youth and adolescence*, *44*(2), 389-404.	Yes	Yes
Dorrian, J., Darwent, D., Dawson, D., & Roach, G. D. (2012). Predicting pilot's sleep during layovers using their own behaviour or data from colleagues: Implications for biomathematical models. *Accident Analysis & Prevention*, *45*, 17-21.	Yes	No
Donse, L., Sack, A. T., Fitzgerald, P. B., & Arns, M. (2017). Sleep disturbances in obsessive-compulsive disorder: Association with non-response to repetitive transcranial magnetic stimulation (rTMS). *Journal of anxiety disorders*, *49*, 31-39.	Yes	No
Drummond, L. M., Wulff, K., Rani, R. S., White, S., Mbanga-Sibanda, J., Ghodse, H., & Fineberg, N. A. (2012). How should we measure delayed sleep phase shift in severe, refractory obsessive-compulsive disorder?. *International journal of psychiatry in clinical practice*, *16*(4), 268-276.	Yes	No
Drummond, S. P., Walker, M., Almklov, E., Campos, M., Anderson, D. E., & Straus, L. D. (2013). Neural correlates of working memory performance in primary insomnia. *Sleep*, *36*(9), 1307-1316.	Yes	No
Dunican, I. C., Martin, D. T., Halson, S. L., Reale, R. J., Dawson, B. T., Caldwell, J. A., ... & Eastwood, P. R. (2017). The effects of the removal of electronic devices for 48 hours on sleep in elite judo athletes. *The Journal of Strength & Conditioning Research*, *31*(10), 2832-2839.	Yes	No
Dørheim, S. K., Bondevik, G. T., Eberhard-Gran, M., & Bjorvatn, B. (2009). Subjective and objective sleep among depressed and non-depressed postnatal women. *Acta Psychiatrica Scandinavica*, *119*(2), 128-136.	Yes	No
Eadie, J., van de Water, A. T., Lonsdale, C., Tully, M. A., van Mechelen, W., Boreham, C. A., ... & Hurley, D. A. (2013). Physiotherapy for sleep disturbance in people with chronic low back pain: results of a feasibility randomized controlled trial. *Archives of physical medicine and rehabilitation*, *94*(11), 2083-2092.	Yes	No
Edinger, J. D., Grubber, J., Ulmer, C., Zervakis, J., & Olsen, M. (2016). A collaborative paradigm for improving management of sleep disorders in primary care: a randomized clinical trial. *Sleep*, *39*(1), 237-247.	Yes	No

Reference	Sleep diary	Event marker
Ensrud, K. E., Blackwell, T. L., Ancoli-Israel, S., Redline, S., Cawthon, P. M., Paudel, M. L., ... & Stone, K. L. (2012). Sleep disturbances and risk of frailty and mortality in older men. *Sleep medicine*, *13*(10), 1217-1225.	Yes	No
Epstein, D. R., Sidani, S., Bootzin, R. R., & Belyea, M. J. (2012). Dismantling multicomponent behavioral treatment for insomnia in older adults: a randomized controlled trial. *Sleep*, *35*(6), 797-805.	Yes	Yes
Esposito, M. J., Occhionero, M., & Cicogna, P. (2015). Sleep deprivation and time-based prospective memory. *Sleep*, *38*(11), 1823-1826.	Yes	No
Evans, B. J., Phillips, K. M., Gonzalez, B. D., Apte, S., Small, B. J., Jacobsen, P. B., & Jim, H. S. (2016). Psychosocial resources and sleep disturbance before chemotherapy for gynecologic cancer. *Journal of psychosocial oncology*, *34*(1-2), 60-76.	Yes	No
Fabbri, M., Tonetti, L., Martoni, M., & Natale, V. (2014). Sleep and prospective memory. *Biological rhythm research*, *45*(1), 115-120.	No	Yes
Falloon, K., Elley, C. R., Fernando, A., Lee, A. C., & Arroll, B. (2015). Simplified sleep restriction for insomnia in general practice: a randomised controlled trial. *Br J Gen Pract*, *65*(637), 508-515.	Yes	No
Fang, S. H., Suzuki, K., Lim, C. L., Chung, M. S., Ku, P. W., & Chen, L. J. (2016). Associations between sleep quality and inflammatory markers in patients with schizophrenia. *Psychiatry research*, *246*, 154-160.	Yes	No
Fargason, R. E., Fobian, A. D., Hablitz, L. M., Paul, J. R., White, B. A., Cropsey, K. L., & Gamble, K. L. (2017). Correcting delayed circadian phase with bright light therapy predicts improvement in ADHD symptoms: A pilot study. *Journal of psychiatric research*, *91*, 105-110.	Yes	No
Fargason, R. E., Gamble, K., Avis, K. T., Besing, R. C., Jackson, C. W., Cates, M. E., & May, R. (2011). Ramelteon for insomnia related to attention-deficit/hyperactivity disorder (ADHD). *Psychopharmacology bulletin*, *44*(2), 32-53.	Yes	No
Fields, A. J., Hoyt, R. E., Linnville, S. E., & Moore, J. L. (2016). Physical activity, sleep, and C-reactive protein as markers of positive health in resilient older men. *Journal of health psychology*, *21*(9), 1928-1938.	Yes	No
Fietze, I., Strauch, J., Holzhausen, M., Glos, M., Theobald, C., Lehnkering, H., & Penzel, T. (2009). Sleep quality in professional ballet dancers. *Chronobiology international*, *26*(6), 1249-1262.	Yes	No
Flausino, N. H., Da Silva Prado, J. M., de Queiroz, S. S., Tufik, S., & de Mello, M. T. (2012). Physical exercise performed before bedtime improves the sleep pattern of healthy young good sleepers. *Psychophysiology*, *49*(2), 186-192.	Yes	No
Forberg, K., Waage, S., Moen, B., & Bjorvatn, B. (2010). Subjective and objective sleep and sleepiness among tunnel workers in an extreme and isolated environment: 10-h shifts, 21-day working period, at 78 degrees north. *Sleep medicine*, *11*(2), 185-190.	Yes	Yes
Francis, G., Bishop, L., Luke, C., Middleton, B., Williams, P., & Arendt, J. (2008). Sleep during the Antarctic winter: preliminary observations on changing the spectral composition of artificial light. *Journal of sleep research*, *17*(3), 354-360.	Yes	No
Frei, P., Mohler, E., & Röösli, M. (2014). Effect of nocturnal road traffic noise exposure and annoyance on objective and subjective sleep quality. *International journal of hygiene and environmental health*, *217*(2-3), 188-195.	Yes	No
Friedman, L., Spira, A. P., Hernandez, B., Mather, C., Sheikh, J., Ancoli-Israel, S., ... & Zeitzer, J. M. (2012). Brief morning light treatment for sleep/wake disturbances in older memory-impaired individuals and their caregivers. *Sleep medicine*, *13*(5), 546-549.	Yes	No
Fritschi, C., Bronas, U. G., Park, C. G., Collins, E. G., & Quinn, L. (2017). Early declines in physical function among aging adults with type 2 diabetes. *Journal of Diabetes and its Complications*, *31*(2), 347-352.	Yes	No

Reference	Sleep diary	Event marker
Fukushige, H., Fukuda, Y., Tanaka, M., Inami, K., Wada, K., Tsumura, Y., ... & Morita, T. (2014). Effects of tryptophan-rich breakfast and light exposure during the daytime on melatonin secretion at night. *Journal of physiological anthropology*, *33*(1), 33.	Yes	No
Fuller-Rowell, T. E., Curtis, D. S., El-Sheikh, M., Chae, D. H., Boylan, J. M., & Ryff, C. D. (2016). Racial disparities in sleep: the role of neighborhood disadvantage. *Sleep medicine*, *27*, 1-8.	Yes	No
Furtado, F., Bruno da Silva, B. G., Abranches, I. L. L., Abrantes, A. F., & Forner-Cordero, A. (2016). Chronic low quality sleep impairs postural control in healthy adults. *PLoS one*, *11*(10), e0163310.	Yes	No
Galli, G., Piaggi, P., Mattingly, M. S., De Jonge, L., Courville, A. B., Pinchera, A., ... & Cizza, G. (2013). Inverse relationship of food and alcohol intake to sleep measures in obesity. *Nutrition & diabetes*, *3*(1), e58.	Yes	No
Gallo, A. M., & Lee, K. A. (2008). Sleep characteristics in hospitalized antepartum patients. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *37*(6), 715-721.	Yes	No
Gamble, K. L., May, R. S., Besing, R. C., Tankersly, A. P., & Fargason, R. E. (2013). Delayed sleep timing and symptoms in adults with attention-deficit/hyperactivity disorder: a controlled actigraphy study. *Chronobiology international*, *30*(4), 598-606.	Yes	No
Gander, P., Signal, L., Van Dongen, H. P., Muller, D., & Van Den Berg, M. (2010). Stable interindividual differences in slow-wave sleep during nocturnal sleep and naps. *Sleep and Biological Rhythms*, *8*(4), 239-244.	Yes	No
Gander, P., van den Berg, M., & Signal, L. (2008). Sleep and sleepiness of fishermen on rotating schedules. *Chronobiology international*, *25*(2-3), 389-398.	Yes	No
Gander, P. H., Mangie, J., van den Berg, M. J., Smith, A. A. T., Mulrine, H. M., & Signal, T. L. (2014). Crew fatigue safety performance indicators for fatigue risk management systems. *Aviation, space, and environmental medicine*, *85*(2), 139-147.	Yes	No
Gander, P. H., Mulrine, H. M., van den Berg, M. J., Smith, A. A. T., Signal, T. L., Wu, L. J., & Belenky, G. (2014). Pilot fatigue: relationships with departure and arrival times, flight duration, and direction. *Aviation, space, and environmental medicine*, *85*(8), 833-840.	Yes	No
Gander, P. H., Mulrine, H. M., Van Den Berg, M. J., Smith, A. A. T., Signal, T. L., Wu, L. J., & Belenky, G. (2015). Effects of sleep/wake history and circadian phase on proposed pilot fatigue safety performance indicators. *Journal of sleep research*, *24*(1), 110-119.	Yes	No
Garde, A. H., Hansen, Å. M., Persson, R., Österberg, K., Ørbæk, P., Karlson, B., ... & Kristiansen, J. (2014). Month-to-month variation in sleep among healthy, Scandinavian daytime workers. *Scandinavian journal of clinical and laboratory investigation*, *74*(6), 527-535.	Yes	No
Garland, S. N., Carlson, L. E., Stephens, A. J., Antle, M. C., Samuels, C., & Campbell, T. S. (2014). Mindfulness-based stress reduction compared with cognitive behavioral therapy for the treatment of insomnia comorbid with cancer: a randomized, partially blinded, noninferiority trial. *Journal of Clinical Oncology*, *32*(5), 449-457.	Yes	No
Geiger-Brown, J., Rogers, V. E., Trinkoff, A. M., Kane, R. L., Bausell, R. B., & Scharf, S. M. (2012). Sleep, sleepiness, fatigue, and performance of 12-hour-shift nurses. *Chronobiology international*, *29*(2), 211-219.	Yes	No
Gershon, A., Thompson, W. K., Eidelman, P., McGlinchey, E. L., Kaplan, K. A., & Harvey, A. G. (2012). Restless pillow, ruffled mind: Sleep and affect coupling in interepisode bipolar disorder. *Journal of abnormal psychology*, *121*(4), 863-873.	Yes	No
Gohar, A., Adams, A., Gertner, E., Sackett-Lundeen, L., Heitz, R., Engle, R., ... & Bijwadia, J. (2009). Working memory capacity is decreased in sleep-deprived internal medicine residents. *Journal of Clinical Sleep Medicine*, *5*(03), 191-197.	Yes	No
Gonzalez, R., Tamminga, C. A., Tohen, M., & Suppes, T. (2014). The relationship between affective state and the rhythmicity of activity in bipolar disorder. *The Journal of clinical psychiatry*, *75*(4), e317.	Yes	No

Reference	Sleep diary	Event marker
Goodman, A. O., Rogers, L., Pilsworth, S., McAllister, C. J., Shneerson, J. M., Morton, A. J., & Barker, R. A. (2011). Asymptomatic sleep abnormalities are a common early feature in patients with Huntington's disease. *Current neurology and neuroscience reports*, *11*(2), 211-217.	Yes	No
Goyal, D., Gay, C., & Lee, K. (2009). Fragmented maternal sleep is more strongly correlated with depressive symptoms than infant temperament at three months postpartum. *Archives of women's mental health*, *12*(4), 229-237.	Yes	No
Grandner, M. A., Kripke, D. F., Naidoo, N., & Langer, R. D. (2010). Relationships among dietary nutrients and subjective sleep, objective sleep, and napping in women. *Sleep medicine*, *11*(2), 180-184.	Yes	No
Gross, C. R., Kreitzer, M. J., Reilly-Spong, M., Wall, M., Winbush, N. Y., Patterson, R., ... & Cramer-Bornemann, M. (2011). Mindfulness-based stress reduction versus pharmacotherapy for chronic primary insomnia: a randomized controlled clinical trial. *Explore: The Journal of Science and Healing*, *7*(2), 76-87.	Yes	No
Grossman, M. N., Anderson, S. L., Worku, A., Marsack, W., Desai, N., Tuvilleja, A., ... & Mokhlesi, B. (2017). Awakenings? Patient and hospital staff perceptions of nighttime disruptions and their effect on patient sleep. *Journal of Clinical Sleep Medicine*, *13*(02), 301-306.	Yes	No
Guedes, L. G., Abreu, G. D. A., Rodrigues, D. F., Teixeira, L. R., Luiz, R. R., & Bloch, K. V. (2016). Comparison between self-reported sleep duration and actigraphy among adolescents: gender differences. *Revista Brasileira de Epidemiologia*, *19*, 339-347.	Yes	No
Haimov, I., & Shatil, E. (2013). Cognitive training improves sleep quality and cognitive function among older adults with insomnia. *PLoS One*, *8*(4), e61390.	Yes	Yes
Hall, M. H., Lee, L., & Matthews, K. A. (2015). Sleep duration during the school week is associated with C-reactive protein risk groups in healthy adolescents. *Sleep medicine*, *16*(1), 73-78.	Yes	No
Hamera, E., Brown, C., & Goetz, J. (2013). Objective and subjective sleep disturbances in individuals with psychiatric disabilities. *Issues in mental health nursing*, *34*(2), 110-116.	Yes	No
Hamze, F. L., Souza, C. C. D., & Chianca, T. C. M. (2015). The influence of care interventions on the continuity of sleep of intensive care unit patients. *Revista latino-americana de enfermagem*, *23*(5), 789-796.	Yes	No
Hansen, A. L., Dahl, L., Olson, G., Thornton, D., Graff, I. E., Frøyland, L., ... & Pallesen, S. (2014). Fish consumption, sleep, daily functioning, and heart rate variability. *Journal of Clinical Sleep Medicine*, *10*(05), 567-575.	Yes	No
Hansen, J. H., Geving, I. H., & Reinertsen, R. E. (2010). Adaptation rate of 6-sulfatoxymelatonin and cognitive performance in offshore fleet shift workers: a field study. *International archives of occupational and environmental health*, *83*(6), 607-615.	Yes	No
Harada, D., Yamadera, W., Sato, M., Iwashita, M., Aoki, R., Obuchi, K., ... & Nakayama, K. (2015). Effects of two-session group cognitive behavioral therapy for psychophysiological insomnia: A preliminary study. *Sleep and Biological Rhythms*, *13*(4), 348-356.	Yes	No
Harbard, E., Allen, N. B., Trinder, J., & Bei, B. (2016). What's keeping teenagers up? Prebedtime behaviors and actigraphy-assessed sleep over school and vacation. *Journal of Adolescent Health*, *58*(4), 426-432.	No	Yes
Harper, D. G., Plante, D. T., Jensen, J. E., Ravichandran, C., Buxton, O. M., Benson, K. L., ... & Winkelman, J. W. (2013). Energetic and cell membrane metabolic products in patients with primary insomnia: a 31-phosphorus magnetic resonance spectroscopy study at 4 tesla. *Sleep*, *36*(4), 493-500.	Yes	No
Harris, E., Taylor, M. K., Drummond, S. P., Larson, G. E., & Potterat, E. G. (2015). Assessment of sleep disruption and sleep quality in Naval Special Warfare Operators. *Military medicine*, *180*(7), 803-808.	Yes	Yes
Harris, J., Lack, L., Kemp, K., Wright, H., & Bootzin, R. (2012). A randomized controlled trial of intensive sleep retraining (ISR): a brief conditioning treatment for chronic insomnia. *Sleep*, *35*(1), 49-60.	Yes	No
Harrow, L., & Espie, C. (2010). Applying the quarter-hour rule: can people with insomnia accurately estimate 15-min periods during the sleep-onset phase?. *Journal of sleep research*, *19*(1), 19-26.	Yes	No

Reference	Sleep diary	Event marker
Hausswirth, C., Louis, J., Aubry, A., Bonnet, G., Duffield, R., & Le Muer, Y. (2014). Evidence of disturbed sleep patterns and increased illness in functionally overreached endurance athletes. *Medicine & Science in Sports & Exercise*, *46*(5), 1036-1045.	Yes	Yes
Hearson, B., McClement, S., McMillan, D. E., & Harlos, M. (2011). Sleeping with one eye open: the sleep experience of family members providing palliative care at home. *Journal of palliative care*, *27*(2), 69.	Yes	No
Heaton, K. L., & Rayens, M. K. (2010). Feedback actigraphy and sleep among long-haul truck drivers. *AAOHN Journal*, *58*(4), 137-145.	Yes	No
Hennig, T., Krkovic, K., & Lincoln, T. M. (2017). What predicts inattention in adolescents? An experience-sampling study comparing chronotype, subjective, and objective sleep parameters. *Sleep medicine*, *38*, 58-63.	Yes	No
Herring, S. J., Foster, G. D., Pien, G. W., Massa, K., Nelson, D. B., Gehrman, P. R., & Davey, A. (2013). Do pregnant women accurately report sleep time? A comparison between self-reported and objective measures of sleep duration in pregnancy among a sample of urban mothers. *Sleep and Breathing*, *17*(4), 1323-1327.	Yes	Yes
Herring, S. J., Nelson, D. B., Pien, G. W., Homko, C., Goetzl, L. M., Davey, A., & Foster, G. D. (2014). Objectively measured sleep duration and hyperglycemia in pregnancy. *Sleep medicine*, *15*(1), 51-55.	Yes	Yes
Hetzenecker, A., Escourrou, P., Kuna, S. T., Series, F., Lewis, K., Birner, C., ... & Arzt, M. (2016). Treatment of sleep apnea in chronic heart failure patients with auto-servo ventilation improves sleep fragmentation: a randomized controlled trial. *Sleep medicine*, *17*, 25-31.	No	Yes
Hibbs, A. M., Storfer-Isser, A., Rosen, C., Ievers-Landis, C. E., Taveras, E. M., & Redline, S. (2014). Advanced sleep phase in adolescents born preterm. *Behavioral sleep medicine*, *12*(5), 412-424.	Yes	No
Hirose, A., Terauchi, M., Akiyoshi, M., Owa, Y., Kato, K., & Kubota, T. (2016). Subjective insomnia is associated with low sleep efficiency and fatigue in middle-aged women. *Climacteric*, *19*(4), 369-374.	Yes	No
Hisler, G., & Krizan, Z. (2017). Anger tendencies and sleep: Poor anger control is associated with objectively measured sleep disruption. *Journal of Research in Personality*, *71*, 17-26.	Yes	No
Holley, A. L., Rabbitts, J., Zhou, C., Durkin, L., & Palermo, T. M. (2017). Temporal daily associations among sleep and pain in treatment-seeking youth with acute musculoskeletal pain. *Journal of behavioral medicine*, *40*(4), 675-681.	Yes	Yes
Howatson, G., Bell, P. G., Tallent, J., Middleton, B., McHugh, M. P., & Ellis, J. (2012). Effect of tart cherry juice (Prunus cerasus) on melatonin levels and enhanced sleep quality. *European journal of nutrition*, *51*(8), 909-916.	Yes	No
Hudson, A. L., Portillo, C. J., & Lee, K. A. (2008). Sleep disturbances in women with HIV or AIDS: efficacy of a tailored sleep promotion intervention. *Nursing Research*, *57*(5), 360-366.	Yes	No
Hurdiel, R., Pezé, T., Daugherty, J., Girard, J., Poussel, M., Poletti, L., ... & Theunynck, D. (2015). Combined effects of sleep deprivation and strenuous exercise on cognitive performances during The North Face® Ultra Trail du Mont Blanc®(UTMB®). *Journal of sports sciences*, *33*(7), 670-674.	Yes	No
Hylkema, T., & Vlaskamp, C. (2009). Significant improvement in sleep in people with intellectual disabilities living in residential settings by non-pharmaceutical interventions. *Journal of Intellectual Disability Research*, *53*(8), 695-703.	Yes	Yes
Haack, M., Serrador, J., Cohen, D., Simpson, N., Meier-Ewert, H., & Mullington, J. M. (2013). Increasing sleep duration to lower beat-to-beat blood pressure: a pilot study. *Journal of sleep research*, *22*(3), 295-304.	Yes	No
Imbach, L. L., Büchele, F., Valko, P. O., Li, T., Maric, A., Stover, J. F., ... & Baumann, C. R. (2016). Sleep–wake disorders persist 18 months after traumatic brain injury but remain underrecognized. *Neurology*, *86*(21), 1945-1949.	Yes	No
Innes, C. R., Poudel, G. R., & Jones, R. D. (2013). Efficient and regular patterns of nighttime sleep are related to increased vulnerability to microsleeps following a single night of sleep restriction. *Chronobiology international*, *30*(9), 1187-1196.	Yes	No

Reference	Sleep diary	Event marker
Innominato, P. F., Lim, A. S., Palesh, O., Clemons, M., Trudeau, M., Eisen, A., ... & Bjarnason, G. A. (2016). The effect of melatonin on sleep and quality of life in patients with advanced breast cancer. *Supportive care in cancer*, *24*(3), 1097-1105.	Yes	No
Inomata, Y., Echizenya, M., Takeshima, M., Shimizu, K., & Shimizu, T. (2014). Validity and reliability of the Japanese version of the Morningness-Eveningness Questionnaire evaluated from actigraphy. *Sleep and Biological Rhythms*, *12*(4), 289-296.	Yes	Yes
Insana, S. P., Glowacki, S. S., & Montgomery-Downs, H. E. (2011). Assessing the efficacy to conduct the multiple sleep latency test with actigraphy. *Behavioral sleep medicine*, *9*(4), 257-265.	Yes	Yes
Jackowska, M., Ronaldson, A., Brown, J., & Steptoe, A. (2016). Biological and psychological correlates of self-reported and objective sleep measures. *Journal of psychosomatic research*, *84*, 52-55.	Yes	No
Jackson, M. L., Butt, H., Ball, M., Lewis, D. P., & Bruck, D. (2015). Sleep quality and the treatment of intestinal microbiota imbalance in chronic fatigue syndrome: a pilot study. *Sleep science*, *8*(3), 124-133.	Yes	No
Järnefelt, H., Lagerstedt, R., Kajaste, S., Sallinen, M., Savolainen, A., & Hublin, C. (2012). Cognitive behavior therapy for chronic insomnia in occupational health services. *Journal of occupational rehabilitation*, *22*(4), 511-521.	Yes	Yes
Javaheri, S., Storfer-Isser, A., Rosen, C. L., & Redline, S. (2008). Sleep quality and elevated blood pressure in adolescents. *Circulation*, *118*(10), 1034-1040.	Yes	No
Jawinski, P., Tegelkamp, S., Sander, C., Häntzsch, M., Huang, J., Mauche, N., ... & Reif, A. (2016). Time to wake up: No impact of COMT Val158Met gene variation on circadian preferences, arousal regulation and sleep. *Chronobiology international*, *33*(7), 893-905.	Yes	No
Jiang, F., VanDyke, R. D., Zhang, J., Li, F., Gozal, D., & Shen, X. (2011). Effect of chronic sleep restriction on sleepiness and working memory in adolescents and young adults. *Journal of clinical and experimental neuropsychology*, *33*(8), 892-900.	Yes	No
Jim, H. S., Small, B., Faul, L. A., Franzen, J., Apte, S., & Jacobsen, P. B. (2011). Fatigue, depression, sleep, and activity during chemotherapy: daily and intraday variation and relationships among symptom changes. *Annals of Behavioral Medicine*, *42*(3), 321-333.	Yes	No
Joffe, H., Partridge, A., Giobbie-Hurder, A., Li, X., Habin, K., Goss, P., ... & Garber, J. (2010). Augmentation of venlafaxine and selective serotonin reuptake inhibitors with zolpidem improves sleep and quality of life in breast cancer patients with hot flashes: a randomized, double-blind, placebo-controlled trial. *Menopause*, *17*(5), 908-916.	No	Yes
Joffe, H., White, D. P., Crawford, S. L., McCurnin, K. E., Economou, N., Connors, S., & Hall, J. E. (2013). Adverse effects of induced hot flashes on objectively recorded and subjectively reported sleep: results of a gonadotropin-releasing hormone agonist experimental protocol. *Menopause: The Journal of The North American Menopause Society*, *20*(9), 905-914.	No	Yes
Johnson, S. T., Thiel, D., Al Sayah, F., Mundt, C., Qiu, W., Buman, M. P., ... & Johnson, J. A. (2017). Objectively measured sleep and health-related quality of life in older adults with type 2 diabetes: a cross-sectional study from the Alberta's Caring for Diabetes Study. *Sleep health*, *3*(2), 102-106.	Yes	No
Johnson II, T. M., Vaughan, C. P., Goode, P. S., Bliwise, D. L., Markland, A. D., Huisingh, C., ... & Issa, M. (2016). Pilot results from a randomized trial in men comparing alpha-adrenergic antagonist versus behavior and exercise for nocturia and sleep. *Clinical therapeutics*, *38*(11), 2394-2406.	Yes	No
Josev, E. K., Jackson, M. L., Bei, B., Trinder, J., Harvey, A., Clarke, C., ... & Knight, S. J. (2017). Sleep quality in adolescents with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME). *Journal of Clinical Sleep Medicine*, *13*(09), 1057-1066.	Yes	Yes
Joustra, S. D., Kruijssen, E., Verstegen, M. J., Pereira, A. M., & Biermasz, N. R. (2014). Determinants of altered sleep-wake rhythmicity in patients treated for nonfunctioning pituitary macroadenomas. *The Journal of Clinical Endocrinology & Metabolism*, *99*(12), 4497-4505.	Yes	No

Reference	Sleep diary	Event marker
Jungquist, C. R., Mund, J., Aquilina, A. T., Klingman, K., Pender, J., Ochs-Balcom, H., ... & Dickerson, S. S. (2016). Validation of the behavioral risk factor surveillance system sleep questions. *Journal of clinical sleep medicine*, *12*(03), 301-310.	Yes	No
Järnefelt, H., Lagerstedt, R., Kajaste, S., Sallinen, M., Savolainen, A., & Hublin, C. (2012). Cognitive behavioral therapy for shift workers with chronic insomnia. *Sleep medicine*, *13*(10), 1238-1246.	Yes	Yes
Jaatinen, N., Korpela, R., Poussa, T., Turpeinen, A., Mustonen, S., Merilahti, J., & Peuhkuri, K. (2014). Effects of daily intake of yoghurt enriched with bioactive components on chronic stress responses: a double-blinded randomized controlled trial. *International journal of food sciences and nutrition*, *65*(4), 507-514.	Yes	No
Kang, J. H., Miao, N. F., Tseng, I. J., Sithole, T., & Chung, M. H. (2015). Circadian activity rhythms and sleep in nurses working fixed 8-hr shifts. *Biological research for nursing*, *17*(3), 348-355.	Yes	No
Karhula, K., HÄRMÄ, M., Sallinen, M., Hublin, C., Virkkala, J., KIVIMÄKI, M., ... & Puttonen, S. (2013). Job strain, sleep and alertness in shift working health care professionals—a field study. *Industrial health*, *51*(4), 406-416.	Yes	No
Karhula, K., Henelius, A., Härmä, M., Sallinen, M., Lindholm, H., Kivimäki, M., ... & Puttonen, S. (2014). Job strain and vagal recovery during sleep in shift working health care professionals. *Chronobiology international*, *31*(10), 1179-1189.	Yes	No
Kashani, M., Eliasson, A., Chrosniak, L., & Vernalis, M. (2010). Taking aim at nurse stress: a call to action. *Military medicine*, *175*(2), 96-100.	Yes	No
Kato, C., Shimada, J., & Hayashi, K. (2012). Sleepiness during shift work in Japanese nurses: A comparison study using JESS, SSS, and actigraphy. *Sleep and Biological Rhythms*, *10*(2), 109-117.	Yes	No
Keller, P. S., Blincoe, S., Gilbert, L. R., Haak, E. A., & DeWall, C. N. (2014). Sleep deprivation and dating aggression perpetration in female college students: The moderating roles of trait aggression, victimization by partner, and alcohol use. *Journal of Aggression, Maltreatment & Trauma*, *23*(4), 351-368.	Yes	No
Kelly, R. J., & Bagley, E. J. (2017). Dating Aggression and Sleep Problems in Emerging Adulthood. *Emerging Adulthood*, *5*(1), 42-52.	Yes	No
Kempler, L., & Richmond, J. L. (2012). Effect of sleep on gross motor memory. *Memory*, *20*(8), 907-914.	Yes	No
Khalsa, S., Mayhew, S. D., Przezdzik, I., Wilson, R., Hale, J., Goldstone, A., ... & Bagshaw, A. P. (2016). Variability in cumulative habitual sleep duration predicts waking functional connectivity. *Sleep*, *39*(1), 87-95.	Yes	Yes
Khawaja, I. S., Hashmi, A. M., Westermeyer, J., Thuras, P., & Hurwitz, T. (2013). Nocturnal awakening & sleep duration in veterans with PTSD: An actigraphic study. *Pakistan journal of medical sciences*, *29*(4), 991-996.	Yes	Yes
Killgore, W. D., Lipizzi, E. L., Grugle, N. L., Killgore, D. B., & Balkin, T. J. (2009). Handedness correlates with actigraphically measured sleep in a controlled environment. *Perceptual and motor skills*, *109*(2), 395-400.	Yes	No
Kim, M., Sasai, H., Kojima, N., & Kim, H. (2015). Objectively measured night-to-night sleep variations are associated with body composition in very elderly women. *Journal of sleep research*, *24*(6), 639-647.	Yes	No
King, H. C., Spence, D. L., Hickey, A. H., Sargent, P., Elesh, R., & Connelly, C. D. (2015). Auricular acupuncture for sleep disturbance in veterans with post-traumatic stress disorder: a feasibility study. *Military medicine*, *180*(5), 582-590.	Yes	Yes
Klumpp, H., Roberts, J., Kapella, M. C., Kennedy, A. E., Kumar, A., & Phan, K. L. (2017). Subjective and objective sleep quality modulate emotion regulatory brain function in anxiety and depression. *Depression and anxiety*, *34*(7), 651-660.	Yes	Yes
Krenk, L., Jennum, P., & Kehlet, H. (2013). Activity, sleep and cognition after fast-track hip or knee arthroplasty. *The Journal of arthroplasty*, *28*(8), 1265-1269.	Yes	No

Reference	Sleep diary	Event marker
Krouse, H. J., Yarandi, H., Mcintosh, J., Cowen, C., & Selim, V. (2008). Assessing sleep quality and daytime wakefulness in asthma using wrist actigraphy. *Journal of Asthma*, *45*(5), 389-395.	Yes	No
Kung, P. Y., Chou, K. R., Lin, K. C., Hsu, H. W., & Chung, M. H. (2015). Sleep disturbances in patients with major depressive disorder: incongruence between sleep log and actigraphy. *Archives of psychiatric nursing*, *29*(1), 39-42.	Yes	No
Kuratsune, H., Umigai, N., Takeno, R., Kajimoto, Y., & Nakano, T. (2010). Effect of crocetin from Gardenia jasminoides Ellis on sleep: a pilot study. *Phytomedicine*, *17*(11), 840-843.	Yes	No
Kurina, L. M., Knutson, K. L., Hawkley, L. C., Cacioppo, J. T., Lauderdale, D. S., & Ober, C. (2011). Loneliness is associated with sleep fragmentation in a communal society. *Sleep*, *34*(11), 1519-1526.	No	Yes
Lammers-van der Holst, H. M., Van Dongen, H. P., Drosopoulos, S., & Kerkhof, G. A. (2016). Inter-individual differences in sleep response to shift work in novice police officers–A prospective study. *Chronobiology international*, *33*(6), 671-677.	Yes	No
Lanzani, M. F., de Zavalía, N., Fontana, H., Sarmiento, M. I. K., Golombek, D., & Rosenstein, R. E. (2012). Alterations of locomotor activity rhythm and sleep parameters in patients with advanced glaucoma. *Chronobiology international*, *29*(7), 911-919.	Yes	No
Lastella, M., Roach, G. D., Halson, S. L., Martin, D. T., West, N. P., & Sargent, C. (2015). Sleep/wake behaviour of endurance cyclists before and during competition. *Journal of sports sciences*, *33*(3), 293-299.	Yes	No
Lauriola, M., Esposito, R., Pizzi, S. D., de Zambotti, M., Londrillo, F., Kramer, J. H., ... & Tartaro, A. (2017). Sleep changes without medial temporal lobe or brain cortical changes in community-dwelling individuals with subjective cognitive decline. *Alzheimer's & Dementia*, *13*(7), 783-791.	Yes	No
Law, E. F., Dufton, L., & Palermo, T. M. (2012). Daytime and nighttime sleep patterns in adolescents with and without chronic pain. *Health Psychology*, *31*(6), 830-833.	Yes	Yes
Lazar, A. S., Panin, F., Goodman, A. O., Lazic, S. E., Lazar, Z. I., Mason, S. L., ... & Borowsky, B. (2015). Sleep deficits but no metabolic deficits in premanifest H untington's disease. *Annals of neurology*, *78*(4), 630-648.	Yes	No
Lee, K. A., & Gay, C. L. (2011). Can modifications to the bedroom environment improve the sleep of new parents? Two randomized controlled trials. *Research in nursing & health*, *34*(1), 7-19.	Yes	No
Lee, K. A., Gay, C., Pullinger, C. R., Hennessy, M. D., Zak, R. S., & Aouizerat, B. E. (2014). Cytokine polymorphisms are associated with poor sleep maintenance in adults living with human immunodeficiency virus/acquired immunodeficiency syndrome. *Sleep*, *37*(3), 453-463.	Yes	Yes
Lee, K. A., Gay, C. L., & Alsten, C. R. (2014). Home-based behavioral sleep training for shift workers: a pilot study. *Behavioral sleep medicine*, *12*(6), 455-468.	Yes	No
Lee, K. A., Gay, C. L., & Alsten, C. R. (2016). Sleep enhancement training for pregnant women. *Obstetrics and gynecology*, *128*(5), 964-971.	Yes	No
Lee, K. C., Yiin, J. J., Lin, P. C., & Lu, S. H. (2015). Sleep disturbances and related factors among family caregivers of patients with advanced cancer. *Psycho-Oncology*, *24*(12), 1632-1638.	Yes	No
Lee, S. Y., & Hsu, H. C. (2012). Stress and health-related well-being among mothers with a low birth weight infant: The role of sleep. *Social science & medicine*, *74*(7), 958-965.	Yes	Yes
Lee, S. Y., & Kimble, L. P. (2009). Impaired sleep and well-being in mothers with low-birth-weight infants. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, *38*(6), 676-685.	Yes	Yes
Lee, S. Y., Aycock, D. M., & Moloney, M. F. (2013). Bright light therapy to promote sleep in mothers of low-birth-weight infants: a pilot study. *Biological research for nursing*, *15*(4), 398-406.	Yes	Yes
Lee, S. Y., Lee, K. A., Aycock, D., & Decker, M. (2010). Circadian activity rhythms for mothers with an infant in ICU. *Frontiers in neurology*, *1*, 155.	Yes	Yes

Reference	Sleep diary	Event marker
Legault, G., Clement, A., Kenny, G. P., Hardcastle, S., & Keller, N. (2017). Cognitive consequences of sleep deprivation, shiftwork, and heat exposure for underground miners. *Applied ergonomics*, *58*, 144-150.	Yes	No
Lerdal, A., Gay, C. L., Saghaug, E., Gautvik, K., Grov, E. K., Normann, A., ... & Lee, K. A. (2014). Sleep in family caregivers of patients admitted to hospice: a pilot study. *Palliative & supportive care*, *12*(6), 439-444.	Yes	No
Lerdal, A., Slåtten, K., Saghaug, E., Grov, E. K., Normann, A. P., Lee, K. A., ... & Gay, C. L. (2016). Sleep among bereaved caregivers of patients admitted to hospice: a 1-year longitudinal pilot study. *BMJ open*, *6*(1), e009345.	Yes	No
Lerner, I., Lupkin, S. M., Corter, J. E., Peters, S. E., Cannella, L. A., & Gluck, M. A. (2016). The influence of sleep on emotional and cognitive processing is primarily trait-(but not state-) dependent. *Neurobiology of learning and memory*, *134*, 275-286.	Yes	No
Li, D. X., Romans, S., De Souza, M. J., Murray, B., & Einstein, G. (2015). Actigraphic and self-reported sleep quality in women: associations with ovarian hormones and mood. *Sleep medicine*, *16*(10), 1217-1224.	No	Yes
Lienert, C., Schawalder, G., Findling, O., Kamm, C. P., Humpert, S. J., Mugglin Vitiello, A. S., ... & Mattle, H. (2013). Tolerance of intravenous methylprednisolone for relapse treatment in demyelinating CNS disease. *Swiss medical weekly*, *143*, w13783.	Yes	No
Lin, H. H., Tsai, P. S., Fang, S. C., & Liu, J. F. (2011). Effect of kiwifruit consumption on sleep quality in adults with sleep problems. *Asia Pacific journal of clinical nutrition*, *20*(2), 169-174.	Yes	No
Liu, J. H., Reape, K. Z., & Hait, H. I. (2012). Synthetic conjugated estrogens-B and postmenopausal nocturnal vasomotor symptoms: a randomized controlled trial. *Obstetrics & Gynecology*, *119*(1), 78-84.	Yes	No
Lovato, N., Gradisar, M., Short, M., Dohnt, H., & Micic, G. (2013). Delayed sleep phase disorder in an Australian school-based sample of adolescents. *Journal of Clinical Sleep Medicine*, *9*(09), 939-944.	Yes	No
Lovato, N., Lack, L., & Kennaway, D. J. (2016). Comparing and contrasting therapeutic effects of cognitive-behavior therapy for older adults suffering from insomnia with short and long objective sleep duration. *Sleep medicine*, *22*, 4-12.	Yes	No
Lovato, N., Lack, L., Wright, H., & Kennaway, D. J. (2014). Evaluation of a brief treatment program of cognitive behavior therapy for insomnia in older adults. *Sleep*, *37*(1), 117-126.	Yes	No
Luik, A. I., Zuurbier, L. A., Direk, N., Hofman, A., Van Someren, E. J., & Tiemeier, H. (2015). 24-hour activity rhythm and sleep disturbances in depression and anxiety: A population-based study of middle-aged and older persons. *Depression and anxiety*, *32*(9), 684-692.	Yes	No
Luik, A. I., Zuurbier, L. A., Hofman, A., Van Someren, E. J., & Tiemeier, H. (2013). Stability and fragmentation of the activity rhythm across the sleep-wake cycle: the importance of age, lifestyle, and mental health. *Chronobiology international*, *30*(10), 1223-1230.	Yes	No
Luik, A. I., Zuurbier, L. A., Hofman, A., Van Someren, E. J., Ikram, M. A., & Tiemeier, H. (2015). Associations of the 24-h activity rhythm and sleep with cognition: a population-based study of middle-aged and elderly persons. *Sleep medicine*, *16*(7), 850-855.	Yes	No
Luik, A. I., Direk, N., Zuurbier, L. A., Hofman, A., Van Someren, E. J., & Tiemeier, H. (2015). Sleep and 24-h activity rhythms in relation to cortisol change after a very low-dose of dexamethasone. *Psychoneuroendocrinology*, *53*, 207-216.	Yes	No
Lunde, L. H., Pallesen, S., Krangnes, L., & Nordhus, I. H. (2010). Characteristics of sleep in older persons with chronic pain: a study based on actigraphy and self-reporting. *The Clinical journal of pain*, *26*(2), 132-137.	Yes	No
Lutsey, P. L., McClelland, R. L., Duprez, D., Shea, S., Shahar, E., Nagayoshi, M., ... & Redline, S. (2015). Objectively measured sleep characteristics and prevalence of coronary artery calcification: the Multi-Ethnic Study of Atherosclerosis Sleep study. *Thorax*, *70*(9), 880-887.	Yes	No
Lützhöft, M., Dahlgren, A., Kircher, A., Thorslund, B., & Gillberg, M. (2010). Fatigue at sea in Swedish shipping—a field study. *American journal of industrial medicine*, *53*(7), 733-740.	Yes	No

Reference	Sleep diary	Event marker
Ma, C. L., Chang, W. P., & Lin, C. C. (2014). Rest/activity rhythm is related to the coexistence of pain and sleep disturbance among advanced cancer patients with pain. *Supportive Care in Cancer*, *22*(1), 87-94.	Yes	No
Malone, S. K., Zemel, B., Compher, C., Souders, M., Chittams, J., Thompson, A. L., & Lipman, T. H. (2016). Characteristics associated with sleep duration, chronotype, and social jet lag in adolescents. *The Journal of School Nursing*, *32*(2), 120-131.	Yes	No
Marqueze, E. C., Ulhôa, M. A., & Moreno, C. R. C. (2014). Leisure-time physical activity does not fully explain the higher body mass index in irregular-shift workers. *International archives of occupational and environmental health*, *87*(3), 229-239.	Yes	No
Martin, J. L., Fiorentino, L., Jouldjian, S., Josephson, K. R., & Alessi, C. A. (2010). Sleep quality in residents of assisted living facilities: effect on quality of life, functional status, and depression. *Journal of the American Geriatrics Society*, *58*(5), 829-836.	Yes	No
Martin, J. L., Fiorentino, L., Jouldjian, S., Mitchell, M., Josephson, K. R., & Alessi, C. A. (2011). Poor self-reported sleep quality predicts mortality within one year of inpatient post-acute rehabilitation among older adults. *Sleep*, *34*(12), 1715-1721.	Yes	No
Martin, J. L., Song, Y., Hughes, J., Jouldjian, S., Dzierzewski, J. M., Fung, C. H., ... & Alessi, C. A. (2017). A four-session sleep intervention program improves sleep for older adult day health care participants: Results of a randomized controlled trial. *Sleep*, *40*(8).	Yes	No
Martin, T., Moussay, S., Bulla, I., Bulla, J., Toupet, M., Etard, O., ... & Quarck, G. (2016). Exploration of circadian rhythms in patients with bilateral vestibular loss. *PloS one*, *11*(6), e0155067.	Yes	No
Matthews, K. A., Kamarck, T. W., H. Hall, M., Strollo, P. J., Owens, J. F., Buysse, D. J., ... & Reis, S. E. (2008). Blood pressure dipping and sleep disturbance in African-American and Caucasian men and women. *American journal of hypertension*, *21*(7), 826-831.	Yes	No
Matthews, K. A., Patel, S. R., Pantesco, E. J., Buysse, D. J., Kamarck, T. W., Lee, L., & Hall, M. H. (2018). Similarities and differences in estimates of sleep duration by polysomnography, actigraphy, diary, and self-reported habitual sleep in a community sample. *Sleep health*, *4*(1), 96-103.	Yes	No
Matura, L. A., Fargo, J., Fritz, J. S., Smith, K. A., Vaidya, A., Pinder, D., ... & Kawut, S. M. (2017). Slow-paced respiration therapy to treat symptoms in pulmonary arterial hypertension. *Heart & Lung: The Journal of Acute and Critical Care*, *46*(1), 7-13.	Yes	No
McBean, A. L., Kinsey, S. G., & Montgomery-Downs, H. E. (2016). Effects of a single night of postpartum sleep on childless women's daytime functioning. *Physiology & behavior*, *156*, 137-147.	Yes	No
McCall, W. V., Blocker, J. N., D&rsquo, R., Kimball, J., Boggs, N., Lasater, B., ... & Rosenquist, P. B. (2010). Treatment of insomnia in depressed insomniacs: effects on health-related quality of life, objective and self-reported sleep, and depression. *Journal of Clinical Sleep Medicine*, *6*(04), 322-329.	Yes	No
McCall, W. V., Kimball, J., Boggs, N., Lasater, B., D&rsquo, R. B., & Rosenquist, P. B. (2009). Prevalence and prediction of primary sleep disorders in a clinical trial of depressed patients with insomnia. *Journal of Clinical Sleep Medicine*, *5*(05), 454-458.	Yes	No
McKenna, B. S., Drummond, S. P., & Eyler, L. T. (2014). Associations between circadian activity rhythms and functional brain abnormalities among euthymic bipolar patients: a preliminary study. *Journal of affective disorders*, *164*, 101-106.	Yes	No
McKinnon, A. C., Duffy, S. L., Cross, N. E., Terpening, Z., Grunstein, R. R., Lagopoulos, J., ... & Naismith, S. L. (2017). Functional connectivity in the default mode network is reduced in association with nocturnal awakening in mild cognitive impairment. *Journal of Alzheimer's Disease*, *56*(4), 1373-1384.	Yes	No
Medina, D., Ebben, M., Milrad, S., Atkinson, B., & Krieger, A. C. (2015). Adverse effects of daylight saving time on adolescents' sleep and vigilance. *Journal of clinical sleep medicine*, *11*(08), 879-884.	Yes	No

Reference	Sleep diary	Event marker
Merikanto, I., Pesonen, A. K., Kuula, L., Lahti, J., Heinonen, K., Kajantie, E., & Räikkönen, K. (2017). Eveningness as a risk for behavioral problems in late adolescence. *Chronobiology international*, *34*(2), 225-234.	Yes	Yes
Mesa, F., Beidel, D. C., & Bunnell, B. E. (2014). An examination of psychopathology and daily impairment in adolescents with social anxiety disorder. *PloS one*, *9*(4), e93668.	Yes	Yes
Mezick, E. J., Matthews, K. A., Hall, M., Kamarck, T. W., Buysse, D. J., Owens, J. F., & Reis, S. E. (2009). Intra-individual variability in sleep duration and fragmentation: associations with stress. *Psychoneuroendocrinology*, *34*(9), 1346-1354.	Yes	No
Mezick, E. J., Matthews, K. A., Hall, M., Strollo Jr, P. J., Buysse, D. J., Kamarck, T. W., ... & Reis, S. E. (2008). Influence of race and socioeconomic status on sleep: Pittsburgh Sleep SCORE project. *Psychosomatic medicine*, *70*(4), 410-416.	Yes	No
Miller, A., Roth, T., Roehrs, T., & Yaremchuk, K. (2015). Correlation between sleep disruption on postoperative pain. *Otolaryngology—Head and Neck Surgery*, *152*(5), 964-968.	Yes	No
Minton, O., & Stone, P. C. (2012). A comparison of cognitive function, sleep and activity levels in disease-free breast cancer patients with or without cancer-related fatigue syndrome. *BMJ supportive & palliative care*, *2*(3), 231-238.	No	Yes
Montgomery-Downs, H. E., Insana, S. P., Clegg-Kraynok, M. M., & Mancini, L. M. (2010). Normative longitudinal maternal sleep: the first 4 postpartum months. *American Journal of Obstetrics and Gynecology*, *203*(5), 465e1-465e7.	Yes	No
Mullin, B. C., Phillips, M. L., Siegle, G. J., Buysse, D. J., Forbes, E. E., & Franzen, P. L. (2013). Sleep deprivation amplifies striatal activation to monetary reward. *Psychological medicine*, *43*(10), 2215-2225.	Yes	No
Nakayama-Ashida, Y., Takegami, M., Chin, K., Sumi, K., Nakamura, T., Takahashi, K. I., ... & Fukuhara, S. (2008). Sleep-disordered breathing in the usual lifestyle setting as detected with home monitoring in a population of working men in Japan. *Sleep*, *31*(3), 419-425.	Yes	No
Nakase-Richardson, R., Nazem, S., Forster, J. E., Brenner, L. A., & Matthews, E. E. (2016). Actigraphic and sleep diary measures in veterans with traumatic brain injury: discrepancy in selected sleep parameters. *Journal of head trauma rehabilitation*, *31*(2), 136-146.	Yes	No
Neikrug, A. B., Donaldson, G., Iacob, E., Williams, S. L., Hamilton, C. A., & Okifuji, A. (2017). Activity rhythms and clinical correlates in fibromyalgia. *Pain*, *158*(8), 1417-1429.	Yes	No
Neukirch, N., & Colagiuri, B. (2015). The placebo effect, sleep difficulty, and side effects: a balanced placebo model. *Journal of behavioral medicine*, *38*(2), 273-283.	Yes	No
Nødtvedt, Ø. O., Hansen, A. L., Bjorvatn, B., & Pallesen, S. (2017). The effects of kiwi fruit consumption in students with chronic insomnia symptoms: a randomized controlled trial. *Sleep and Biological Rhythms*, *15*(2), 159-166.	Yes	No
Noor, Z. M., Smith, A. J., Smith, S. S., & Nissen, L. M. (2016). A feasibility study: Use of actigraph to monitor and follow-up sleep/wake patterns in individuals attending community pharmacy with sleeping disorders. *Journal of pharmacy & bioallied sciences*, *8*(3), 173-180.	Yes	No
Nussbaumer-Ochsner, Y., Schuepfer, N., Siebenmann, C., Maggiorini, M., & Bloch, K. E. (2011). High altitude sleep disturbances monitored by actigraphy and polysomnography. *High altitude medicine & biology*, *12*(3), 229-236.	No	Yes
Obayashi, K., Saeki, K., & Kurumatani, N. (2016). Gender differences in the association between objective sleep quality and leukocyte count: The HEIJO-KYO cohort. *Physiology & behavior*, *164*, 19-24.	Yes	No
Obayashi, K., Saeki, K., & Kurumatani, N. (2015). Quantitative association between nocturnal voiding frequency and objective sleep quality in the general elderly population: the HEIJO-KYO cohort. *Sleep medicine*, *16*(5), 577-582.	Yes	No

Reference	Sleep diary	Event marker
Obayashi, K., Saeki, K., Iwamoto, J., Ikada, Y., & Kurumatani, N. (2014). Association between light exposure at night and nighttime blood pressure in the elderly independent of nocturnal urinary melatonin excretion. *Chronobiology international*, *31*(6), 779-786.	Yes	No
Obayashi, K., Saeki, K., Miyata, K., Nishi, T., Tone, N., Ogata, N., & Kurumatani, N. (2015). Comparisons of objective sleep quality between elderly Individuals with and without cataract surgery: a cross-sectional study of the HEIJO-KYO cohort. *Journal of epidemiology*, *25*(8), 529-535.	Yes	No
Ødegård, S. S., Omland, P. M., Nilsen, K. B., Stjern, M., Gravdahl, G. B., & Sand, T. (2015). The effect of sleep restriction on laser evoked potentials, thermal sensory and pain thresholds and suprathreshold pain in healthy subjects. *Clinical Neurophysiology*, *126*(10), 1979-1987.	Yes	No
Ok, G., Yilmaz, H., Tok, D., Erbüyün, K., Çoban, S., & Dinç, G. (2011). Evaluating sleep characteristics in intensive care unit and non-intensive care unit physicians. *Anaesthesia and intensive care*, *39*(6), 1071-1076.	No	Yes
Olsen, M. N., Sherry, D. D., Boyne, K., McCue, R., Gallagher, P. R., & Brooks, L. J. (2013). Relationship between sleep and pain in adolescents with juvenile primary fibromyalgia syndrome. *Sleep*, *36*(4), 509-516.	Yes	No
Ortiz, A., Bradler, K., Radu, L., Alda, M., & Rusak, B. (2016). Exponential state transition dynamics in the rest–activity architecture of patients with bipolar disorder. *Bipolar disorders*, *18*(2), 116-123.	Yes	No
Paech, G. M., Crowley, S. J., Fogg, L. F., & Eastman, C. I. (2017). Advancing the sleep/wake schedule impacts the sleep of African-Americans more than European-Americans. *PloS one*, *12*(10), e0186887.	Yes	No
Pallesen, S., Nødtvedt, Ø., Saxvig, I. W., & Bjorvatn, B. (2016). A new light source (Valkee©) does not alter sleep–wake parameters and does not improve mood in phase delayed subjects. *Sleep and Biological Rhythms*, *14*(1), 97-105.	Yes	No
Parsey, C. M., Schmitter-Edgecombe, M., & Belenky, G. (2015). Sleep and everyday functioning in older adulthood. *Journal of Applied Gerontology*, *34*(1), 48-72.	Yes	No
Paterson, J. L., Dorrian, J., Clarkson, L., Darwent, D., & Ferguson, S. A. (2012). Beyond working time: factors affecting sleep behaviour in rail safety workers. *Accident Analysis & Prevention*, *45*, 32-35.	Yes	No
Paul, M. A., Love, R. J., Hawton, A., & Arendt, J. (2015). Sleep and the endogenous melatonin rhythm of high arctic residents during the summer and winter. *Physiology & behavior*, *141*, 199-206.	Yes	No
Pereira, D., & Elfering, A. (2014). Social stressors at work and sleep during weekends: The mediating role of psychological detachment. *Journal of Occupational Health Psychology*, *19*(1), 85-95.	Yes	No
Perfect, M. M., Elkins, G. R., Lyle-Lahroud, T., & Posey, J. R. (2010). Stress and quality of sleep among individuals diagnosed with diabetes. *Stress and Health: Journal of the International Society for the Investigation of Stress*, *26*(1), 61-74.	No	Yes
Philbrook, L. E., & El-Sheikh, M. (2016). Associations between neighborhood context, physical activity, and sleep in adolescents. *Sleep health*, *2*(3), 205-210.	Yes	No
Pirrera, S., De Valck, E., & Cluydts, R. (2014). Field study on the impact of nocturnal road traffic noise on sleep: The importance of in-and outdoor noise assessment, the bedroom location and nighttime noise disturbances. *Science of the Total Environment*, *500*, 84-90.	Yes	No
Pylkkönen, M., Sihvola, M., Hyvärinen, H. K., Puttonen, S., Hublin, C., & Sallinen, M. (2015). Sleepiness, sleep, and use of sleepiness countermeasures in shift-working long-haul truck drivers. *Accident Analysis & Prevention*, *80*, 201-210.	Yes	No
Rahman, K., Burton, A., Galbraith, S., Lloyd, A., & Vollmer-Conna, U. (2011). Sleep-wake behavior in chronic fatigue syndrome. *Sleep*, *34*(5), 671-678.	Yes	No
Redeker, N. S., Jeon, S., Andrews, L., Cline, J., Jacoby, D., & Mohsenin, V. (2015). Feasibility and efficacy of a self-management intervention for insomnia in stable heart failure. *Journal of Clinical Sleep Medicine*, *11*(10), 1109-1119.	Yes	No

Reference	Sleep diary	Event marker
Redeker, N. S., Knies, A. K., Hollenbeak, C., Yaggi, H. K., Cline, J., Andrews, L., ... & Finoia, L. (2017). Cognitive behavioral therapy for insomnia in stable heart failure: Protocol for a randomized controlled trial. *Contemporary clinical trials*, *55*, 16-23.	Yes	No
Reid, K. J., Jaksa, A. A., Eisengart, J. B., Baron, K. G., Lu, B., Kane, P., ... & Zee, P. C. (2012). Systematic evaluation of Axis-I DSM diagnoses in delayed sleep phase disorder and evening-type circadian preference. *Sleep medicine*, *13*(9), 1171-1177.	Yes	No
Reid, K. J., Santostasi, G., Baron, K. G., Wilson, J., Kang, J., & Zee, P. C. (2014). Timing and intensity of light correlate with body weight in adults. *PloS one*, *9*(4), e92251.	Yes	No
Reyes, S., Algarin, C., Bunout, D., & Peirano, P. (2013). Sleep/wake patterns and physical performance in older adults. *Aging clinical and experimental research*, *25*(2), 175-181.	Yes	No
Richdale, A. L., Baker, E., Short, M., & Gradisar, M. (2014). The role of insomnia, pre-sleep arousal and psychopathology symptoms in daytime impairment in adolescents with high-functioning autism spectrum disorder. *Sleep medicine*, *15*(9), 1082-1088.	Yes	No
Rissling, M. B., Liu, L., Natarajan, L., He, F., & Ancoli-Israel, S. (2011). Relationship of menopausal status and climacteric symptoms to sleep in women undergoing chemotherapy. *Supportive Care in Cancer*, *19*(8), 1107-1115.	Yes	No
Robertson, J. A., Purple, R. J., Cole, P., Zaiwalla, Z., Wulff, K., & Pattinson, K. T. S. (2016). Sleep disturbance in patients taking opioid medication for chronic back pain. *Anaesthesia*, *71*(11), 1296-1307.	Yes	No
Robertson, M. D., Russell-Jones, D., Umpleby, A. M., & Dijk, D. J. (2013). Effects of three weeks of mild sleep restriction implemented in the home environment on multiple metabolic and endocrine markers in healthy young men. *Metabolism*, *62*(2), 204-211.	Yes	No
Robey, E., Dawson, B., Halson, S., Gregson, W., Goodman, C., & Eastwood, P. (2014). Sleep quantity and quality in elite youth soccer players: a pilot study. *European journal of sport science*, *14*(5), 410-417.	Yes	No
Robillard, R., Hermens, D. F., Lee, R. S., Jones, A., Carpenter, J. S., White, D., ... & Hickie, I. B. (2016). Sleep–wake profiles predict longitudinal changes in manic symptoms and memory in young people with mood disorders. *Journal of sleep research*, *25*(5), 549-555.	Yes	No
Robillard, R., Hermens, D. F., Naismith, S. L., White, D., Rogers, N. L., Ip, T. K., ... & Rong, Y. (2015). Ambulatory sleep-wake patterns and variability in young people with emerging mental disorders. *Journal of psychiatry & neuroscience: JPN*, *40*(1), 28-37.	Yes	No
Robillard, R., Lambert, T. J. R., & Rogers, N. L. (2012). Measuring sleep–wake patterns with physical activity and energy expenditure monitors. *Biological rhythm research*, *43*(5), 555-562.	Yes	No
Robillard, R., Naismith, S. L., Rogers, N. L., Scott, E. M., Ip, T. K. C., Hermens, D. F., & Hickie, I. B. (2013). Sleep-wake cycle and melatonin rhythms in adolescents and young adults with mood disorders: comparison of unipolar and bipolar phenotypes. *European Psychiatry*, *28*(7), 412-416.	Yes	No
Robillard, R., Naismith, S. L., Smith, K. L., Rogers, N. L., White, D., Terpening, Z., ... & Hickie, I. B. (2014). Sleep-wake cycle in young and older persons with a lifetime history of mood disorders. *PloS one*, *9*(2), e87763.	Yes	No
Robillard, R., Oxley, C., Hermens, D. F., White, D., Wallis, R., Naismith, S. L., ... & Hickie, I. B. (2016). The relative contributions of psychiatric symptoms and psychotropic medications on the sleep-wake profile of young persons with anxiety, depression and bipolar disorders. *Psychiatry research*, *243*, 403-406.	Yes	No
Rodríguez-Colón, S. M., He, F., Bixler, E. O., Fernandez-Mendoza, J., Vgontzas, A. N., Calhoun, S., ... & Liao, D. (2015). Sleep variability and cardiac autonomic modulation in adolescents–Penn State Child Cohort (PSCC) study. *Sleep medicine*, *16*(1), 67-72.	Yes	No
Roehrs, T. A., & Roth, T. (2017). Increasing presurgery sleep reduces postsurgery pain and analgesic use following joint replacement: a feasibility study. *Sleep medicine*, *33*, 109-113.	Yes	Yes

Reference	Sleep diary	Event marker
Romney, L., Larson, M. J., Clark, T., Tucker, L. A., Bailey, B. W., & LeCheminant, J. D. (2016). Reduced sleep acutely influences sedentary behavior and mood but not total energy intake in normal-weight and obese women. *Behavioral sleep medicine*, *14*(5), 528-538.	Yes	No
Rose, M., Manser, T., & Ware, J. C. (2008). Effects of call on sleep and mood in internal medicine residents. *Behavioral sleep medicine*, *6*(2), 75-88.	Yes	No
Ross, A. J., Yang, H., Larson, R. A., & Carter, J. R. (2014). Sleep efficiency and nocturnal hemodynamic dipping in young, normotensive adults. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology*, *307*(7), 888-892.	Yes	No
Carandente, F., Montaruli, A., Angeli, A., Sciolla, C., Roveda, E., & Calogiuri, G. (2011). Effects of endurance and strength acute exercise on night sleep quality. *International SportMed Journal*, *12*(3), 113-124.	Yes	No
Roveda, E., Vitale, J. A., Bruno, E., Montaruli, A., Pasanisi, P., Villarini, A., ... & Carandente, F. (2017). Protective effect of aerobic physical activity on sleep behavior in breast cancer survivors. *Integrative cancer therapies*, *16*(1), 21-31.	Yes	No
Ruggiero, J. S., Redeker, N. S., Fiedler, N., Avi-Itzhak, T., & Fischetti, N. (2012). Sleep and psychomotor vigilance in female shiftworkers. *Biological research for nursing*, *14*(3), 225-235.	Yes	No
Russell, C., Wearden, A. J., Fairclough, G., Emsley, R. A., & Kyle, S. D. (2016). Subjective but not actigraphy-defined sleep predicts next-day fatigue in chronic fatigue syndrome: a prospective daily diary study. *Sleep*, *39*(4), 937-944.	Yes	Yes
Röösli, M., Mohler, E., Frei, P., & Vienneau, D. (2014). Noise-related sleep disturbances: Does gender matter?. *Noise and health*, *16*(71), 197-204.	Yes	No
Sadeh, A., Dan, O., & Bar-Haim, Y. (2011). Online assessment of sustained attention following sleep restriction. *Sleep medicine*, *12*(3), 257-261.	Yes	No
Saeki, K., Obayashi, K., Tone, N., & Kurumatani, N. (2015). A warmer indoor environment in the evening and shorter sleep onset latency in winter: The HEIJO-KYO study. *Physiology & behavior*, *149*, 29-34.	Yes	No
Saksvik, I. B., Bjorvatn, B., Harvey, A. G., Waage, S., Harris, A., & Pallesen, S. (2011). Adaptation and readaptation to different shift work schedules measured with sleep diary and actigraphy. *Journal of Occupational Health Psychology*, *16*(3), 331-334.	Yes	Yes
Sakurai, S., Onishi, J., & Hirai, M. (2015). Impaired autonomic nervous system activity during sleep in family caregivers of ambulatory dementia patients in Japan. *Biological research for nursing*, *17*(1), 21-28.	Yes	No
Salvatore, P., Ghidini, S., Zita, G., Panfilis, C. D., Lambertino, S., Maggini, C., & Baldessarini, R. J. (2008). Circadian activity rhythm abnormalities in ill and recovered bipolar I disorder patients. *Bipolar Disorders*, *10*(2), 256-265.	Yes	No
Samson, D. R., Manus, M. B., Krystal, A. D., Fakir, E., Yu, J. J., & Nunn, C. L. (2017). Segmented sleep in a nonelectric, small-scale agricultural society in Madagascar. *American Journal of Human Biology*, *29*(4), e22979.	Yes	No
Samson, D. R., Yetish, G. M., Crittenden, A. N., Mabulla, I. A., Mabulla, A. Z., & Nunn, C. L. (2016). What is segmented sleep? Actigraphy field validation for daytime sleep and nighttime wake. *Sleep health*, *2*(4), 341-347.	Yes	No
Sanches, I., Teixeira, F., dos Santos, J. M., & Ferreira, A. J. (2015). Effects of acute sleep deprivation resulting from night shift work on young doctors. *Acta medica portuguesa*, *28*(4), 457-462.	Yes	No
Sánchez-Ortunño, M. M., & Edinger, J. D. (2012). Internight sleep variability: its clinical significance and responsiveness to treatment in primary and comorbid insomnia. *Journal of sleep research*, *21*(5), 527-534.	Yes	No
Sánchez-Ortuñ, M. M., Edinger, J. D., Means, M. K., & Almirall, D. (2010). Home is where sleep is: an ecological approach to test the validity of actigraphy for the assessment of insomnia. *Journal of Clinical Sleep Medicine*, *6*(01), 21-29.	Yes	No

Reference	Sleep diary	Event marker
Sathyanarayana, A., Joty, S., Fernandez-Luque, L., Ofli, F., Srivastava, J., Elmagarmid, A., ... & Taheri, S. (2016). Sleep quality prediction from wearable data using deep learning. *JMIR mHealth and uHealth*, *4*(4), e125.	Yes	No
Sato, M., Yasuhara, Y., Tanioka, T., Iwasa, Y., Miyake, M., Yasui, T., ... & Locsin, R. C. (2014). Measuring quality of sleep and autonomic nervous function in healthy Japanese women. *Neuropsychiatric disease and treatment*, *10*, 89-96.	Yes	No
Saxvig, I. W., Wilhelmsen-Langeland, A., Pallesen, S., Vedaa, Ø., Nordhus, I. H., & Bjorvatn, B. (2014). A randomized controlled trial with bright light and melatonin for delayed sleep phase disorder: effects on subjective and objective sleep. *Chronobiology International*, *31*(1), 72-86.	Yes	Yes
Schäfer, V., & Bader, K. (2013). Relationship between early-life stress load and sleep in psychiatric outpatients: A sleep diary and actigraphy study. *Stress and Health*, *29*(3), 177-189.	Yes	Yes
Schaal, K., Le Meur, Y., Louis, J., Filliard, J. R., Hellard, P., Casazza, G., & Hausswirth, C. (2015). Whole-body cryostimulation limits overreaching in elite synchronized swimmers. *Medicine & Science in Sports & Exercise*, *47*(7), 1416-1425.	No	Yes
Scott, E. M., Robillard, R., Hermens, D. F., Naismith, S. L., Rogers, N. L., Ip, T. K., ... & Hickie, I. B. (2016). Dysregulated sleep–wake cycles in young people are associated with emerging stages of major mental disorders. *Early intervention in psychiatry*, *10*(1), 63-70.	Yes	No
Serfaty, M. A., Osborne, D., Buszewicz, M. J., Blizard, R., & Raven, P. W. (2010). A randomized double-blind placebo-controlled trial of treatment as usual plus exogenous slow-release melatonin (6 mg) or placebo for sleep disturbance and depressed mood. *International clinical psychopharmacology*, *25*(3), 132-142.	Yes	Yes
Sharkey, K. M., Pearlstein, T. B., & Carskadon, M. A. (2013). Circadian phase shifts and mood across the perinatal period in women with a history of major depressive disorder: a preliminary communication. *Journal of affective disorders*, *150*(3), 1103-1108.	Yes	No
Shea, J. A., Dinges, D. F., Small, D. S., Basner, M., Zhu, J., Norton, L., ... & Mollicone, D. J. (2014). A randomized trial of a three-hour protected nap period in a medicine training program: sleep, alertness, and patient outcomes. *Academic Medicine*, *89*(3), 452-459.	Yes	No
Shechter, A., Kim, E. W., St-Onge, M. P., & Westwood, A. J. (2018). Blocking nocturnal blue light for insomnia: A randomized controlled trial. *Journal of psychiatric research*, *96*, 196-202.	Yes	No
Sherwood, A., Routledge, F. S., Wohlgemuth, W. K., Hinderliter, A. L., Kuhn, C. M., & Blumenthal, J. A. (2011). Blood pressure dipping: ethnicity, sleep quality, and sympathetic nervous system activity. *American journal of hypertension*, *24*(9), 982-988.	Yes	No
Shieh, Y. Y., & Tsai, F. Y. (2008). Static magnetotherapy for the treatment of insomnia. *International journal of electronic healthcare*, *4*(3-4), 339-349.	Yes	No
Simon, S. L., Field, J., Miller, L. E., DiFrancesco, M., & Beebe, D. W. (2015). Sweet/dessert foods are more appealing to adolescents after sleep restriction. *PloS one*, *10*(2), e0115434.	Yes	No
Skibitsky, M., Edelen, M. O., Martin, J. L., Harker, J., Alessi, C., & Saliba, D. (2012). Can standardized sleep questionnaires be used to identify excessive daytime sleeping in older post-acute rehabilitation patients?. *Journal of the American Medical Directors Association*, *13*(2), 127-135.	Yes	No
Smagula, S. F., Harrison, S., Cauley, J. A., Ancoli-Israel, S., Cawthon, P. M., Cummings, S., & Stone, K. L. (2017). Determinants of Change in Objectively Assessed Sleep Duration Among Older Men. *American journal of epidemiology*, *185*(10), 933-940.	Yes	No
Solverson, K. J., Easton, P. A., & Doig, C. J. (2016). Assessment of sleep quality post-hospital discharge in survivors of critical illness. *Respiratory medicine*, *114*, 97-102.	No	Yes
Song, Y., Dzierzewski, J. M., Fung, C. H., Rodriguez, J. C., Jouldjian, S., Mitchell, M. N., ... & Martin, J. L. (2015). Association between sleep and physical function in older veterans in an adult day healthcare program. *Journal of the American Geriatrics Society*, *63*(8), 1622-1627.	Yes	No

Reference	Sleep diary	Event marker
Soreca, I., Wallace, M. L., Frank, E., Hasler, B. P., Levenson, J. C., & Kupfer, D. J. (2012). Sleep duration is associated with dyslipidemia in patients with bipolar disorder in clinical remission. *Journal of affective disorders*, *141*(2-3), 484-487.	Yes	No
Spada, J., Scholz, M., Kirsten, H., Hensch, T., Horn, K., Jawinski, P., ... & Hegerl, U. (2016). Genome-wide association analysis of actigraphic sleep phenotypes in the LIFE Adult Study. *Journal of sleep research*, *25*(6), 690-701.	Yes	No
Sparrow, A. R., Mollicone, D. J., Kan, K., Bartels, R., Satterfield, B. C., Riedy, S. M., ... & Van Dongen, H. P. (2016). Naturalistic field study of the restart break in US commercial motor vehicle drivers: Truck driving, sleep, and fatigue. *Accident Analysis & Prevention*, *93*, 55-64.	Yes	No
Spira, A. P., Stone, K. L., Redline, S., Ensrud, K. E., Ancoli-Israel, S., Cauley, J. A., & Yaffe, K. (2017). Actigraphic sleep duration and fragmentation in older women: associations with performance across cognitive domains. *Sleep*, *40*(8).	Yes	No
St-Amand, J., Provencher, M. D., Bélanger, L., & Morin, C. M. (2013). Sleep disturbances in bipolar disorder during remission. *Journal of affective disorders*, *146*(1), 112-119.	Yes	No
Stuifbergen, A. K., Phillips, L., Carter, P., Morrison, J., & Todd, A. (2010). Subjective and objective sleep difficulties in women with fibromyalgia syndrome. *Journal of the American Academy of Nurse Practitioners*, *22*(10), 548-556.	Yes	No
Su, C. C., Su, P. Y., Wang, S. Y., & Lin, C. C. (2015). Circadian rhythm mediates the relationship between physical activity and quality of life in younger and older cancer survivors. *Chronobiology international*, *32*(10), 1417-1426.	Yes	No
Sultana, R., Vaidya, N., Parganiha, A., & Pati, A. K. (2008). Dichotomy in human population based on variability in peak spread of rest–activity rhythm in respect of internal phase reference point. *Biological Rhythm Research*, *39*(2), 109-121.	Yes	No
Sun, J. L., Wu, S. C., Chang, L. I., Chiou, J. F., Chou, P. L., & Lin, C. C. (2014). The relationship between light exposure and sleep, fatigue, and depression in cancer outpatients: Test of the mediating effect. *Cancer nursing*, *37*(5), 382-390.	Yes	No
Sunde, E., Bråtveit, M., Pallesen, S., & Moen, B. E. (2016). Noise and sleep on board vessels in the Royal Norwegian Navy. *Noise & health*, *18*(81), 85-92.	No	Yes
Takahashi, M., Tsutsumi, A., Kurioka, S., Inoue, A., Shimazu, A., Kosugi, Y., & Kawakami, N. (2014). Occupational and socioeconomic differences in actigraphically measured sleep. *Journal of sleep research*, *23*(4), 458-462.	Yes	No
Takano, K., Boddez, Y., & Raes, F. (2016). I sleep with my Mind's eye open: Cognitive arousal and overgeneralization underpin the misperception of sleep. *Journal of behavior therapy and experimental psychiatry*, *52*, 157-165.	Yes	No
Takano, K., Sakamoto, S., & Tanno, Y. (2014). Repetitive thought impairs sleep quality: An experience sampling study. *Behavior therapy*, *45*(1), 67-82.	No	Yes
Talbot, L. S., Rao, M. N., Cohen, B. E., Richards, A., Inslicht, S. S., O'Donovan, A., ... & Neylan, T. C. (2015). Metabolic risk factors and posttraumatic stress disorder: the role of sleep in young, healthy adults. *Psychosomatic medicine*, *77*(4), 383-391.	Yes	No
Tang, N. K., & Sanborn, A. N. (2014). Better quality sleep promotes daytime physical activity in patients with chronic pain? A multilevel analysis of the within-person relationship. *PLoS One*, *9*(3), e92158.	Yes	Yes
Tang, N. K., Goodchild, C. E., & Salkovskis, P. M. (2012). Hybrid cognitive-behaviour therapy for individuals with insomnia and chronic pain: a pilot randomised controlled trial. *Behaviour research and therapy*, *50*(12), 814-821.	Yes	No
Tang, N. K., Goodchild, C. E., Sanborn, A. N., Howard, J., & Salkovskis, P. M. (2012). Deciphering the temporal link between pain and sleep in a heterogeneous chronic pain patient sample: a multilevel daily process study. *Sleep*, *35*(5), 675-687.	No	Yes

Reference	Sleep diary	Event marker
Tansupswatdikul, P., Chaikittisilpa, S., Jaimchariyatam, N., Panyakhamlerd, K., Jaisamrarn, U., & Taechakraichana, N. (2015). Effects of estrogen therapy on postmenopausal sleep quality regardless of vasomotor symptoms: a randomized trial. *Climacteric*, *18*(2), 198-204.	Yes	No
Tasali, E., Chapotot, F., Wroblewski, K., & Schoeller, D. (2014). The effects of extended bedtimes on sleep duration and food desire in overweight young adults: a home-based intervention. *Appetite*, *80*, 220-224.	Yes	Yes
Taylor, D. J., Peterson, A. L., Pruiksma, K. E., Young-McCaughan, S., Nicholson, K., Mintz, J., ... & Roache, J. D. (2017). Internet and In-Person Cognitive Behavioral Therapy for Insomnia in Military Personnel: A Randomized Clinical Trial. *Sleep*, *40*(6).	Yes	Yes
Taylor, D. J., Zimmerman, M. R., Gardner, C. E., Williams, J. M., Grieser, E. A., Tatum, J. I., ... & Ruggero, C. (2014). A pilot randomized controlled trial of the effects of cognitive-behavioral therapy for insomnia on sleep and daytime functioning in college students. *Behavior therapy*, *45*(3), 376-389.	Yes	Yes
Thorne, H., Hampton, S., Morgan, L., Skene, D. J., & Arendt, J. (2008). Differences in sleep, light, and circadian phase in offshore 18: 00–06: 00 h and 19: 00–07: 00 h shift workers. *Chronobiology International*, *25*(2-3), 225-235.	Yes	No
Thun, E., Bjorvatn, B., Osland, T., Steen, V. M., Sivertsen, B., Johansen, T., ... & Pallesen, S. (2012). An actigraphic validation study of seven morningness-eveningness inventories. *European Psychologist*, *17*(3), 222-230.	Yes	Yes
Todder, D., & Baune, B. T. (2010). Quality of sleep in escitalopram-treated female patients with panic disorder. *Human Psychopharmacology: Clinical and Experimental*, *25*(2), 167-173.	Yes	No
Tomfohr-Madsen, L. M., Clayborne, Z. M., Rouleau, C. R., & Campbell, T. S. (2017). Sleeping for two: an open-pilot study of cognitive behavioral therapy for insomnia in pregnancy. *Behavioral sleep medicine*, *15*(5), 377-393.	Yes	No
Tosur, Z., Green, D., De Chavez, P. J., Knutson, K. L., Goldberger, J. J., Zee, P., ... & Carnethon, M. R. (2014). The association between sleep characteristics and prothrombotic markers in a population-based sample: Chicago Area Sleep Study. *Sleep medicine*, *15*(8), 973-978.	Yes	Yes
Tranah, G. J., Parimi, N., Blackwell, T., Ancoli-Israel, S., Ensrud, K. E., Cauley, J. A., ... & Yaffe, K. (2010). Postmenopausal hormones and sleep quality in the elderly: a population based study. *BMC women's health*, *10*(1), 15-22.	Yes	No
Tremaine, R., Dorrian, J., Paterson, J., Neall, A., Piggott, E., Grech, C., & Pincombe, J. (2013). Actigraph estimates of the sleep of australian midwives: the impact of shift work. *Biological research for nursing*, *15*(2), 191-199.	Yes	No
Tsai, S. Y., Kuo, L. T., Lai, Y. H., & Lee, C. N. (2011). Factors associated with sleep quality in pregnant women: a prospective observational study. *Nursing Research*, *60*(6), 405-412.	Yes	No
Tsai, S. Y., Lin, J. W., Kuo, L. T., & Thomas, K. A. (2012). Daily sleep and fatigue characteristics in nulliparous women during the third trimester of pregnancy. *Sleep*, *35*(2), 257-262.	Yes	No
Tsuchiyama, K., Terao, T., Wang, Y., Hoaki, N., & Goto, S. (2013). Relationship between hostility and subjective sleep quality. *Psychiatry research*, *209*(3), 545-548.	Yes	No
Tyagi, S., Resnick, N. M., Perera, S., Monk, T. H., Hall, M. H., & Buysse, D. J. (2014). Behavioral treatment of chronic insomnia in older adults: does nocturia matter?. *Sleep*, *37*(4), 681-687.	Yes	No
Ulhôa, M. A., Marqueze, E. C., Kantermann, T., Skene, D., & Moreno, C. (2011). When does stress end? Evidence of a prolonged stress reaction in shiftworking truck drivers. *Chronobiology International*, *28*(9), 810-818.	Yes	No
Urner, M., Tornic, J., & Bloch, K. E. (2009). Sleep patterns in high school and university students: a longitudinal study. *Chronobiology international*, *26*(6), 1222-1234.	Yes	Yes
van de Water, A. T., Eadie, J., & Hurley, D. A. (2011). Investigation of sleep disturbance in chronic low back pain: an age-and gender-matched case-control study over a 7-night period. *Manual therapy*, *16*(6), 550-556.	Yes	No

Reference	Sleep diary	Event marker
van Dijk, E., Hilgenkamp, T. I. M., Evenhuis, H. M., & Echteld, M. A. (2012). Exploring the use of actigraphy to investigate sleep problems in older people with intellectual disability. *Journal of Intellectual Disability Research*, *56*(2), 204-211.	No	Yes
Van Dyk, T. R., Zhang, N., Catlin, P. A., Cornist, K., McAlister, S., Whitacre, C., & Beebe, D. W. (2017). Feasibility and emotional impact of experimentally extending sleep in short-sleeping adolescents. *Sleep*, *40*(9).	Yes	No
van Langenberg, D. R., Papandony, M. C., & Gibson, P. R. (2015). Sleep and physical activity measured by accelerometry in Crohn's disease. *Alimentary pharmacology & therapeutics*, *41*(10), 991-1004.	Yes	No
Van Lenten, S. A., & Doane, L. D. (2016). Examining multiple sleep behaviors and diurnal salivary cortisol and alpha-amylase: within-and between-person associations. *Psychoneuroendocrinology*, *68*, 100-110.	Yes	Yes
Van Ravesteyn, L. M., Tulen, J. H., Kamperman, A. M., Raats, M. E., Schneider, A. T., Birnie, E., ... & Lambregtse–van den Berg, M. P. (2014). Perceived sleep quality is worse than objective parameters of sleep in pregnant women with a mental disorder. *Journal of Clinical Sleep Medicine*, *10*(10), 1137-1141.	Yes	No
Van Veen, M. M., Kooij, J. S., Boonstra, A. M., Gordijn, M. C., & Van Someren, E. J. (2010). Delayed circadian rhythm in adults with attention-deficit/hyperactivity disorder and chronic sleep-onset insomnia. *Biological Psychiatry*, *67*(11), 1091-1096.	Yes	No
Van Wouwe, N. C., Valk, P. J., & Veenstra, B. J. (2011). Sleep monitoring: a comparison between three wearable instruments. *Military Medicine*, *176*(7), 811-816.	Yes	No
Vanaparthy, R., Mota, P., Khan, R., Ehsan, M., Qureshi, A., ZuWallack, R., & Leidy, N. (2015). A longitudinal assessment of sleep variables during exacerbations of chronic obstructive pulmonary disease. *Chronic respiratory disease*, *12*(4), 299-304.	Yes	No
Vanderlind, W. M., Beevers, C. G., Sherman, S. M., Trujillo, L. T., McGeary, J. E., Matthews, M. D., ... & Schnyer, D. M. (2014). Sleep and sadness: exploring the relation among sleep, cognitive control, and depressive symptoms in young adults. *Sleep medicine*, *15*(1), 144-149.	Yes	No
Vejvoda, M., Elmenhorst, E. M., Pennig, S., Plath, G., Maass, H., Tritschler, K., ... & Aeschbach, D. (2014). Significance of time awake for predicting pilots' fatigue on short-haul flights: implications for flight duty time regulations. *Journal of sleep research*, *23*(5), 564-567.	Yes	No
Verkooijen, S., Stevelink, R., Abramovic, L., Vinkers, C. H., Ophoff, R. A., Kahn, R. S., ... & van Haren, N. E. (2017). The association of sleep and physical activity with integrity of white matter microstructure in bipolar disorder patients and healthy controls. *Psychiatry Research: Neuroimaging*, *262*, 71-80.	Yes	No
Verkooijen, S., van Bergen, A. H., Knapen, S. E., Vreeker, A., Abramovic, L., Pagani, L., ... & Kahn, R. S. (2017). An actigraphy study investigating sleep in bipolar I patients, unaffected siblings and controls. *Journal of affective disorders*, *208*, 248-254.	Yes	No
Vincent, G. E., Aisbett, B., Hall, S. J., & Ferguson, S. A. (2016). Fighting fire and fatigue: sleep quantity and quality during multi-day wildfire suppression. *Ergonomics*, *59*(7), 932-940.	Yes	No
Vitale, J. A., Roveda, E., Montaruli, A., Galasso, L., Weydahl, A., Caumo, A., & Carandente, F. (2015). Chronotype influences activity circadian rhythm and sleep: differences in sleep quality between weekdays and weekend. *Chronobiology international*, *32*(3), 405-415.	Yes	No
Volkovich, E., Tikotzky, L., & Manber, R. (2016). Objective and subjective sleep during pregnancy: links with depressive and anxiety symptoms. *Archives of women's mental health*, *19*(1), 173-181.	Yes	No
Volpp, K. G., Shea, J. A., Small, D. S., Basner, M., Zhu, J., Norton, L., ... & Mollicone, D. J. (2012). Effect of a protected sleep period on hours slept during extended overnight in-hospital duty hours among medical interns: a randomized trial. *JAMA*, *308*(21), 2208-2217.	Yes	No
Von Känel, R., Ancoli-Israel, S., Dimsdale, J. E., Mills, P. J., Mausbach, B. T., Ziegler, M. G., ... & Grant, I. (2010). Sleep and biomarkers of atherosclerosis in elderly Alzheimer caregivers and controls. *Gerontology*, *56*(1), 41-50.	Yes	No

Reference	Sleep diary	Event marker
Vorbeck, E. D. N. P., Willette-Murphy, K., & Meiers, S. (2010). A descriptive, interventional study to assess the impact of surgical stomas on individuals' sleep perceptions and response to sleep hygiene intervention. *Ostomy wound management*, *56*(1), 36-44.	Yes	No
Wang, Y., Terao, T., Hoaki, N., Goto, S., Araki, Y., Kohno, K., & Mizokami, Y. (2012). Type A behavior pattern: Bortner scale vs. Japanese-original questionnaires. *Journal of affective disorders*, *142*(1-3), 351-354.	Yes	No
Wang, Y., Terao, T., Hoaki, N., Goto, S., Tsuchiyama, K., Iwata, N., ... & Nakamura, J. (2011). Type A behavior pattern and hyperthymic temperament: possible association with bipolar IV disorder. *Journal of affective disorders*, *133*(1-2), 22-28.	Yes	No
Webel, A. R., Perazzo, J., Decker, M., Horvat-Davey, C., Sattar, A., & Voss, J. (2016). Physical activity is associated with reduced fatigue in adults living with HIV/AIDS. *Journal of advanced nursing*, *72*(12), 3104-3112.	Yes	No
Weise, S., Ong, J., Tesler, N. A., Kim, S., & Roth, W. T. (2013). Worried sleep: 24-h monitoring in high and low worriers. *Biological psychology*, *94*(1), 61-70.	Yes	No
Weissová, K., Bartoš, A., Sládek, M., Nováková, M., & Sumová, A. (2016). Moderate changes in the circadian system of Alzheimer's disease patients detected in their home environment. *PloS one*, *11*(1), e0146200.	Yes	No
Westermeyer, J., Khawaja, I. S., Freerks, M., Sutherland, R. J., Engle, K., Johnson, D., ... & Hurwitz, T. (2010). Quality of sleep in patients with posttraumatic stress disorder. *Psychiatry (Edgmont)*, *7*(9), 21-27.	Yes	No
Weymouth, W., & Steel, G. D. (2013). Sleep patterns during an antarctic field expedition. *Military medicine*, *178*(4), 438-444.	Yes	No
Wichniak, A., Wierzbicka, A., & Jernajczyk, W. (2011). Patients with insomnia and subthreshold depression show marked worsening of insomnia after discontinuation of sleep promoting medication. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *35*(7), 1671-1676.	Yes	No
Williams, J. M., Kay, D. B., Rowe, M., & McCrae, C. S. (2013). Sleep discrepancy, sleep complaint, and poor sleep among older adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *68*(5), 712-720.	Yes	No
Williams, S. C., Rogers, N. L., Marshall, N. S., Leung, S., Starmer, G. A., & Grunstein, R. R. (2008). The effect of modafinil following acute CPAP withdrawal: a preliminary study. *Sleep and Breathing*, *12*(4), 359-364.	Yes	No
Winkelman, J. W., Benson, K. L., Buxton, O. M., Lyoo, I. K., Yoon, S., O'Connor, S., & Renshaw, P. F. (2010). Lack of hippocampal volume differences in primary insomnia and good sleeper controls: an MRI volumetric study at 3 Tesla. *Sleep medicine*, *11*(6), 576-582.	Yes	No
Winkelman, J. W., Plante, D. T., Schoerning, L., Benson, K., Buxton, O. M., O'Connor, S. P., ... & Gonenc, A. (2013). Increased rostral anterior cingulate cortex volume in chronic primary insomnia. *Sleep*, *36*(7), 991-998.	Yes	No
Winser, M. A., McBean, A. L., & Montgomery-Downs, H. E. (2013). Minimum duration of actigraphy-defined nocturnal awakenings necessary for morning recall. *Sleep medicine*, *14*(7), 688-691.	Yes	No
Winzeler, K., Voellmin, A., Schäfer, V., Meyer, A. H., Cajochen, C., Wilhelm, F. H., & Bader, K. (2014). Daily stress, presleep arousal, and sleep in healthy young women: a daily life computerized sleep diary and actigraphy study. *Sleep medicine*, *15*(3), 359-366.	Yes	No
Wong, M. L., Lau, K. N. T., Espie, C. A., Luik, A. I., Kyle, S. D., & Lau, E. Y. Y. (2017). Psychometric properties of the Sleep Condition Indicator and Insomnia Severity Index in the evaluation of insomnia disorder. *Sleep medicine*, *33*, 76-81.	Yes	No
Xian, H., Gonzalez, C., Deych, E., Farris, S., Ding, J., Shannon, W., & McCall, W. V. (2015). Age-related effects on circadian phase in the sleep of patients with depression and insomnia. *Behavioral sleep medicine*, *13*(3), 208-216.	Yes	No
Yamadera, W., Sato, M., Harada, D., Iwashita, M., Aoki, R., Obuchi, K., ... & Nakayama, K. (2013). Comparisons of short-term efficacy between individual and group cognitive behavioral therapy for primary insomnia. *Sleep and biological rhythms*, *11*(3), 176-184.	Yes	No

Reference	Sleep diary	Event marker
Yaugher, A. C., & Alexander, G. M. (2015). Internalizing and externalizing traits predict changes in sleep efficiency in emerging adulthood: an actigraphy study. *Frontiers in psychology*, *6*, 1495.	No	Yes
Yeung, J., Sletten, T. L., & Rajaratnam, S. M. (2011). A phase-advanced, extended sleep paradigm to increase sleep duration among early-morning shift workers: a preliminary investigation. *Scandinavian journal of work, environment & health*. 37(1) 62-69.	Yes	No
Yeung, W. F., Chung, K. F., Tso, K. C., Zhang, S. P., Zhang, Z. J., & Ho, L. M. (2011). Electroacupuncture for residual insomnia associated with major depressive disorder: a randomized controlled trial. *Sleep*, *34*(6), 807-815.	Yes	Yes
Yngman-Uhlin, P., Johansson, A., Fernström, A., Börjeson, S., & Edéll-Gustafsson, U. (2011). Fragmented sleep: an unrevealed problem in peritoneal dialysis patients. *Scandinavian journal of urology and nephrology*, *45*(3), 206-215.	Yes	No
Zee, P. C., Wang-Weigand, S., Wright Jr, K. P., Peng, X., & Roth, T. (2010). Effects of ramelteon on insomnia symptoms induced by rapid, eastward travel. *Sleep medicine*, *11*(6), 525-533.	No	Yes
Zeiders, K. H., Doane, L. D., & Adam, E. K. (2011). Reciprocal relations between objectively measured sleep patterns and diurnal cortisol rhythms in late adolescence. *Journal of Adolescent Health*, *48*(6), 566-571.	Yes	No
Zeitzer, J. M., Bliwise, D. L., Hernandez, B., Friedman, L., & Yesavage, J. A. (2013). Nocturia compounds nocturnal wakefulness in older individuals with insomnia. *Journal of Clinical Sleep Medicine*, *9*(03), 259-262.	Yes	No
Zeitzer, J. M., David, R., Friedman, L., Mulin, E., Garcia, R., Wang, J., ... & Shannon, W. (2013). Phenotyping apathy in individuals with Alzheimer disease using functional principal component analysis. *The American Journal of Geriatric Psychiatry*, *21*(4), 391-397.	Yes	No
Zeitzer, J. M., Fisicaro, R. A., Grove, M. E., Mignot, E., Yesavage, J. A., & Friedman, L. (2011). Faster REM sleep EEG and worse restedness in older insomniacs with HLA DQB1* 0602. *Psychiatry research*, *187*(3), 397-400.	Yes	No
Zeitzer, J. M., Ku, B., Ota, D., & Kiratli, B. J. (2014). Randomized controlled trial of pharmacological replacement of melatonin for sleep disruption in individuals with tetraplegia. *The journal of spinal cord medicine*, *37*(1), 46-53.	Yes	No
Zhang, J., Lam, S. P., Li, S. X., Ma, R. C., Kong, A. P., Chan, M. H., ... & Wing, Y. K. (2014). A community-based study on the association between insomnia and hypothalamic-pituitary-adrenal axis: sex and pubertal influences. *The Journal of Clinical Endocrinology & Metabolism*, *99*(6), 2277-2287.	Yes	No
Ziebertz, C. M., Beckers, D. G., Van Hooff, M. L., Kompier, M. A., & Geurts, S. A. (2017). The effect on sleep of being on-call: an experimental field study. *Journal of sleep research*, *26*(6), 809-815.	Yes	No
Zielinski, M. R., Kline, C. E., Kripke, D. F., Bogan, R. K., & Youngstedt, S. D. (2008). No effect of 8-week time in bed restriction on glucose tolerance in older long sleepers. *Journal of sleep research*, *17*(4), 412-419.	Yes	No
Zoccola, P. M., Dickerson, S. S., & Lam, S. (2009). Rumination predicts longer sleep onset latency after an acute psychosocial stressor. *Psychosomatic Medicine*, *71*(7), 771-775.	Yes	No
Zuurbier, L. A., Luik, A. I., Hofman, A., Franco, O. H., Van Someren, E. J., & Tiemeier, H. (2014). Fragmentation and stability of circadian activity rhythms predict mortality: the Rotterdam study. *American journal of epidemiology*, *181*(1), 54-63.	Yes	No
Åkerstedt, T., Axelsson, J., Lekander, M., Orsini, N., & Kecklund, G. (2013). The daily variation in sleepiness and its relation to the preceding sleep episode—a prospective study across 42 days of normal living. *Journal of sleep research*, *22*(3), 258-265.	Yes	No
Åkerstedt, T., Orsini, N., Petersen, H., Axelsson, J., Lekander, M., & Kecklund, G. (2012). Predicting sleep quality from stress and prior sleep–a study of day-to-day covariation across six weeks. *Sleep Medicine*, *13*(6), 674-679.	Yes	No

Reference	Sleep diary	Event marker
Articles that report corroboration of sleep diaries and/or event markers into the actigraphic dataset, but not how this corroboration was performed in detail		
Agmon, M., Shochat, T., & Kizony, R. (2016). Sleep quality is associated with walking under dual-task, but not single-task performance. *Gait & posture*, *49*, 127-131.	Yes	No
Alcántara, C., Biggs, M. L., Davidson, K. W., Delaney, J. A., Jackson, C. L., Zee, P. C., ... & Redline, S. (2016). Sleep disturbances and depression in the multi-ethnic study of atherosclerosis. *Sleep*, *39*(4), 915-925.	Yes	No
Allega, O. R., Leng, X., Vaccarino, A., Skelly, M., Lanzini, M., Hidalgo, M. P., ... & Frey, B. N. (2018). Performance of the biological rhythms interview for assessment in neuropsychiatry: An item response theory and actigraphy analysis. *Journal of affective disorders*, *225*, 54-63.	Yes	No
Ancoli-Israel, S., Liu, L., Rissling, M., Natarajan, L., Neikrug, A. B., Palmer, B. W., ... & Maglione, J. (2014). Sleep, fatigue, depression, and circadian activity rhythms in women with breast cancer before and after treatment: a 1-year longitudinal study. *Supportive Care in Cancer*, *22*(9), 2535-2545.	Yes	No
Ancoli-Israel, S., Rissling, M., Neikrug, A., Trofimenko, V., Natarajan, L., Parker, B. A., ... & Liu, L. (2012). Light treatment prevents fatigue in women undergoing chemotherapy for breast cancer. *Supportive Care in Cancer*, *20*(6), 1211-1219.	Yes	No
Appelhans, B. M., Janssen, I., Cursio, J. F., Matthews, K. A., Hall, M., Gold, E. B., ... & Kravitz, H. M. (2013). Sleep duration and weight change in midlife women: the SWAN sleep study. *Obesity*, *21*(1), 77-84.	Yes	No
Appleman, E. R., Albouy, G., Doyon, J., Cronin-golomb, A., & King, B. R. (2016). Sleep Quality Influences Subsequent Motor Skill Acquisition. *Behavioral Neuroscience*, *130*(3), 290-297.	Yes	No
Aubin, S., Gacon, C., Jennum, P., Ptito, M., & Kupers, R. (2016). Altered sleep–wake patterns in blindness: a combined actigraphy and psychometric study. *Sleep medicine*, *24*, 100-108.	Yes	Yes
Azuma, M., Chin, K., Yoshimura, C., Takegami, M., Takahashi, K. I., Sumi, K., ... & Oka, Y. (2014). Associations among chronic obstructive pulmonary disease and sleep-disordered breathing in an urban male working population in Japan. *Respiration*, *88*(3), 234-243.	Yes	No
Bailey, B. W., Allen, M. D., LeCheminant, J. D., Tucker, L. A., Errico, W. K., Christensen, W. F., & Hill, M. D. (2014). Objectively measured sleep patterns in young adult women and the relationship to adiposity. *American Journal of Health Promotion*, *29*(1), 46-54.	Yes	No
Bakker, J. P., Weng, J., Wang, R., Redline, S., Punjabi, N. M., & Patel, S. R. (2015). Associations between obstructive sleep apnea, sleep duration, and abnormal fasting glucose. The multi-ethnic study of atherosclerosis. *American journal of respiratory and critical care medicine*, *192*(6), 745-753.	Yes	Yes
Barger, L. K., Wright Jr, K. P., Burke, T. M., Chinoy, E. D., Ronda, J. M., Lockley, S. W., & Czeisler, C. A. (2014). Sleep and cognitive function of crewmembers and mission controllers working 24-h shifts during a simulated 105-day spaceflight mission. *Acta Astronautica*, *93*, 230-242.	Yes	No
Baron, K. G., Reid, K. J., & Zee, P. C. (2013). Exercise to improve sleep in insomnia: exploration of the bidirectional effects. *Journal of Clinical Sleep Medicine*, *9*(8), 819-824.	Yes	No
Baron, K. G., Reid, K. J., Van Horn, L., & Zee, P. C. (2013). Contribution of evening macronutrient intake to total caloric intake and body mass index. *Appetite*, *60*(1), 246-251.	Yes	No
Baron, K. G., Reid, K. J., Kim, T., Van Horn, L., Attarian, H., Wolfe, L., ... & Zee, P. C. (2017). Circadian timing and alignment in healthy adults: associations with BMI, body fat, caloric intake and physical activity. *International journal of obesity (2005)*, *41*(2), 203-209.	Yes	No
Barrett-Connor, E., Dam, T. T., Stone, K., Harrison, S. L., Redline, S., Orwoll, E., & Osteoporotic Fractures in Men Study Group. (2008). The association of testosterone levels with overall sleep quality, sleep architecture, and sleep-disordered breathing. *The Journal of Clinical Endocrinology & Metabolism*, *93*(7), 2602-2609.	Yes	No

Reference	Sleep diary	Event marker
Barsevick, A., Beck, S. L., Dudley, W. N., Wong, B., Berger, A. M., Whitmer, K., ... & Stewart, K. (2010). Efficacy of an intervention for fatigue and sleep disturbance during cancer chemotherapy. *Journal of pain and symptom management*, *40*(2), 200-216.	Yes	Yes
Beck, S. L., Berger, A. M., Barsevick, A. M., Wong, B., Stewart, K. A., & Dudley, W. N. (2010). Sleep quality after initial chemotherapy for breast cancer. *Supportive Care in Cancer*, *18*(6), 679-689.	Yes	No
Becker, T., Penzel, T., & Fietze, I. (2016). Evaluation of the Charité Jet Lag Scale: Further Assessment of Jet Lag Using a Method-Comparison Approach. *Journal of biological rhythms*, *31*(1), 94-107.	Yes	No
Bei, B., Allen, N. B., Nicholas, C. L., Dudgeon, P., Murray, G., & Trinder, J. (2014). Actigraphy-assessed sleep during school and vacation periods: A naturalistic study of restricted and extended sleep opportunities in adolescents. *Journal of sleep research*, *23*(1), 107-117.	No	Yes
Bei, B., Byrne, M. L., Ivens, C., Waloszek, J., Woods, M. J., Dudgeon, P., ... & Allen, N. B. (2013). Pilot study of a mindfulness-based, multi-component, in-school group sleep intervention in adolescent girls. *Early intervention in psychiatry*, *7*(2), 213-220.	No	Yes
Bei, B., Calcagni, S. C., Milgrom, J., & Trinder, J. (2012). Day-to-day alteration of 24-hour sleep pattern immediately before and after giving birth. *Sleep and Biological Rhythms*, *10*(3), 212-221.	No	Yes
Bei, B., Seeman, T. E., Carroll, J. E., & Wiley, J. F. (2017). Sleep and physiological dysregulation: a closer look at sleep intraindividual variability. *Sleep*, *40*(9).	Yes	Yes
Beijamini, F., Silva, A. G. T., Peixoto, C. A. T., & Louzada, F. M. (2008). Influence of gender on psychomotor vigilance task performance by adolescents. *Brazilian Journal of Medical and Biological Research*, *41*(8), 734-738.	Yes	No
Berger, A. M., Wielgus, K., Hertzog, M., Fischer, P., & Farr, L. (2010). Patterns of circadian activity rhythms and their relationships with fatigue and anxiety/depression in women treated with breast cancer adjuvant chemotherapy. *Supportive Care in Cancer*, *18*(1), 105-114.	Yes	Yes
Berndt, C., Diekelmann, S., Alexander, N., Pustal, A., & Kirschbaum, C. (2014). Sleep fragmentation and false memories during pregnancy and motherhood. *Behavioural brain research*, *266*, 52-57.	Yes	No
Bernert, R. A., Hom, M. A., Iwata, N. G., & Joiner, T. E. (2017). Objectively Assessed Sleep Variability as an Acute Warning Sign of Suicidal Ideation in a Longitudinal Evaluation of Young Adults at High Suicide Risk. *The Journal of clinical psychiatry*, *78*(6), 678-687.	Yes	No
Bertisch, S. M., Sillau, S., De Boer, I. H., Szklo, M., & Redline, S. (2015). 25-hydroxyvitamin D concentration and sleep duration and continuity: multi-ethnic study of atherosclerosis. *Sleep*, *38*(8), 1305-1311.	Yes	Yes
Björkqvist, J., Paavonen, J., Andersson, S., Pesonen, A. K., Lahti, J., Heinonen, K., ... & Strang-Karlsson, S. (2014). Advanced sleep–wake rhythm in adults born prematurely: confirmation by actigraphy-based assessment in the Helsinki Study of Very Low Birth Weight Adults. *Sleep medicine*, *15*(9), 1101-1106.	Yes	Yes
Blackwell, T., Yaffe, K., Ancoli-Israel, S., Redline, S., Ensrud, K. E., Stefanick, M. L., ... & Osteoporotic Fractures in Men (MrOS) Study Group. (2011). Association of sleep characteristics and cognition in older community-dwelling men: the MrOS sleep study. *Sleep*, *34*(10), 1347-1356.	Yes	No
Blackwell, T., Yaffe, K., Laffan, A., Ancoli-Israel, S., Redline, S., Ensrud, K. E., ... & Stone, K. L. (2014). Associations of objectively and subjectively measured sleep quality with subsequent cognitive decline in older community-dwelling men: the MrOS sleep study. *Sleep*, *37*(4), 655-663.	Yes	No
Blake, M., Schwartz, O., Waloszek, J. M., Raniti, M., Simmons, J. G., Murray, G., ... & Dudgeon, P. (2017). The SENSE study: Treatment mechanisms of a cognitive behavioral and mindfulness-based group sleep improvement intervention for at-risk adolescents. *Sleep*, *40*(6).	Yes	Yes
Blake, M., Waloszek, J. M., Schwartz, O., Raniti, M., Simmons, J. G., Blake, L., ... & Trinder, J. (2016). The SENSE study: Post intervention effects of a randomized controlled trial of a cognitive-behavioral and mindfulness-based group sleep improvement intervention among at-risk adolescents. *Journal of consulting and clinical psychology*, *84*(12), 1039-1051.	Yes	Yes

Reference	Sleep diary	Event marker
Blake, M. J., Snoep, L., Raniti, M., Schwartz, O., Waloszek, J. M., Simmons, J. G., ... & Bootzin, R. (2017). A cognitive-behavioral and mindfulness-based group sleep intervention improves behavior problems in at-risk adolescents by improving perceived sleep quality. *Behaviour research and therapy*, *99*, 147-156.	Yes	Yes
Blytt, K. M., Bjorvatn, B., Husebo, B., & Flo, E. (2017). Clinically significant discrepancies between sleep problems assessed by standard clinical tools and actigraphy. *BMC geriatrics*, *17*(1), 253.	Yes	Yes
Boland, E. M., Stange, J. P., Adams, A. M., LaBelle, D. R., Ong, M. L., Hamilton, J. L., ... & Alloy, L. B. (2015). Associations between sleep disturbance, cognitive functioning and work disability in Bipolar Disorder. *Psychiatry research*, *230*(2), 567-574.	Yes	No
Booth, J. N., Bromley, L. E., Darukhanavala, A. P., Whitmore, H. R., Imperial, J. G., & Penev, P. D. (2012). Reduced physical activity in adults at risk for type 2 diabetes who curtail their sleep. *Obesity*, *20*(2), 278-284.	Yes	Yes
Borel, A. L., Pépin, J. L., Nasse, L., Baguet, J. P., Netter, S., & Benhamou, P. Y. (2013). Short Sleep Duration Measured by Wrist Actimetry Is Associated With Deteriorated Glycemic Control in Type 1 Diabetes. *Diabetes Care*, *36*(10), 2902-2908.	Yes	Yes
Boudebesse, C., Geoffroy, P. A., Henry, C., Germain, A., Scott, J., Lajnef, M., ... & Etain, B. (2015). Links between sleep and body mass index in bipolar disorders: an exploratory study. *European Psychiatry*, *30*(1), 89-93.	Yes	Yes
Briscoe, S., Hardy, E., Pengo, M. F., Kosky, C., Williams, A. J., Hart, N., & Steier, J. (2014). Comparison of 7 versus 14 days wrist actigraphy monitoring in a sleep disorders clinic population. *Chronobiology international*, *31*(3), 356-362.	Yes	Yes
Brøndsted, A. E., Sander, B., Haargaard, B., Lund-Andersen, H., Jennum, P., Gammeltoft, S., & Kessel, L. (2015). The effect of cataract surgery on circadian photoentrainment: a randomized trial of blue-blocking versus neutral intraocular lenses. *Ophthalmology*, *122*(10), 2115-2124.	Yes	Yes
Buchanan, D. T., Landis, C. A., Hohensee, C., Guthrie, K. A., Otte, J. L., Paudel, M., ... & LaCroix, A. Z. (2017). Effects of yoga and aerobic exercise on actigraphic sleep parameters in menopausal women with hot flashes. *Journal of Clinical Sleep Medicine*, *13*(01), 11-18.	Yes	Yes
Buffum, D., Koetters, T., Cho, M., Macera, L., Paul, S. M., West, C., ... & Cooper, B. (2011). The effects of pain, gender, and age on sleep/wake and circadian rhythm parameters in oncology patients at the initiation of radiation therapy. *The Journal of Pain*, *12*(3), 390-400.	Yes	Yes
Bulls, H. W., Lynch, M. K., Petrov, M. E., Gossett, E. W., Owens, M. A., Terry, S. C., ... & Goodin, B. R. (2017). Depressive Symptoms and Sleep Efficiency Sequentially Mediate Racial Differences in Temporal Summation of Mechanical Pain. *Annals of Behavioral Medicine*, *51*(5), 673-682.	Yes	Yes
Burgess, H. J., & Molina, T. A. (2014). Home lighting before usual bedtime impacts circadian timing: a field study. *Photochemistry and photobiology*, *90*(3), 723-726.	Yes	No
Burgess, H. J., Park, M., Wyatt, J. K., Rizvydeen, M., & Fogg, L. F. (2017). Sleep and circadian variability in people with delayed sleep–wake phase disorder versus healthy controls. *Sleep medicine*, *34*, 33-39.	No	Yes
Buysse, D. J., Cheng, Y., Germain, A., Moul, D. E., Franzen, P. L., Fletcher, M., & Monk, T. H. (2010). Night-to-night sleep variability in older adults with and without chronic insomnia. *Sleep medicine*, *11*(1), 56-64.	Yes	No
Buysse, D. J., Germain, A., Moul, D. E., Franzen, P. L., Brar, L. K., Fletcher, M. E., ... & Monk, T. H. (2011). Efficacy of brief behavioral treatment for chronic insomnia in older adults. *Archives of internal medicine*, *171*(10), 887-895.	Yes	No
Byun, E., Gay, C. L., & Lee, K. A. (2016). Sleep, fatigue, and problems with cognitive function in adults living with HIV. *Journal of the Association of Nurses in AIDS Care*, *27*(1), 5-16.	Yes	Yes
Caia, J., Halson, S. L., Scott, T. J., & Kelly, V. G. (2017). Intra-individual variability in the sleep of senior and junior rugby league athletes during the competitive season. *Chronobiology international*, *34*(9), 1239-1247.	Yes	Yes

Reference	Sleep diary	Event marker
Caia, J., Scott, T. J., Halson, S. L., & Kelly, V. G. (2017). Do players and staff sleep more during the pre-or competitive season of elite rugby league?. *European journal of sport science*, *17*(8), 964-972.	Yes	Yes
Calogiuri, G., & Weydahl, A. (2014). Effects of sleep loss on the rest–activity circadian rhythm of helpers participating in continuous dogsled races. *Biological research for nursing*, *16*(2), 123-133.	Yes	No
Calogiuri, G., Weydahl, A., & Roveda, E. (2011). Effects of sleep loss and strenuous physical activity on the rest–activity circadian rhythm: A study on 500 km and 1,000 km Dogsled Racers. *Biological research for nursing*, *13*(4), 409-418.	Yes	No
Carnethon, M. R., De Chavez, P. J., Zee, P. C., Kim, K. Y. A., Liu, K., Goldberger, J. J., ... & Knutson, K. L. (2016). Disparities in sleep characteristics by race/ethnicity in a population-based sample: Chicago Area Sleep Study. *Sleep medicine*, *18*, 50-55.	Yes	Yes
Carney, C. E., Moss, T. G., Lachowski, A. M., & Atwood, M. E. (2014). Understanding mental and physical fatigue complaints in those with depression and insomnia. *Behavioral sleep medicine*, *12*(4), 272-289.	Yes	Yes
Carpenter, J. S., Robillard, R., Hermens, D. F., Naismith, S. L., Gordon, C., Scott, E. M., & Hickie, I. B. (2017). Sleep-wake profiles and circadian rhythms of core temperature and melatonin in young people with affective disorders. *Journal of psychiatric research*, *94*, 131-138.	Yes	Yes
Casida, J. M., Davis, J. E., Brewer, R. J., Smith, C., & Yarandi, H. (2011). Sleep and daytime sleepiness of patients with left ventricular assist devices: a longitudinal pilot study. *Progress in Transplantation*, *21*(2), 131-136.	Yes	Yes
Castro-Diehl, C., Diez, A. R., Redline, S., Seeman, T., McKinley, P., Sloan, R., & Shea, S. (2016). Sleep Duration and Quality in Relation to Autonomic Nervous System Measures: The Multi-Ethnic Study of Atherosclerosis (MESA). *Sleep*, *39*(11), 1927-1940.	Yes	Yes
Castro-Diehl, C., Diez Roux, A. V., Redline, S., Seeman, T., Shrager, S. E., & Shea, S. (2015). Association of sleep duration and quality with alterations in the hypothalamic-pituitary adrenocortical axis: The multi-ethnic study of atherosclerosis (MESA). *The Journal of Clinical Endocrinology & Metabolism*, *100*(8), 3149-3158.	Yes	Yes
Cavuoto, M. G., Ong, B., Pike, K. E., Nicholas, C. L., Bei, B., & Kinsella, G. J. (2016). Better objective sleep quality in older adults with high subjective memory decline. *Journal of Alzheimer's Disease*, *53*(3), 943-953.	Yes	No
Chan, W. S., Williams, J., Dautovich, N. D., McNamara, J. P., Stripling, A., Dzierzewski, J. M., ... & McCrae, C. S. (2017). Night-to-night sleep variability in older adults with chronic insomnia: mediators and moderators in a randomized controlled trial of brief behavioral therapy (BBT-I). *Journal of Clinical Sleep Medicine*, *13*(11), 1243-1254.	Yes	No
Chen, H. M., Tsai, C. M., Wu, Y. C., Lin, K. C., & Lin, C. C. (2016). Effect of walking on circadian rhythms and sleep quality of patients with lung cancer: A randomised controlled trial. *British Journal of Cancer*, *115*(11), 1304-1312.	Yes	No
Chen, H. M., Wu, Y. C., Tsai, C. M., Tzeng, J. I., & Lin, C. C. (2015). Relationships of circadian rhythms and physical activity with objective sleep parameters in lung cancer patients. *Cancer nursing*, *38*(3), 215-223.	Yes	No
Chen, N., Wu, Q., Xiong, Y., Chen, G., Song, D., & Xu, C. (2016). Circadian rhythm and sleep during prolonged Antarctic residence at Chinese Zhongshan station. *Wilderness & environmental medicine*, *27*(4), 458-467.	Yes	Yes
Chen, X., Wang, R., Zee, P., Lutsey, P. L., Javaheri, S., Alcántara, C., ... & Redline, S. (2015). Racial/ethnic differences in sleep disturbances: the Multi-Ethnic Study of Atherosclerosis (MESA). *Sleep*, *38*(6), 877-888.	Yes	No
Chinoy, E. D., Harris, M. P., Kim, M. J., Wang, W., & Duffy, J. F. (2016). Scheduled evening sleep and enhanced lighting improve adaptation to night shift work in older adults. *Occupational and environmental medicine*, *73*(12), 869-876.	Yes	No
Chiu, H. Y., Chen, P. Y., Chen, N. H., Chuang, L. P., & Tsai, P. S. (2013). Trajectories of sleep changes during the acute phase of traumatic brain injury: a 7-day actigraphy study. *Journal of the Formosan Medical Association*, *112*(9), 545-553.	Yes	No

Reference	Sleep diary	Event marker
Chiu, H. Y., Lo, W. C., Chiang, Y. H., & Tsai, P. S. (2014). The effects of sleep on the relationship between brain injury severity and recovery of cognitive function: a prospective study. *International journal of nursing studies*, *51*(6), 892-899.	Yes	No
Chontong, S., Saetung, S., & Reutrakul, S. (2016). Higher sleep variability is associated with poorer glycaemic control in patients with type 1 diabetes. *Journal of sleep research*, *25*(4), 438-444.	Yes	Yes
Chung, K. F., & Tso, K. C. (2010). Relationship between insomnia and pain in major depressive disorder: A sleep diary and actigraphy study. *Sleep medicine*, *11*(8), 752-758.	Yes	Yes
Cole, H. V., Owusu-Dabo, E., Iwelunmor, J., Newsome, V., Meeks, K., Agyemang, C., & Jean-Louis, G. (2017). Sleep duration is associated with increased risk for cardiovascular outcomes: a pilot study in a sample of community dwelling adults in Ghana. *Sleep medicine*, *34*, 118-125.	Yes	No
Coo Calcagni, S., Bei, B., Milgrom, J., & Trinder, J. (2012). The relationship between sleep and mood in first-time and experienced mothers. *Behavioral sleep medicine*, *10*(3), 167-179.	No	Yes
Cosgrave, J., Wu, L. J., van den Berg, M., Signal, T. L., & Gander, P. H. (2018). Sleep on Long Haul Layovers and Pilot Fatigue at the Start of the Next Duty Period. *Aerospace medicine and human performance*, *89*(1), 19-25.	Yes	No
Crowley, S. J., & Carskadon, M. A. (2010). Modifications to weekend recovery sleep delay circadian phase in older adolescents. *Chronobiology international*, *27*(7), 1469-1492.	Yes	Yes
Curtis, D. S., Fuller-Rowell, T. E., El-Sheikh, M., Carnethon, M. R., & Ryff, C. D. (2017). Habitual sleep as a contributor to racial differences in cardiometabolic risk. *Proceedings of the National Academy of Sciences*, *114*(33), 8889-8894.	Yes	No
D'aoust, R. F., Brewster, G., & Rowe, M. A. (2015). Depression in informal caregivers of persons with dementia. *International journal of older people nursing*, *10*(1), 14-26.	Yes	No
de Bruin, E. J., Bögels, S. M., Oort, F. J., & Meijer, A. M. (2015). Efficacy of cognitive behavioral therapy for insomnia in adolescents: a randomized controlled trial with internet therapy, group therapy and a waiting list condition. *Sleep*, *38*(12), 1913-1926.	Yes	Yes
de Bruin, E. J., Dewald-Kaufmann, J. F., Oort, F. J., Bögels, S. M., & Meijer, A. M. (2015). Differential effects of online insomnia treatment on executive functions in adolescents. *Sleep medicine*, *16*(4), 510-520.	Yes	Yes
de Bruin, E. J., Oort, F. J., Bögels, S. M., & Meijer, A. M. (2014). Efficacy of internet and group-administered cognitive behavioral therapy for insomnia in adolescents: a pilot study. *Behavioral sleep medicine*, *12*(3), 235-254.	Yes	Yes
de Jonge, L., Zhao, X., Mattingly, M. S., Zuber, S. M., Piaggi, P., Csako, G., ... & NIDDK Sleep Extension Study Group. (2012). Poor sleep quality and sleep apnea are associated with higher resting energy expenditure in obese individuals with short sleep duration. *The Journal of Clinical Endocrinology & Metabolism*, *97*(8), 2881-2889.	Yes	No
Dean, G. E., Redeker, N. S., Wang, Y. J., Rogers, A. E., Dickerson, S. S., Steinbrenner, L. M., & Gooneratne, N. S. (2013). Sleep, mood, and quality of life in patients receiving treatment for lung cancer. *Oncology nursing forum*, *40*(5), 441-451	Yes	No
Dean, G. E., Sabbah, E. A., Yingrengreung, S., Ziegler, P., Chen, H., Steinbrenner, L. M., & Dickerson, S. S. (2015). Sleeping with the enemy: sleep and quality of life in patients with lung cancer. *Cancer nursing*, *38*(1), 60-70.	Yes	No
Devine, J. K., & Wolf, J. M. (2016). Integrating nap and night-time sleep into sleep patterns reveals differential links to health-relevant outcomes. *Journal of sleep research*, *25*(2), 225-233.	Yes	Yes
Dewald, J. F., Meijer, A. M., Oort, F. J., Kerkhof, G. A., & Bögels, S. M. (2014). Adolescents' sleep in low-stress and high-stress (exam) times: a prospective quasi-experiment. *Behavioral sleep medicine*, *12*(6), 493-506.	Yes	No
Dewald, J. F., Short, M. A., Gradisar, M., Oort, F. J., & Meijer, A. M. (2012). The Chronic Sleep Reduction Questionnaire (CSRQ): a cross-cultural comparison and validation in Dutch and Australian adolescents. *Journal of sleep research*, *21*(5), 584-594.	Yes	No

Reference	Sleep diary	Event marker
Dhruva, A., Lee, K., Paul, S. M., West, C., Dunn, L., Dodd, M., ... & Miaskowski, C. (2012). Sleep-Wake Circadian Activity Rhythms and Fatigue in Family Caregivers of Oncology Patients. *Cancer Nursing*, *35*(1), 70-81.	Yes	Yes
Dhruva, A., Paul, S. M., Cooper, B. A., Lee, K., West, C., Aouizerat, B. E., ... & Miaskowski, C. (2012). A longitudinal study of measures of objective and subjective sleep disturbance in patients with breast cancer before, during, and after radiation therapy. *Journal of pain and symptom management*, *44*(2), 215-228.	Yes	Yes
Dzierzewski, J. M., Fung, C. H., Jouldjian, S., Alessi, C. A., Irwin, M. R., & Martin, J. L. (2014). Decrease in daytime sleeping is associated with improvement in cognition after hospital discharge in older adults. *Journal of the American Geriatrics Society*, *62*(1), 47-53.	Yes	No
Evans, D. S., Parimi, N., Nievergelt, C. M., Blackwell, T., Redline, S., Ancoli-Israel, S., ... & Study of Osteoporotic Fractures (SOF) and the Osteoporotic Fractures in Men (MrOS) Study Groups. (2013). Common genetic variants in ARNTL and NPAS2 and at chromosome 12p13 are associated with objectively measured sleep traits in the elderly. *Sleep*, *36*(3), 431-446.	Yes	No
Fales, J., Palermo, T. M., Law, E. F., & Wilson, A. C. (2015). Sleep outcomes in youth with chronic pain participating in a randomized controlled trial of online cognitive-behavioral therapy for pain management. *Behavioral sleep medicine*, *13*(2), 107-123.	Yes	Yes
Filardi, M., Pizza, F., Martoni, M., Vandi, S., Plazzi, G., & Natale, V. (2015). Actigraphic assessment of sleep/wake behavior in central disorders of hypersomnolence. *Sleep medicine*, *16*(1), 126-130.	Yes	Yes
Floam, S., Simpson, N., Nemeth, E., Scott-Sutherland, J., Gautam, S., & Haack, M. (2015). Sleep characteristics as predictor variables of stress systems markers in insomnia disorder. *Journal of sleep research*, *24*(3), 296-304.	Yes	No
Forbes, E. E., Dahl, R. E., Almeida, J. R., Ferrell, R. E., Nimgaonkar, V. L., Mansour, H., ... & Phillips, M. L. (2012). PER2 rs2304672 polymorphism moderates circadian-relevant reward circuitry activity in adolescents. *Biological psychiatry*, *71*(5), 451-457.	Yes	Yes
Ftouni, S., Sletten, T. L., Howard, M., Anderson, C., Lenné, M. G., Lockley, S. W., & Rajaratnam, S. M. (2013). Objective and subjective measures of sleepiness, and their associations with on-road driving events in shift workers. *Journal of sleep research*, *22*(1), 58-69.	Yes	No
Fung, C. H., Martin, J. L., Chung, C., Fiorentino, L., Mitchell, M., Josephson, K. R., ... & Alessi, C. (2012). Sleep disturbance among older adults in assisted living facilities. *The American Journal of Geriatric Psychiatry*, *20*(6), 485-493.	Yes	No
Fung, M. M., Peters, K., Ancoli-Israel, S., Redline, S., Stone, K. L., & Barrett-Connor, E. (2013). Total sleep time and other sleep characteristics measured by actigraphy do not predict incident hypertension in a cohort of community-dwelling older men. *Journal of Clinical Sleep Medicine*, *9*(06), 585-591.	Yes	No
Gamaldo, C. E., Gamaldo, A., Creighton, J., Salas, R. E., Selnes, O. A., David, P. M., ... & Smith, M. T. (2013). Evaluating Sleep and Cognition in HIV. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, *63*(5), 609-616.	Yes	Yes
Gamaldo, C. E., Spira, A. P., Hock, R. S., Salas, R. E., McArthur, J. C., David, P. M., ... & Smith, M. T. (2013). Sleep, function and HIV: a multi-method assessment. *AIDS and Behavior*, *17*(8), 2808-2815.	Yes	Yes
Gander, P., Mulrine, H. M., van den Berg, M. J., Wu, L., Smith, A., Signal, L., & Mangie, J. (2016). Does the circadian clock drift when pilots fly multiple transpacific flights with 1-to 2-day layovers?. *Chronobiology international*, *33*(8), 982-994.	Yes	Yes
Gander, P., van den Berg, M., Mulrine, H., Signal, L., & Mangie, J. (2013). Circadian adaptation of airline pilots during extended duration operations between the USA and Asia. *Chronobiology international*, *30*(8), 963-972.	Yes	No
Gander, P. H., Signal, T. L., van den Berg, M. J., Mulrine, H. M., Jay, S. M., & Jim Mangie, C. (2013). In-flight sleep, pilot fatigue and Psychomotor Vigilance Task performance on ultra-long range versus long range flights. *Journal of sleep research*, *22*(6), 697-706.	Yes	No

Reference	Sleep diary	Event marker
Garrett, K., Dhruva, A., Koetters, T., West, C., Paul, S. M., Dunn, L. B., ... & Wara, W. (2011). Differences in sleep disturbance and fatigue between patients with breast and prostate cancer at the initiation of radiation therapy. *Journal of pain and symptom management*, *42*(2), 239-250.	Yes	Yes
Gathecha, E., Rios, R., Buenaver, L. F., Landis, R., Howell, E., & Wright, S. (2016). Pilot study aiming to support sleep quality and duration during hospitalizations. *Journal of hospital medicine*, *11*(7), 467-472.	Yes	No
Geoffroy, P. A., Boudebesse, C., Bellivier, F., Lajnef, M., Henry, C., Leboyer, M., ... & Etain, B. (2014). Sleep in remitted bipolar disorder: a naturalistic case-control study using actigraphy. *Journal of affective disorders*, *158*, 1-7.	Yes	Yes
Geoffroy, P. A., Boudebesse, C., Henrion, A., Jamain, S., Henry, C., Leboyer, M., ... & Etain, B. (2014). An ASMT variant associated with bipolar disorder influences sleep and circadian rhythms: a pilot study. *Genes, Brain and Behavior*, *13*(3), 299-304.	Yes	Yes
Geoghegan, P., O'donovan, M. T., & Lawlor, B. A. (2012). Investigation of the effects of alcohol on sleep using actigraphy. *Alcohol and alcoholism*, *47*(5), 538-544.	Yes	No
Goldman, S. E., Alder, M. L., Burgess, H. J., Corbett, B. A., Hundley, R., Wofford, D., ... & Malow, B. A. (2017). Characterizing sleep in adolescents and adults with autism spectrum disorders. *Journal of autism and developmental disorders*, *47*(6), 1682-1695.	Yes	Yes
Goldman, S. E., Hall, M., Boudreau, R., Matthews, K. A., Cauley, J. A., Ancoli-Israel, S., ... & Newman, A. B. (2008). Association between nighttime sleep and napping in older adults. *Sleep*, *31*(5), 733-740.	Yes	No
Goldstein, C. A., Lanham, M. S., Smith, Y. R., & O'Brien, L. M. (2017). Sleep in women undergoing in vitro fertilization: a pilot study. *Sleep medicine*, *32*, 105-113.	Yes	No
Grønli, J., Melinder, A., Ousdal, O. T., Pallesen, S., Endestad, T., & Milde, A. M. (2017). Life Threat and Sleep Disturbances in Adolescents: A Two-Year Follow-Up of Survivors From the 2011 Utøya, Norway, Terror Attack. *Journal of traumatic stress*, *30*(3), 219-228.	No	Yes
Gunn, H. E., Buysse, D. J., Hasler, B. P., Begley, A., & Troxel, W. M. (2015). Sleep concordance in couples is associated with relationship characteristics. *Sleep*, *38*(6), 933-939.	Yes	Yes
Gunn, H. E., Buysse, D. J., Matthews, K. A., Kline, C. E., Cribbet, M. R., & Troxel, W. M. (2017). Sleep–Wake Concordance in Couples Is Inversely Associated With Cardiovascular Disease Risk Markers. *Sleep*, *40*(1).	Yes	Yes
Hanisch, L. J., Gooneratne, N. S., Soin, K., Gehrman, P. R., Vaughn, D. J., & Coyne, J. C. (2011). Sleep and daily functioning during androgen deprivation therapy for prostate cancer. *European journal of cancer care*, *20*(4), 549-554.	Yes	No
Harada, Y., Oga, T., Chin, K., Takegami, M., TAKAHASHI, K. I., Sumi, K., ... & Oka, Y. (2012). Differences in relationships among sleep apnoea, glucose level, sleep duration and sleepiness between persons with and without type 2 diabetes. *Journal of sleep research*, *21*(4), 410-418.	Yes	No
Hasler, B. P., & Troxel, W. M. (2010). Couples' Nighttime Sleep Efficiency and Concordance: Evidence for Bidirectional Associations With Daytime Relationship Functioning. *Psychosomatic Medicine*, *72*(8), 794-801.	Yes	Yes
Haynes, P. L., Ancoli-Israel, S., Walter, C. M., & McQuaid, J. R. (2012). Preliminary evidence for a relationship between sleep disturbance and global attributional style in depression. *Cognitive therapy and research*, *36*(2), 140-148.	Yes	No
Heeren, M., Sojref, F., Schuppner, R., Worthmann, H., Pflugrad, H., Tryc, A. B., ... & Weissenborn, K. (2014). Active at night, sleepy all day–sleep disturbances in patients with hepatitis C virus infection. *Journal of hepatology*, *60*(4), 732-740.	Yes	No
Hori, H., Koga, N., Hidese, S., Nagashima, A., Kim, Y., Higuchi, T., & Kunugi, H. (2016). 24-h activity rhythm and sleep in depressed outpatients. *Journal of psychiatric research*, *77*, 27-34.	Yes	No
Huỳnh, C., Guilé, J. M., Breton, J. J., & Godbout, R. (2016). Sleep-wake patterns of adolescents with borderline personality disorder and bipolar disorder. *Child Psychiatry & Human Development*, *47*(2), 202-214.	Yes	Yes

Reference	Sleep diary	Event marker
Insana, S. P., & Montgomery-Downs, H. E. (2013). Sleep and sleepiness among first-time postpartum parents: A field-and laboratory-based multimethod assessment. *Developmental psychobiology*, *55*(4), 361-372.	Yes	No
Insana, S. P., & Montgomery-Downs, H. E. (2010). Maternal postpartum sleepiness and fatigue: Associations with objectively measured sleep variables. *Journal of psychosomatic research*, *69*(5), 467-473.	Yes	No
Insana, S. P., Costello, C. R., & Montgomery-Downs, H. E. (2011). Perception of partner sleep and mood: Postpartum couples' relationship satisfaction. *Journal of sex & marital therapy*, *37*(5), 428-440.	Yes	No
Insana, S. P., Stacom, E. E., & Montgomery-Downs, H. E. (2011). Actual and perceived sleep: Associations with daytime functioning among postpartum women. *Physiology & behavior*, *102*(2), 234-238.	Yes	No
Insana, S. P., Williams, K. B., & Montgomery-Downs, H. E. (2013). Sleep disturbance and neurobehavioral performance among postpartum women. *Sleep*, *36*(1), 73-81.	Yes	No
Irish, L. A., Kline, C. E., Rothenberger, S. D., Krafty, R. T., Buysse, D. J., Kravitz, H. M., ... & Hall, M. H. (2013). A 24-hour approach to the study of health behaviors: temporal relationships between waking health behaviors and sleep. *Annals of Behavioral Medicine*, *47*(2), 189-197.	Yes	No
Jim, H. S., Jacobsen, P. B., Phillips, K. M., Wenham, R. M., Roberts, W., & Small, B. J. (2013). Lagged relationships among sleep disturbance, fatigue, and depressed mood during chemotherapy. *Health psychology: official journal of the Division of Health Psychology, American Psychological Association*, *32*(7), 768-774.	Yes	No
Johansson, A., Svanborg, E., & Edéll-Gustafsson, U. (2013). Sleep–wake activity rhythm and health-related quality of life among patients with coronary artery disease and in a population-based sample—An actigraphy and questionnaire study. *International journal of nursing practice*, *19*(4), 390-401.	Yes	No
Johnson, D. A., Simonelli, G., Moore, K., Billings, M., Mujahid, M. S., Rueschman, M., ... & Patel, S. R. (2017). The neighborhood social environment and objective measures of sleep in the multi-ethnic study of atherosclerosis. *Sleep*, *40*(1), zsw016.	Yes	Yes
Joo, E. Y., Abbott, S. M., Reid, K. J., Wu, D., Kang, J., Wilson, J., & Zee, P. C. (2017). Timing of light exposure and activity in adults with delayed sleep-wake phase disorder. *Sleep medicine*, *32*, 259-265.	Yes	No
Ju, Y. E. S., Ooms, S. J., Sutphen, C., Macauley, S. L., Zangrilli, M. A., Jerome, G., ... & Holtzman, D. M. (2017). Slow wave sleep disruption increases cerebrospinal fluid amyloid-β levels. *Brain*, *140*(8), 2104-2111.	Yes	Yes
Kahlhöfer, J., Karschin, J., Breusing, N., & Bosy-Westphal, A. (2016). Relationship between actigraphy-assessed sleep quality and fat mass in college students. *Obesity*, *24*(2), 335-341.	Yes	Yes
Kahn, M., Fridenson, S., Lerer, R., Bar-Haim, Y., & Sadeh, A. (2014). Effects of one night of induced night-wakings versus sleep restriction on sustained attention and mood: a pilot study. *Sleep medicine*, *15*(7), 825-832.	Yes	No
Kahya, M., Vidoni, E., Burns, J. M., Thompson, A. N., Meyer, K., & Siengsukon, C. F. (2017). The relationship between apolipoprotein ε4 carrier status and sleep characteristics in cognitively normal older adults. *Journal of geriatric psychiatry and neurology*, *30*(5), 273-279.	Yes	No
Kasper, S., Hajak, G., Wulff, K., Hoogendijk, W. J., Montejo, A. L., Smeraldi, E., ... & Baylé, F. J. (2010). Efficacy of the novel antidepressant agomelatine on the circadian rest-activity cycle and depressive and anxiety symptoms in patients with major depressive disorder: a randomized, double-blind comparison with sertraline. *The Journal of clinical psychiatry*, *71*(2), 109-120.	Yes	Yes
Kim, T. H., Carroll, J. E., An, S. K., Seeman, T. E., Namkoong, K., & Lee, E. (2016). Associations between actigraphy-assessed sleep, inflammatory markers, and insulin resistance in the Midlife Development in the United States (MIDUS) study. *Sleep medicine*, *27*, 72-79.	Yes	No
King, C. R., Knutson, K. L., Rathouz, P. J., Sidney, S., Liu, K., & Lauderdale, D. S. (2008). Short sleep duration and incident coronary artery calcification. *Jama*, *300*(24), 2859-2866.	Yes	Yes

Reference	Sleep diary	Event marker
Kline, C. E., Crowley, E. P., Ewing, G. B., Burch, J. B., Blair, S. N., Durstine, J. L., ... & Youngstedt, S. D. (2011). The effect of exercise training on obstructive sleep apnea and sleep quality: a randomized controlled trial. *Sleep*, *34*(12), 1631-1640.	No	Yes
Knutson, K. L. (2014). Sleep duration, quality, and timing and their associations with age in a community without electricity in Haiti. *American Journal of Human Biology*, *26*(1), 80-86.	Yes	No
Knutson, K. L., Van Cauter, E., Zee, P., Liu, K., & Lauderdale, D. S. (2011). Cross-sectional Associations Between Measures of Sleep and Markers of Glucose Metabolism Among Subjects With and Without Diabetes: The Coronary Artery Risk Development in Young Adults (cardia) Sleep Study. *Diabetes Care*, *34*(5), 1171-1176.	Yes	Yes
Knutson, K. L., Zhao, X., Mattingly, M., Galli, G., & Cizza, G. (2012). Predictors of sleep-disordered breathing in obese adults who are chronic short sleepers. *Sleep medicine*, *13*(5), 484-489.	Yes	No
Kobayashi, I., Huntley, E., Lavela, J., & Mellman, T. A. (2012). Subjectively and objectively measured sleep with and without posttraumatic stress disorder and trauma exposure. *Sleep*, *35*(7), 957-965.	Yes	No
Kobayashi, I., Lavela, J., & Mellman, T. A. (2014). Nocturnal autonomic balance and sleep in PTSD and resilience. *Journal of traumatic stress*, *27*(6), 712-716.	Yes	No
Korczak, A. L., Martynhak, B. J., Pedrazzoli, M., Brito, A. F., & Louzada, F. M. (2008). Influence of chronotype and social zeitgebers on sleep/wake patterns. *Brazilian Journal of Medical and Biological Research*, *41*(10), 914-919.	Yes	No
Krane-Gartiser, K., Steinan, M. K., Langsrud, K., Vestvik, V., Sand, T., Fasmer, O. B., ... & Morken, G. (2016). Mood and motor activity in euthymic bipolar disorder with sleep disturbance. *Journal of affective disorders*, *202*, 23-31.	Yes	Yes
Krasich, K., Ramger, B., Holton, L., Wang, L., Mitroff, S. R., & Gregory Appelbaum, L. (2016). Sensorimotor learning in a computerized athletic training battery. *Journal of Motor Behavior*, *48*(5), 401-412.	Yes	No
Kravitz, H. M., Zheng, H., Bromberger, J. T., Buysse, D. J., Owens, J., & Hall, M. H. (2015). An actigraphy study of sleep and pain in midlife women: The Study of Women's Health Across the Nation Sleep Study. *Menopause*, *22*(7), 710-718.	Yes	No
Kripke, D. F., Langer, R. D., Elliott, J. A., Klauber, M. R., & Rex, K. M. (2011). Mortality related to actigraphic long and short sleep. *Sleep medicine*, *12*(1), 28-33.	Yes	No
Kuck, J., Pantke, M., & Flick, U. (2014). Effects of social activation and physical mobilization on sleep in nursing home residents. *Geriatric Nursing*, *35*(6), 455-461.	Yes	No
Kurina, L. M., Thisted, R. A., Chen, J. H., McClintock, M. K., Waite, L. J., & Lauderdale, D. S. (2015). Actigraphic sleep characteristics among older Americans. *Sleep health*, *1*(4), 285-292.	Yes	Yes
Lambiase, M. J., & Thurston, R. C. (2013). Physical activity and sleep among midlife women with vasomotor symptoms. *Menopause*, *20*(9), 946-952.	Yes	No
Lambiase, M. J., Gabriel, K. P., Kuller, L. H., & Matthews, K. A. (2014). Sleep and executive function in older women: the moderating effect of physical activity. *Journals of Gerontology Series A: Biomedical Sciences and Medical Sciences*, *69*(9), 1170-1176.	Yes	No
Lambiase, M. J., Gabriel, K. P., Kuller, L. H., & Matthews, K. A. (2013). Temporal relationships between physical activity and sleep in older women. *Medicine and science in sports and exercise*, *45*(12), 2362-2368.	Yes	No
Lane, J. M., Chang, A. M., Bjonnes, A. C., Aeschbach, D., Anderson, C., Cade, B. E., ... & Gottlieb, D. J. (2016). Impact of common diabetes risk variant in MTNR1B on sleep, circadian, and melatonin physiology. *Diabetes*, *65*(6), 1741-1751.	Yes	Yes
Lauderdale, D. S., Chen, J. H., Kurina, L. M., Waite, L. J., & Thisted, R. A. (2016). Sleep duration and health among older adults: associations vary by how sleep is measured. *J Epidemiol Community Health*, *70*(4), 361-366.	Yes	Yes

Reference	Sleep diary	Event marker
Lauderdale, D. S., Philip Schumm, L., Kurina, L. M., McClintock, M., Thisted, R. A., Chen, J. H., & Waite, L. (2014). Assessment of sleep in the national social life, health, and aging project. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *69*(2), 125-133.	Yes	Yes
Lee, K. A., Gay, C., Byun, E., Lerdal, A., Pullinger, C. R., & Aouizerat, B. E. (2015). Circadian regulation gene polymorphisms are associated with sleep disruption and duration, and circadian phase and rhythm in adults with HIV. *Chronobiology international*, *32*(9), 1278-1293.	Yes	Yes
Lee, K. A., Gay, C., Humphreys, J., Portillo, C. J., Pullinger, C. R., & Aouizerat, B. E. (2014). Telomere length is associated with sleep duration but not sleep quality in adults with human immunodeficiency virus. *Sleep*, *37*(1), 157-166.	Yes	Yes
Lee, K. A., Gay, C., Portillo, C. J., Coggins, T., Davis, H., Pullinger, C. R., & Aouizerat, B. E. (2012). Types of sleep problems in adults living with HIV/AIDS. *Journal of Clinical Sleep Medicine*, *8*(1), 67-75.	Yes	Yes
Lemola, S., Ledermann, T., & Friedman, E. M. (2013). Variability of sleep duration is related to subjective sleep quality and subjective well-being: an actigraphy study. *PloS one*, *8*(8), e71292.	Yes	Yes
Lengacher, C. A., Reich, R. R., Paterson, C. L., Jim, H. S., Ramesar, S., Alinat, C. B., ... & Park, J. Y. (2015). The effects of mindfulness-based stress reduction on objective and subjective sleep parameters in women with breast cancer: a randomized controlled trial. *Psycho-Oncology*, *24*(4), 424-432.	Yes	No
Leproult, R., Deliens, G., Gilson, M., & Peigneux, P. (2015). Beneficial impact of sleep extension on fasting insulin sensitivity in adults with habitual sleep restriction. *Sleep*, *38*(5), 707-715.	Yes	Yes
Leung, J. M., Sands, L. P., Newman, S., Meckler, G., Xie, Y., Gay, C., & Lee, K. (2015). Preoperative sleep disruption and postoperative delirium. *Journal of Clinical Sleep Medicine*, *11*(08), 907-913.	Yes	Yes
Levenson, J. C., Troxel, W. M., Begley, A., Hall, M., Germain, A., Monk, T. H., & Buysse, D. J. (2013). A quantitative approach to distinguishing older adults with insomnia from good sleeper controls. *Journal of Clinical Sleep Medicine*, *9*(02), 125-131.	Yes	No
Holley, A. L., Rabbitts, J., Zhou, C., Durkin, L., & Palermo, T. M. (2017). Temporal daily associations among sleep and pain in treatment-seeking youth with acute musculoskeletal pain. *Journal of behavioral medicine*, *40*(4), 675-681.	Yes	Yes
Lewandowski, A. S., Palermo, T. M., De la Motte, S., & Fu, R. (2010). Temporal daily associations between pain and sleep in adolescents with chronic pain versus healthy adolescents. *Pain*, *151*(1), 220-225.	Yes	Yes
Liu, L., Fiorentino, L., Rissling, M., Natarajan, L., Parker, B. A., Dimsdale, J. E., ... & Ancoli-Israel, S. (2013). Decreased health-related quality of life in women with breast cancer is associated with poor sleep. *Behavioral sleep medicine*, *11*(3), 189-206.	Yes	No
Liu, L., Mills, P. J., Rissling, M., Fiorentino, L., Natarajan, L., Dimsdale, J. E., ... & Ancoli-Israel, S. (2012). Fatigue and sleep quality are associated with changes in inflammatory markers in breast cancer patients undergoing chemotherapy. *Brain, behavior, and immunity*, *26*(5), 706-713.	Yes	No
Liu, L., Rissling, M., Natarajan, L., Fiorentino, L., Mills, P. J., Dimsdale, J. E., ... & Ancoli-Israel, S. (2012). The longitudinal relationship between fatigue and sleep in breast cancer patients undergoing chemotherapy. *Sleep*, *35*(2), 237-245.	Yes	No
Loewen, A., Siemens, A., & Hanly, P. (2009). Sleep disruption in patients with sleep apnea and end-stage renal disease. *Journal of Clinical Sleep Medicine*, *5*(04), 324-329.	Yes	No
Lucassen, E. A., Zhao, X., Rother, K. I., Mattingly, M. S., Courville, A. B., de Jonge, L., ... & Sleep Extension Study Group. (2013). Evening chronotype is associated with changes in eating behavior, more sleep apnea, and increased stress hormones in short sleeping obese individuals. *PloS one*, *8*(3), e56519.	Yes	No
Madsen, M. T., Hansen, M. V., Andersen, L. T., Hageman, I., Rasmussen, L. S., Bokmand, S., ... & Gögenur, I. (2016). Effect of melatonin on sleep in the perioperative period after breast cancer surgery: a randomized, double-blind, placebo-controlled trial. *Journal of Clinical Sleep Medicine*, *12*(02), 225-233.	Yes	No

Reference	Sleep diary	Event marker
Magee, M., Sletten, T. L., Ferguson, S. A., Grunstein, R. R., Anderson, C., Kennaway, D. J., ... & Rajaratnam, S. M. (2016). Associations between number of consecutive night shifts and impairment of neurobehavioral performance during a subsequent simulated night shift. *Scandinavian journal of work, environment & health*, *42*(3), 217-227.	Yes	No
Maglione, J. E., Ancoli-Israel, S., Peters, K. W., Paudel, M. L., Yaffe, K., Ensrud, K. E., & Stone, K. L. (2012). Depressive symptoms and subjective and objective sleep in community-dwelling older women. *Journal of the American Geriatrics Society*, *60*(4), 635-643.	Yes	No
Maglione, J. E., Ancoli-Israel, S., Peters, K. W., Paudel, M. L., Yaffe, K., Ensrud, K. E., & Stone, K. L. (2014). Subjective and objective sleep disturbance and longitudinal risk of depression in a cohort of older women. *Sleep*, *37*(7), 1-9.	Yes	No
Malmberg, B., Kecklund, G., Karlson, B., Persson, R., Flisberg, P., & Orbaek, P. (2010). Sleep and recovery in physicians on night call: a longitudinal field study. *BMC Health Services Research*, *10*, 239-239.	Yes	Yes
Malone, S. K., Zemel, B., Compher, C., Souders, M., Chittams, J., Thompson, A. L., ... & Lipman, T. H. (2016). Social jet lag, chronotype and body mass index in 14–17-year-old adolescents. *Chronobiology international*, *33*(9), 1255-1266.	Yes	No
Manber, R., Edinger, J. D., Gress, J. L., Pedro-Salcedo, M. G. S., Kuo, T. F., & Kalista, T. (2008). Cognitive behavioral therapy for insomnia enhances depression outcome in patients with comorbid major depressive disorder and insomnia. *Sleep*, *31*(4), 489-495.	Yes	Yes
Martin, J. L., Alam, T., Harker, J. O., Josephson, K. R., & Alessi, C. A. (2008). Sleep in assisted living facility residents versus home-dwelling older adults. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, *63*(12), 1407-1409.	Yes	No
Martin, J. S., Hébert, M., Ledoux, É., Gaudreault, M., & Laberge, L. (2012). Relationship of chronotype to sleep, light exposure, and work-related fatigue in student workers. *Chronobiology international*, *29*(3), 295-304.	Yes	No
Martin, J. S., Laberge, L., Sasseville, A., Bérubé, M., Alain, S., Houle, J., & Hébert, M. (2015). Day and night shift schedules are associated with lower sleep quality in Evening-types. *Chronobiology international*, *32*(5), 627-636.	Yes	No
Martoni, M., Bayon, V., Elbaz, M., & Léger, D. (2012). Using actigraphy versus polysomnography in the clinical assessment of chronic insomnia (retrospective analysis of 27 patients). *La Presse Médicale*, *41*(3), e95-e100.	Yes	Yes
Massa, J., Stone, K. L., Wei, E. K., Harrison, S. L., Barrett-Connor, E., Lane, N. E., ... & Schernhammer, E. (2015). Vitamin D and actigraphic sleep outcomes in older community-dwelling men: the MrOS sleep study. *Sleep*, *38*(2), 251-257.	Yes	No
Massar, S. A., Liu, J. C., Mohammad, N. B., & Chee, M. W. (2017). Poor habitual sleep efficiency is associated with increased cardiovascular and cortisol stress reactivity in men. *Psychoneuroendocrinology*, *81*, 151-156.	Yes	No
McBean, A. L., & Montgomery-Downs, H. E. (2015). Diurnal fatigue patterns, sleep timing, and mental health outcomes among healthy postpartum women. *Biological research for nursing*, *17*(1), 29-39.	Yes	No
McBean, A. L., & Montgomery-Downs, H. E. (2013). Timing and variability of postpartum sleep in relation to daytime performance. *Physiology & behavior*, *122*, 134-139.	Yes	No
McCloughan, L. J., Hanrahan, S. J., Anderson, R., & Halson, S. R. (2016). Psychological recovery: progressive muscle relaxation (PMR), anxiety, and sleep in dancers. *Performance Enhancement & Health*, *4*(1-2), 12-17.	Yes	Yes
McCrae, C. S., McNamara, J. P., Rowe, M. A., Dzierzewski, J. M., Dirk, J., Marsiske, M., & Craggs, J. G. (2008). Sleep and affect in older adults: Using multilevel modeling to examine daily associations. *Journal of sleep research*, *17*(1), 42-53.	Yes	No
McDevitt, E. A., Alaynick, W. A., & Mednick, S. C. (2012). The effect of nap frequency on daytime sleep architecture. *Physiology & behavior*, *107*(1), 40-44.	Yes	Yes

Reference	Sleep diary	Event marker
McGlinchey, E. L., Gershon, A., Eidelman, P., Kaplan, K. A., & Harvey, A. G. (2014). Physical activity and sleep: day-to-day associations among individuals with and without bipolar disorder. *Mental health and physical activity*, *7*(3), 183-190.	Yes	Yes
McSorley, V. E., Pinto, J., Schumm, L. P., Wroblewski, K., Kern, D., McClintock, M., & Lauderdale, D. S. (2017). Sleep and olfaction among older adults. *Neuroepidemiology*, *48*(3-4), 147-154.	Yes	Yes
Meadows, R., Arber, S., Venn, S., Hislop, J., & Stanley, N. (2009). Exploring the Interdependence of Couples' Rest-Wake Cycles: An Actigraphic Study. *Chronobiology international*, *26*(1), 80-92.	Yes	Yes
Mehra, R., Stone, K. L., Ancoli-Israel, S., Litwack-Harrison, S., Ensrud, K. E., & Redline, S. (2008). Interpreting wrist actigraphic indices of sleep in epidemiologic studies of the elderly: the Study of Osteoporotic Fractures. *Sleep*, *31*(11), 1569-1576.	Yes	No
Merkelbach, S., Schulz, H., Kölmel, H. W., Gora, G., Klingelhöfer, J., Dachsel, R., ... & Polzer, U. (2011). Fatigue, sleepiness, and physical activity in patients with multiple sclerosis. *Journal of neurology*, *258*(1), 74-79.	No	Yes
Mezick, E. J., Hall, M., & Matthews, K. A. (2012). Sleep duration and ambulatory blood pressure in black and white adolescents. *Hypertension (dallas, Tex.: 1979)*, *59*(3), 747-752.	Yes	No
Mezick, E. J., Matthews, K. A., Hall, M. H., Richard Jennings, J., & Kamarck, T. W. (2014). Sleep duration and cardiovascular responses to stress in undergraduate men. *Psychophysiology*, *51*(1), 88-96.	Yes	No
Mezick, E. J., Wing, R. R., & McCaffery, J. M. (2014). Associations of self-reported and actigraphy-assessed sleep characteristics with body mass index and waist circumference in adults: moderation by gender. *Sleep medicine*, *15*(1), 64-70.	Yes	No
Miaskowski, C., Lee, K., Dunn, L., Dodd, M., Aouizerat, B. E., West, C., ... & Swift, P. (2011). Sleep-wake Circadian Activity Rhythm Parameters and Fatigue in Oncology Patients Before the Initiation of Radiation Therapy. *Cancer Nursing*, *34*(4), 255-268.	Yes	Yes
Micic, G., Lovato, N., Gradisar, M., Burgess, H. J., Ferguson, S. A., Kennaway, D. J., & Lack, L. (2015). Nocturnal melatonin profiles in patients with delayed sleep-wake phase disorder and control sleepers. *Journal of biological rhythms*, *30*(5), 437-448.	Yes	No
Miller, N. L., Shattuck, L. G., & Mateangas, P. (2010). Longitudinal study of sleep patterns of United States Military Academy cadets. *Sleep*, *33*(12), 1623-1631.	Yes	Yes
Mizuno, K., & Okamoto-Mizuno, K. (2014). Actigraphically evaluated sleep on the days surrounding the Great East Japan Earthquake. *Natural hazards*, *72*(2), 969-981.	Yes	No
Mizuno, K., Matsumoto, A., Aiba, T., Abe, T., Ohshima, H., Takahashi, M., & Inoue, Y. (2016). Sleep patterns among shift-working flight controllers of the International Space Station: an observational study on the JAXA Flight Control Team. *Journal of physiological anthropology*, *35*(1), 19.	Yes	No
Mohler, E., Frei, P., Fröhlich, J., Braun-Fahrländer, C., & Röösli, M. (2012). Exposure to radiofrequency electromagnetic fields and sleep quality: a prospective cohort study. *PloS one*, *7*(5), e37455.	Yes	Yes
Molano, J. R., Roe, C. M., & Ju, Y. E. S. (2017). The interaction of sleep and amyloid deposition on cognitive performance. *Journal of sleep research*, *26*(3), 288-292.	Yes	Yes
Montagnese, S., Middleton, B., Mani, A. R., Skene, D. J., & Morgan, M. Y. (2010). On the origin and the consequences of circadian abnormalities in patients with cirrhosis. *The American journal of gastroenterology*, *105*(8), 1773-1781.	Yes	No
Montagnese, S., Middleton, B., Mani, A. R., Skene, D. J., & Morgan, M. Y. (2009). Sleep and circadian abnormalities in patients with cirrhosis: features of delayed sleep phase syndrome?. *Metabolic brain disease*, *24*(3), 427-439.	Yes	No

Reference	Sleep diary	Event marker
Montaruli, A., Roveda, E., Calogiuri, G., La Torre, A., & Carandente, F. (2009). The sportsman readjustment after transcontinental flight: a study on marathon runners. *Journal of Sports Medicine and Physical Fitness*, *49*(4), 372-381.	Yes	No
Montgomery-Downs, H. E., Insana, S. P., & Miller, E. A. (2010). Effects of Two Types of Ambient Sound During Sleep. *Behavioral sleep medicine*, *8*(1), 40-47.	No	Yes
Mottram, V., Middleton, B., Williams, P., & Arendt, J. (2011). The impact of bright artificial white and 'blue-enriched'light on sleep and circadian phase during the polar winter. *Journal of sleep research*, *20*(1-2), 154-161.	Yes	No
Mulligan, L. D., Haddock, G., Emsley, R., Neil, S. T., & Kyle, S. D. (2016). High resolution examination of the role of sleep disturbance in predicting functioning and psychotic symptoms in schizophrenia: A novel experience sampling study. *Journal of abnormal psychology*, *125*(6), 788-797.	Yes	No
Naismith, S. L., Lagopoulos, J., Hermens, D. F., White, D., Duffy, S. L., Robillard, R., ... & Hickie, I. B. (2014). Delayed circadian phase is linked to glutamatergic functions in young people with affective disorders: a proton magnetic resonance spectroscopy study. *BMC psychiatry*, *14*(1), 345.	Yes	No
Naismith, S. L., Rogers, N. L., Hickie, I. B., Mackenzie, J., Norrie, L. M., & Lewis, S. J. (2010). Sleep well, think well: sleep-wake disturbance in mild cognitive impairment. *Journal of Geriatric Psychiatry and Neurology*, *23*(2), 123-130.	Yes	No
Naismith, S. L., Rogers, N. L., Lewis, S. J., Terpening, Z., Ip, T., Diamond, K., ... & Hickie, I. B. (2011). Sleep disturbance relates to neuropsychological functioning in late-life depression. *Journal of Affective Disorders*, *132*(1-2), 139-145.	Yes	No
Natale, V., Innominato, P. F., Boreggiani, M., Tonetti, L., Filardi, M., Parganiha, A., ... & Lévi, F. (2015). The difference between in bed and out of bed activity as a behavioral marker of cancer patients: A comparative actigraphic study. *Chronobiology international*, *32*(7), 925-933.	Yes	Yes
Natale, V., Léger, D., Martoni, M., Bayon, V., & Erbacci, A. (2014). The role of actigraphy in the assessment of primary insomnia: a retrospective study. *Sleep medicine*, *15*(1), 111-115.	Yes	Yes
Natale, V., Plazzi, G., & Martoni, M. (2009). Actigraphy in the assessment of insomnia: a quantitative approach. *Sleep*, *32*(6), 767-771.	Yes	Yes
Nehme, P., Marqueze, E. C., Ulhoˆa, M., Moulatlet, E., Codarin, M. A., & Moreno, C. R. (2014). Effects of a carbohydrate-enriched night meal on sleepiness and sleep duration in night workers: a double-blind intervention. *Chronobiology international*, *31*(4), 453-460.	Yes	No
Niu, S. F., Miao, N. F., Liao, Y. M., Chi, M. J., Chung, M. H., & Chou, K. R. (2017). Sleep quality associated with different work schedules: A longitudinal study of nursing staff. *Biological research for nursing*, *19*(4), 375-381.	Yes	No
Nova, P., Hernandez, B., Ptolemy, A. S., & Zeitzer, J. M. (2012). Modeling caffeine concentrations with the Stanford Caffeine Questionnaire: preliminary evidence for an interaction of chronotype with the effects of caffeine on sleep. *Sleep medicine*, *13*(4), 362-367.	Yes	No
Nunes, D. M., de Bruin, V. M., Louzada, F. M., Peixoto, C. A., Cavalcante, A. G., Castro-Silva, C., & de Bruin, P. F. (2013). Actigraphic assessment of sleep in chronic obstructive pulmonary disease. *Sleep and Breathing*, *17*(1), 125-132.	Yes	No
O'brien, E. M., Waxenberg, L. B., Atchison, J. W., Gremillion, H. A., Staud, R. M., McCrae, C. S., & Robinson, M. E. (2011). Intraindividual variability in daily sleep and pain ratings among chronic pain patients: bidirectional association and the role of negative mood. *The Clinical journal of pain*, *27*(5), 425-433.	Yes	No
Ogilvie, R. P., Redline, S., Bertoni, A. G., Chen, X., Ouyang, P., Szklo, M., & Lutsey, P. L. (2016). Actigraphy measured sleep indices and adiposity: the multi-ethnic study of atherosclerosis (MESA). *Sleep*, *39*(9), 1701-1708.	Yes	Yes
Okun, M. L., Buysse, D. J., & Hall, M. H. (2015). Identifying insomnia in early pregnancy: validation of the insomnia symptoms questionnaire (ISQ) in pregnant women. *Journal of Clinical Sleep Medicine*, *11*(06), 645-654.	Yes	Yes

Reference	Sleep diary	Event marker
Okun, M. L., Kline, C. E., Roberts, J. M., Wettlaufer, B., Glover, K., & Hall, M. (2013). Prevalence of sleep deficiency in early gestation and its associations with stress and depressive symptoms. *Journal of Women's Health*, *22*(12), 1028-1037.	Yes	Yes
Okun, M. L., Tolge, M., & Hall, M. (2014). Low socioeconomic status negatively affects sleep in pregnant women. *Journal of obstetric, gynecologic, & neonatal nursing*, *43*(2), 160-167.	Yes	Yes
Ong, J. C., Manber, R., Segal, Z., Xia, Y., Shapiro, S., & Wyatt, J. K. (2014). A randomized controlled trial of mindfulness meditation for chronic insomnia. *Sleep*, *37*(9), 1553-1563.	Yes	Yes
Orzech, K. M., Acebo, C., Seifer, R., Barker, D., & Carskadon, M. A. (2014). Sleep patterns are associated with common illness in adolescents. *Journal of Sleep Research*, *23*(2), 133-142.	Yes	No
Otte, J. L., Payne, J. K., & Carpenter, J. S. (2011). Nighttime variability in wrist actigraphy. *Journal of nursing measurement*, *19*(2), 105-114.	Yes	No
Owens, J. F., Buysse, D. J., Hall, M., Kamarck, T. W., Lee, L., Strollo, P. J., ... & Matthews, K. A. (2010). Napping, nighttime sleep, and cardiovascular risk factors in mid-life adults. *Journal of Clinical Sleep Medicine*, *6*(04), 330-335.	Yes	No
Paech, G. M., Ferguson, S. A., Banks, S., Dorrian, J., & Roach, G. D. (2014). The influence of break timing on the sleep quantity and quality of fly-in, fly-out shiftworkers. *Industrial health*, *52*(6), 521-530.	Yes	No
Paech, G. M., Jay, S. M., Lamond, N., Roach, G. D., & Ferguson, S. A. (2010). The effects of different roster schedules on sleep in miners. *Applied ergonomics*, *41*(4), 600-606.	Yes	No
Paine, S. J., & Gander, P. H. (2016). Differences in circadian phase and weekday/weekend sleep patterns in a sample of middle-aged morning types and evening types. *Chronobiology international*, *33*(8), 1009-1017.	Yes	No
Palesh, O., Aldridge-Gerry, A., Zeitzer, J. M., Koopman, C., Neri, E., Giese-Davis, J., ... & Spiegel, D. (2014). Actigraphy-measured sleep disruption as a predictor of survival among women with advanced breast cancer. *Sleep*, *37*(5), 837-842.	Yes	No
Parimi, N., Blackwell, T., Stone, K. L., Lui, L. Y., Ancoli-Israel, S., Tranah, G. J., ... & Study of Osteoporotic Fractures Study Group. (2012). Hip pain while using lower extremity joints and sleep disturbances in elderly white women: Results from a cross-sectional analysis. *Arthritis care & research*, *64*(7), 1070-1078.	Yes	No
Park, E. M., Meltzer-Brody, S., & Stickgold, R. (2013). Poor sleep maintenance and subjective sleep quality are associated with postpartum maternal depression symptom severity. *Archives of women's mental health*, *16*(6), 539-547.	Yes	Yes
Park, H., Tsai, K. M., Dahl, R. E., Irwin, M. R., McCreath, H., Seeman, T. E., & Fuligni, A. J. (2016). Sleep and inflammation during adolescence. *Psychosomatic medicine*, *78*(6), 677.	Yes	Yes
Patel, A., Hasak, S., Cassell, B., Ciorba, M. A., Vivio, E. E., Kumar, M., ... & Sayuk, G. S. (2016). Effects of disturbed sleep on gastrointestinal and somatic pain symptoms in irritable bowel syndrome. *Alimentary pharmacology & therapeutics*, *44*(3), 246-258.	Yes	Yes
Patel, S. R., Blackwell, T., Ancoli-Israel, S., & Stone, K. L. (2012). Sleep characteristics of self-reported long sleepers. *Sleep*, *35*(5), 641-648.	Yes	No
Patel, S. R., Blackwell, T., Redline, S., Ancoli-Israel, S., Cauley, J. A., Hillier, T. A., ... & Yaffe, K. (2008). The association between sleep duration and obesity in older adults. *International journal of obesity*, *32*(12), 1825-1834.	Yes	No
Patel, S. R., Hayes, A. L., Blackwell, T., Evans, D. S., Ancoli-Israel, S., Wing, Y. K., & Stone, K. L. (2014). The association between sleep patterns and obesity in older adults. *International journal of obesity*, *38*(9), 1159-1165.	Yes	No
Paudel, M., Taylor, B. C., Ancoli-Israel, S., Blackwell, T., Maglione, J. E., Stone, K., ... & Osteoporotic Fractures in Men (MrOS) Study Group. (2013). Sleep disturbances and risk of depression in older men. *Sleep*, *36*(7), 1033-1040.	Yes	No

Reference	Sleep diary	Event marker
Paul, M. A., Gray, G. W., Lieberman, H. R., Love, R. J., Miller, J. C., Trouborst, M., & Arendt, J. (2011). Phase advance with separate and combined melatonin and light treatment. *Psychopharmacology*, *214*(2), 515-523.	Yes	No
Paul, M. A., Love, R. J., Hawton, A., Brett, K., McCreary, D. R., & Arendt, J. (2015). Sleep deficits in the High Arctic summer in relation to light exposure and behaviour: use of melatonin as a countermeasure. *Sleep medicine*, *16*(3), 406-413.	Yes	No
Peter, C. C. S., Montgomery-Downs, H. E., & Massullo, J. P. (2012). Improving accuracy of sleep self-reports through correspondence training. *The Psychological Record*, *62*(4), 623-630.	No	Yes
Pickering, L., Jennum, P., Gammeltoft, S., Poulsgaard, L., Feldt-Rasmussen, U., & Klose, M. (2014). Sleep–wake and melatonin pattern in craniopharyngioma patients. *European Journal of Endocrinology*, *170*(6), 873-884.	Yes	Yes
Pillai, V., Steenburg, L. A., Ciesla, J. A., Roth, T., & Drake, C. L. (2014). A seven day actigraphy-based study of rumination and sleep disturbance among young adults with depressive symptoms. *Journal of psychosomatic research*, *77*(1), 70-75.	Yes	Yes
Posmontier, B. (2008). Sleep quality in women with and without postpartum depression. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *37*(6), 722-737.	Yes	No
Prather, A. A., Hall, M., Fury, J. M., Ross, D. C., Muldoon, M. F., Cohen, S., & Marsland, A. L. (2012). Sleep and antibody response to hepatitis B vaccination. *Sleep*, *35*(8), 1063-1069.	Yes	No
Prather, A. A., Janicki-Deverts, D., Hall, M. H., & Cohen, S. (2015). Behaviorally assessed sleep and susceptibility to the common cold. *Sleep*, *38*(9), 1353-1359.	Yes	No
Pyrke, R. J., McKinnon, M. C., McNeely, H. E., Ahern, C., Langstaff, K. L., & Bieling, P. J. (2017). Evidence-Based Design Features Improve Sleep Quality Among Psychiatric Inpatients. *HERD: Health Environments Research & Design Journal*, *10*(5), 52-63.	Yes	No
Rabbitts, J. A., Holley, A. L., Karlson, C. W., & Palermo, T. M. (2014). Bidirectional associations between pain and physical activity in adolescents. *The Clinical journal of pain*, *30*(3), 251-258.	No	Yes
Raikes, A. C., & Schaefer, S. Y. (2016). Sleep quantity and quality during acute concussion: a pilot study. *Sleep*, *39*(12), 2141-2147.	Yes	No
Rao, M. N., Blackwell, T., Redline, S., Punjabi, N. M., Barrett-Connor, E., Neylan, T. C., & Stone, K. L. (2013). Association between sleep duration and 24-hour urine free cortisol in the MrOS Sleep Study. *PloS one*, *8*(9), e75205.	Yes	No
Rao, M. N., Chau, A., Madden, E., Inslicht, S., Talbot, L., Richards, A., ... & Neylan, T. C. (2014). Hyperinsulinemic response to oral glucose challenge in individuals with posttraumatic stress disorder. *Psychoneuroendocrinology*, *49*, 171-181.	Yes	No
Rasmussen-Torvik, L. J., De Chavez, P. J. D., Kershaw, K. N., Montag, S. E., Knutson, K. L., Kim, K. Y. A., ... & Carnethon, M. R. (2016). The mediation of racial differences in hypertension by sleep characteristics: Chicago area sleep study. *American journal of hypertension*, *29*(12), 1353-1357.	Yes	Yes
Razavi, N., Horn, H., Koschorke, P., Hügli, S., Höfle, O., Müller, T., ... & Walther, S. (2011). Measuring motor activity in major depression: the association between the Hamilton Depression Rating Scale and actigraphy. *Psychiatry research*, *190*(2-3), 212-216.	Yes	No
Reid, K. J., Facco, F. L., Grobman, W. A., Parker, C. B., Herbas, M., Hunter, S., ... & Manchanda, S. (2017). Sleep during pregnancy: the nuMoM2b pregnancy and sleep duration and continuity study. *Sleep*, *40*(5).	Yes	Yes
Reinhardt, É. L., Fernandes, P. A., Markus, R. P., & Fischer, F. M. (2016). Short sleep duration increases salivary IL-6 production. *Chronobiology international*, *33*(6), 780-782.	Yes	No
Reutrakul, S., Sumritsopak, R., Saetung, S., Chanprasertyothin, S., & Anothaisintawee, T. (2017). The relationship between sleep and glucagon-like peptide 1 in patients with abnormal glucose tolerance. *Journal of sleep research*, *26*(6), 756-763.	Yes	Yes

Reference	Sleep diary	Event marker
Rigney, G., Blunden, S., Maher, C., Dollman, J., Parvazian, S., Matricciani, L., & Olds, T. (2015). Can a school-based sleep education programme improve sleep knowledge, hygiene and behaviours using a randomised controlled trial. *Sleep medicine*, *16*(6), 736-745.	Yes	No
Risso, T. T., Poyares, D., Rizzi, C. F., Pulz, C., Guilleminault, C., Tufik, S., ... & Cintra, F. (2013). The impact of sleep duration in obstructive sleep apnea patients. *Sleep and Breathing*, *17*(2), 837-843.	Yes	Yes
Ritter, P. S., Marx, C., Lewtschenko, N., Pfeiffer, S., Leopold, K., Bauer, M., & Pfennig, A. (2012). The characteristics of sleep in patients with manifest bipolar disorder, subjects at high risk of developing the disease and healthy controls. *Journal of neural transmission*, *119*(10), 1173-1184.	Yes	Yes
Robillard, R., Naismith, S. L., Rogers, N. L., Ip, T. K., Hermens, D. F., Scott, E. M., & Hickie, I. B. (2013). Delayed sleep phase in young people with unipolar or bipolar affective disorders. *Journal of affective disorders*, *145*(2), 260-263.	Yes	No
Rock, P., Goodwin, G., Harmer, C., & Wulff, K. (2014). Daily rest-activity patterns in the bipolar phenotype: a controlled actigraphy study. *Chronobiology international*, *31*(2), 290-296.	Yes	No
Rock, P. L., Goodwin, G. M., Wulff, K., McTavish, S. F., & Harmer, C. J. (2016). Effects of short-term quetiapine treatment on emotional processing, sleep and circadian rhythms. *Journal of Psychopharmacology*, *30*(3), 273-282.	Yes	No
Rognvaldsdottir, V., Gudmundsdottir, S. L., Brychta, R. J., Hrafnkelsdottir, S. M., Gestsdottir, S., Arngrimsson, S. A., ... & Johannsson, E. (2017). Sleep deficiency on school days in Icelandic youth, as assessed by wrist accelerometry. *Sleep medicine*, *33*, 103-108.	Yes	No
Romyn, G., Robey, E., Dimmock, J. A., Halson, S. L., & Peeling, P. (2016). Sleep, anxiety and electronic device use by athletes in the training and competition environments. *European journal of sport science*, *16*(3), 301-308.	Yes	No
Ronzio, C. R., Huntley, E., & Monaghan, M. (2013). Postpartum mothers' napping and improved cognitive growth fostering of infants: Results from a pilot study. *Behavioral sleep medicine*, *11*(2), 120-132.	Yes	No
Rowe, M., McCrae, C., Campbell, J., Horne, C., Tiegs, T., Lehman, B., & Cheng, J. (2008). Actigraphy in older adults: comparison of means and variability of three different aggregates of measurement. *Behavioral sleep medicine*, *6*(2), 127-145.	Yes	No
Rowe, M. A., Kairalla, J. A., & McCrae, C. S. (2010). Sleep in dementia caregivers and the effect of a nighttime monitoring system. *Journal of Nursing Scholarship*, *42*(3), 338-347.	Yes	No
Ruggiero, J. S., & Avi-Itzhak, T. (2016). Sleep patterns of emergency department nurses on workdays and days off. *Journal of Nursing Research*, *24*(2), 173-180.	Yes	Yes
Saksvik-Lehouillier, I., Harrison, S. L., Marshall, L. M., Tranah, G. J., Ensrud, K., Ancoli-Israel, S., ... & Osteoporotic Fractures in Men (MrOS) Study Group. (2015). Association of urinary 6-sulfatoxymelatonin (aMT6s) levels and objective and subjective sleep measures in older men: the MrOS Sleep Study. *Journals of Gerontology Series A: Biomedical Sciences and Medical Sciences*, *70*(12), 1569-1577.	Yes	No
Santos-Silva, R., Tufik, S., Conway, S. G., Taddei, J. A., & Bittencourt, L. R. A. (2009). Sao Paulo Epidemiologic Sleep Study: rationale, design, sampling, and procedures. *Sleep medicine*, *10*(6), 679-685.	Yes	No
Sargent, C., & Roach, G. D. (2016). Sleep duration is reduced in elite athletes following night-time competition. *Chronobiology international*, *33*(6), 667-670.	Yes	No
Sato, M., Yamadera, W., Matsushima, M., Itoh, H., & Nakayama, K. (2010). Clinical efficacy of individual cognitive behavior therapy for psychophysiological insomnia in 20 outpatients. *Psychiatry and clinical neurosciences*, *64*(2), 187-195.	Yes	No
Savard, J., Ivers, H., Savard, M. H., & Morin, C. M. (2014). Is a video-based cognitive behavioral therapy for insomnia as efficacious as a professionally administered treatment in breast cancer? Results of a randomized controlled trial. *Sleep*, *37*(8), 1305-1314.	Yes	No

Reference	Sleep diary	Event marker
Scheer, F. A., Morris, C. J., Garcia, J. I., Smales, C., Kelly, E. E., Marks, J., ... & Shea, S. A. (2012). Repeated melatonin supplementation improves sleep in hypertensive patients treated with beta-blockers: a randomized controlled trial. *Sleep*, *35*(10), 1395-1402.	Yes	No
Shearer, D. A., Jones, R. M., Kilduff, L. P., & Cook, C. J. (2015). Effects of competition on the sleep patterns of elite rugby union players. *European journal of sport science*, *15*(8), 681-686.	No	Yes
Sherman, S. M., Mumford, J. A., & Schnyer, D. M. (2015). Hippocampal activity mediates the relationship between circadian activity rhythms and memory in older adults. *Neuropsychologia*, *75*, 617-625.	Yes	No
Shochat, T., & Dagan, E. (2010). Sleep disturbances in asymptomatic BRCA1/2 mutation carriers: women at high risk for breast–ovarian cancer. *Journal of sleep research*, *19*(2), 333-340.	Yes	No
Short, M. A., Gradisar, M., Lack, L. C., Wright, H. R., & Chatburn, A. (2013). Estimating adolescent sleep patterns: parent reports versus adolescent self-report surveys, sleep diaries, and actigraphy. *Nature and science of sleep*, *5*, 23-26.	Yes	No
Signal, T. L., Mulrine, H. M., van den Berg, M. J., Smith, A. A., Gander, P. H., & Serfontein, W. (2014). Mitigating and monitoring flight crew fatigue on a westward ultra-long-range flight. *Aviation, space, and environmental medicine*, *85*(12), 1199-1208.	Yes	No
Simpson, C., & Carter, P. A. (2010). Pilot study of a brief behavioral sleep intervention for caregivers of individuals with dementia. *Research in gerontological nursing*, *3*(1), 19-29.	Yes	No
Sinclair, K. L., Ponsford, J., & Rajaratnam, S. M. (2014). Actigraphic assessment of sleep disturbances following traumatic brain injury. *Behavioral sleep medicine*, *12*(1), 13-27.	Yes	No
Song, Y., Ancoli-Israel, S., Lewis, C. E., Redline, S., Harrison, S. L., & Stone, K. L. (2012). The association of race/ethnicity with objectively measured sleep characteristics in older men. *Behavioral sleep medicine*, *10*(1), 54-69.	Yes	No
Spira, A. P., Covinsky, K., Rebok, G. W., Punjabi, N. M., Stone, K. L., Hillier, T. A., ... & Yaffe, K. (2012). Poor sleep quality and functional decline in older women. *Journal of the American Geriatrics Society*, *60*(6), 1092-1098.	Yes	No
Spira, A. P., Covinsky, K., Rebok, G. W., Stone, K. L., Redline, S., & Yaffe, K. (2012). Objectively measured sleep quality and nursing home placement in older women. *Journal of the American Geriatrics Society*, *60*(7), 1237-1243.	Yes	No
Spira, A. P., Runko, V. T., Finan, P. H., Kaufmann, C. N., Bounds, S. C., Liu, L., ... & Smith, M. T. (2015). Circadian rest/activity rhythms in knee osteoarthritis with insomnia: A study of osteoarthritis patients and pain-free controls with insomnia or normal sleep. *Chronobiology international*, *32*(2), 242-247.	Yes	No
Peter, C. C. S., Montgomery-Downs, H. E., & Massullo, J. P. (2012). Improving accuracy of sleep self-reports through correspondence training. *The Psychological Record*, *62*(4), 623-630.	Yes	Yes
Stone, K. L., Ancoli-Israel, S., Blackwell, T., Ensrud, K. E., Cauley, J. A., Redline, S., ... & Cummings, S. R. (2008). Actigraphy-measured sleep characteristics and risk of falls in older women. *Archives of internal medicine*, *168*(16), 1768-1775.	Yes	No
Stone, K. L., Blackwell, T. L., Ancoli-Israel, S., Cauley, J. A., Redline, S., Marshall, L. M., ... & Osteoporotic Fractures in Men Study Group. (2014). Sleep disturbances and risk of falls in older community-dwelling men: the outcomes of Sleep Disorders in Older Men (MrOS Sleep) Study. *Journal of the American Geriatrics Society*, *62*(2), 299-305.	Yes	No
Storfer-Isser, A., Lebourgeois, M. K., Harsh, J., Tompsett, C. J., & Redline, S. (2013). Psychometric properties of the A dolescent S leep H ygiene S cale. *Journal of sleep research*, *22*(6), 707-716.	Yes	No
Strang-Karlsson, S., Räikkönen, K., Kajantie, E., Andersson, S., Hovi, P., Heinonen, K., ... & Paavonen, E. J. (2007). Sleep quality in young adults with very low birth weight—the Helsinki study of very low birth weight adults. *Journal of pediatric psychology*, *33*(4), 387-395.	Yes	Yes

Reference	Sleep diary	Event marker
Straus, L. D., Drummond, S. P., Nappi, C. M., Jenkins, M. M., & Norman, S. B. (2015). Sleep variability in military-related PTSD: A comparison to primary insomnia and healthy controls. *Journal of traumatic stress*, *28*(1), 8-16.	Yes	No
Suppiah, H. T., Low, C. Y., & Chia, M. (2016). Effects of sport-specific training intensity on sleep patterns and psychomotor performance in adolescent athletes. *Pediatric exercise science*, *28*(4), 588-595.	Yes	No
Suzuki, Y., Khoury, S., El-Khatib, H., Chauny, J. M., Paquet, J., Giguère, J. F., ... & Arbour, C. (2017). Individuals with pain need more sleep in the early stage of mild traumatic brain injury. *Sleep medicine*, *33*, 36-42.	Yes	Yes
Taibi, D. M., & Vitiello, M. V. (2011). A pilot study of gentle yoga for sleep disturbance in women with osteoarthritis. *Sleep medicine*, *12*(5), 512-517.	Yes	No
Taibi, D. M., Price, C., & Voss, J. (2013). A pilot study of sleep quality and Rest–Activity patterns in persons living with HIV. *Journal of the Association of Nurses in AIDS Care*, *24*(5), 411-421.	Yes	No
Takeshima, M., Echizenya, M., Inomata, Y., Shimizu, K., & Shimizu, T. (2014). Comparison of sleep estimation using wrist actigraphy and waist actigraphy in healthy young adults. *Sleep and Biological Rhythms*, *12*(1), 62-68.	No	Yes
Tanner, J. B., Tanner, S. M., Thapa, G. B., Chang, Y., Watson, K. L., Staunton, E., ... & Harris, N. S. (2013). A randomized trial of temazepam versus acetazolamide in high altitude sleep disturbance. *High altitude medicine & biology*, *14*(3), 234-239.	Yes	Yes
Tashjian, S. M., Goldenberg, D., & Galván, A. (2017). Neural connectivity moderates the association between sleep and impulsivity in adolescents. *Developmental cognitive neuroscience*, *27*, 35-44.	Yes	Yes
Thurston, R. C., Aizenstein, H. J., Derby, C. A., Sejdić, E., & Maki, P. M. (2016). Menopausal hot flashes and white matter hyperintensities. *Menopause (New York, NY)*, *23*(1), 27-32.	Yes	No
Thurston, R. C., Chang, Y., von Känel, R., Barinas-Mitchell, E., Jennings, J. R., Hall, M. H., ... & Matthews, K. A. (2017). Sleep characteristics and carotid atherosclerosis among midlife women. *Sleep*, *40*(2), zsw052.	Yes	No
Thurston, R. C., Maki, P. M., Derby, C. A., Sejdić, E., & Aizenstein, H. J. (2015). Menopausal hot flashes and the default mode network. *Fertility and sterility*, *103*(6), 1572-1578.	Yes	No
Thurston, R. C., Santoro, N., & Matthews, K. A. (2012). Are vasomotor symptoms associated with sleep characteristics among symptomatic midlife women? Comparisons of self-report and objective measures. *Menopause (New York, NY)*, *19*(7), 742-748.	Yes	Yes
Ting, H., Huang, R. J., Lai, C. H., Chang, S. W., Chung, A. H., Kuo, T. Y., ... & Lee, S. D. (2014). Evaluation of candidate measures for home-based screening of sleep disordered breathing in Taiwanese bus drivers. *Sensors*, *14*(5), 8126-8149.	Yes	No
Tonetti, L., Conca, A., Giupponi, G., & Natale, V. (2017). Circadian pattern of motor activity in adults with attention-deficit/hyperactivity disorder. *Chronobiology international*, *34*(6), 802-807.	No	Yes
Tonetti, L., Erbacci, A., Fabbri, M., Martoni, M., & Natale, V. (2013). Effects of transitions into and out of daylight saving time on the quality of the sleep/wake cycle: an actigraphic study in healthy university students. *Chronobiology international*, *30*(10), 1218-1222.	No	Yes
Tonetti, L., Fabbri, M., Erbacci, A., Filardi, M., Martoni, M., & Natale, V. (2015). Effects of dawn simulation on attentional performance in adolescents. *European journal of applied physiology*, *115*(3), 579-587.	Yes	Yes
Tonetti, L., Fabbri, M., Filardi, M., Martoni, M., & Natale, V. (2015). Effects of sleep timing, sleep quality and sleep duration on school achievement in adolescents. *Sleep medicine*, *16*(8), 936-940.	Yes	Yes
Tonetti, L., Martoni, M., & Natale, V. (2011). Effects of different mattresses on sleep quality in healthy subjects: an actigraphic study. *Biological rhythm research*, *42*(2), 89-97.	Yes	Yes
Tonetti, L., Martoni, M., Fabbri, M., & Natale, V. (2011). Relationship between mattress technological features and sleep quality: an actigraphic study of healthy participants. *Biological rhythm research*, *42*(3), 247-254.	Yes	Yes

Reference	Sleep diary	Event marker
Tonetti, L., Pascalis, V. D., Fabbri, M., Martoni, M., Russo, P. M., & Natale, V. (2016). Circadian typology and the Alternative Five-Factor Model of personality. *International journal of psychology*, *51*(5), 332-339.	Yes	Yes
Tonetti, L., Pasquini, F., Fabbri, M., Belluzzi, M., & Natale, V. (2008). Comparison of two different actigraphs with polysomnography in healthy young subjects. *Chronobiology international*, *25*(1), 145-153.	No	Yes
Troxel, W. M., Buysse, D. J., Matthews, K. A., Kravitz, H. M., Bromberger, J. T., Sowers, M., & Hall, M. H. (2010). Marital/cohabitation status and history in relation to sleep in midlife women. *Sleep*, *33*(7), 973-981.	Yes	No
Troxel, W. M., Buysse, D. J., Monk, T. H., Begley, A., & Hall, M. (2010). Does social support differentially affect sleep in older adults with versus without insomnia?. *Journal of Psychosomatic research*, *69*(5), 459-466.	Yes	No
Tsai, S. Y., & Thomas, K. A. (2012). Sleep disturbances and depressive symptoms in healthy postpartum women: a pilot study. *Research in nursing & health*, *35*(3), 314-323.	Yes	No
Tsai, S. Y., Kuo, L. T., Lee, C. N., Lee, Y. L., & Landis, C. A. (2013). Reduced sleep duration and daytime naps in pregnant women in Taiwan. *Nursing research*, *62*(2), 99-105.	Yes	No
Tsai, S. Y., Lee, C. N., Wu, W. W., & Landis, C. A. (2016). Sleep Hygiene and Sleep Quality of Third-Trimester Pregnant Women. *Research in nursing & health*, *39*(1), 57-65.	Yes	No
Tsai, S. Y., Lee, P. L., Lin, J. W., & Lee, C. N. (2016). Cross-sectional and longitudinal associations between sleep and health-related quality of life in pregnant women: a prospective observational study. *International journal of nursing studies*, *56*, 45-53.	Yes	No
Tsai, S. Y., Lin, J. W., Kuo, L. T., Lee, C. N., & Landis, C. A. (2013). Nighttime sleep, daytime napping, and labor outcomes in healthy pregnant women in Taiwan. *Research in nursing & health*, *36*(6), 612-622.	Yes	No
Tsai, S. Y., Lin, J. W., Wu, W. W., Lee, C. N., & Lee, P. L. (2016). Sleep disturbances and symptoms of depression and daytime sleepiness in pregnant women. *Birth*, *43*(2), 176-183.	Yes	No
Tsuzuki, K., Mori, I., Sakoi, T., & Kurokawa, Y. (2015). Effects of seasonal illumination and thermal environments on sleep in elderly men. *Building and Environment*, *88*, 82-88.	Yes	No
Ustinov, Y., & Lichstein, K. L. (2013). Actigraphy reliability with normal sleepers. *Behavioral sleep medicine*, *11*(5), 313-320.	Yes	Yes
Valomon, A., Holst, S. C., Bachmann, V., Viola, A. U., Schmidt, C., Zürcher, J., ... & Landolt, H. P. (2014). Genetic polymorphisms of DAT1 and COMT differentially associate with actigraphy-derived sleep–wake cycles in young adults. *Chronobiology international*, *31*(5), 705-714.	Yes	No
van de Wouw, E., Evenhuis, H. M., & Echteld, M. A. (2013). Objective assessment of sleep and sleep problems in older adults with intellectual disabilities. *Research in developmental disabilities*, *34*(8), 2291-2303.	No	Yes
Van den Berg, J. F., Neven, A. K., Tulen, J. H. M., Hofman, A., Witteman, J. C. M., Miedema, H. M. E., & Tiemeier, H. (2008). Actigraphic sleep duration and fragmentation are related to obesity in the elderly: the Rotterdam Study. *International journal of obesity*, *32*(7), 1083-1090.	Yes	Yes
van den Berg, J. F., Miedema, H. M., Tulen, J. H., Hofman, A., Neven, A. K., & Tiemeier, H. (2009). Sex differences in subjective and actigraphic sleep measures: a population-based study of elderly persons. *Sleep*, *32*(10), 1367-1375.	Yes	Yes
van Den Berg, J. F., Miedema, H. M., Tulen, J. H., Neven, A. K., Hofman, A., Witteman, J. C., & Tiemeier, H. (2008). Long sleep duration is associated with serum cholesterol in the elderly: the Rotterdam Study. *Psychosomatic medicine*, *70*(9), 1005-1011.	Yes	Yes
Van Der Meijden, W. P., Van Someren, J. L., Te Lindert, B. H., Bruijel, J., Van Oosterhout, F., Coppens, J. E., ... & Van Someren, E. J. (2016). Individual differences in sleep timing relate to melanopsin-based phototransduction in healthy adolescents and young adults. *Sleep*, *39*(6), 1305-1310.	Yes	No

Reference	Sleep diary	Event marker
Vincent, G. E., Aisbett, B., Hall, S. J., & Ferguson, S. A. (2016). Sleep quantity and quality is not compromised during planned burn shifts of less than 12 h. *Chronobiology international*, *33*(6), 657-666.	Yes	No
Vitale, J. A., Bonato, M., Galasso, L., La Torre, A., Merati, G., Montaruli, A., ... & Carandente, F. (2017). Sleep quality and high intensity interval training at two different times of day: A crossover study on the influence of the chronotype in male collegiate soccer players. *Chronobiology international*, *34*(2), 260-268.	Yes	No
Von Korff, M., Vitiello, M. V., McCurry, S. M., Balderson, B. H., Moore, A. L., Baker, L. D., ... & Rybarczyk, B. D. (2012). Group interventions for co-morbid insomnia and osteoarthritis pain in primary care: The lifestyles cluster randomized trial design. *Contemporary clinical trials*, *33*(4), 759-768.	Yes	Yes
von Känel, R., Mausbach, B. T., Ancoli-Israel, S., Dimsdale, J. E., Mills, P. J., Patterson, T. L., ... & Grant, I. (2012). Sleep in spousal Alzheimer caregivers: a longitudinal study with a focus on the effects of major patient transitions on sleep. *Sleep*, *35*(2), 247-255.	Yes	No
von Känel, R., Mausbach, B. T., Ancoli-Israel, S., Mills, P. J., Dimsdale, J. E., Patterson, T. L., & Grant, I. (2014). Positive affect and sleep in spousal Alzheimer caregivers: a longitudinal study. *Behavioral sleep medicine*, *12*(5), 358-372.	Yes	No
Wallace, D. M., Shafazand, S., Ramos, A. R., Carvalho, D. Z., Gardener, H., Lorenzo, D., & Wohlgemuth, W. K. (2011). Insomnia characteristics and clinical correlates in Operation Enduring Freedom/Operation Iraqi Freedom veterans with post-traumatic stress disorder and mild traumatic brain injury: an exploratory study. *Sleep medicine*, *12*(9), 850-859.	Yes	No
Wallen, G. R., Brooks, M. A. T., Whiting, M. B., Clark, R., Krumlauf, M. M. C., Yang, L., ... & Ramchandani, V. A. (2014). The prevalence of sleep disturbance in alcoholics admitted for treatment: a target for chronic disease management. *Family & community health*, *37*(4), 288-297.	Yes	No
Walsh, C. M., Ruoff, L., Varbel, J., Walker, K., Grinberg, L. T., Boxer, A. L., ... & Neylan, T. C. (2016). Rest-activity rhythm disruption in progressive supranuclear palsy. *Sleep medicine*, *22*, 50-56.	Yes	No
Wang, S. Y., Chang, H. J., & Lin, C. C. (2010). Sleep disturbances among patients with non-small cell lung cancer in Taiwan: congruence between sleep log and actigraphy. *Cancer nursing*, *33*(1), E11-E17.	Yes	No
Werner, K. B., Griffin, M. G., & Galovski, T. E. (2016). Objective and subjective measurement of sleep disturbance in female trauma survivors with posttraumatic stress disorder. *Psychiatry research*, *240*, 234-240.	Yes	Yes
White, K. H., Rumble, M. E., & Benca, R. M. (2017). Sex differences in the relationship between depressive symptoms and actigraphic assessments of sleep and rest-activity rhythms in a population-based sample. *Psychosomatic medicine*, *79*(4), 479-484.	Yes	Yes
Whiting, W. L., & Murdock, K. K. (2016). Emerging adults' sleep patterns and attentional capture: the pivotal role of consistency. *Cognitive processing*, *17*(2), 155-162.	Yes	Yes
Wilson, A., Pyke, K. E., Bassett, E., & Moore, S. (2015). Does the Association Between Self-Reported Restless Sleep and Objective Sleep Efficiency Differ in Obese and Non-Obese Women? Findings From the Kingston Senior Women Study. *SAGE Open*, *5*(4).	Yes	Yes
Wrede, J. E., Mengel-From, J., Buchwald, D., Vitiello, M. V., Bamshad, M., Noonan, C., ... & Watson, N. F. (2015). Mitochondrial DNA copy number in sleep duration discordant monozygotic twins. *Sleep*, *38*(10), 1655-1658.	Yes	Yes
Wu, L. J., Gander, P. H., van den Berg, M. J., & Signal, T. L. (2016). Estimating long-haul airline pilots' at-home baseline sleep duration. *Sleep health*, *2*(2), 143-145.	Yes	Yes
Wulff, K., Dijk, D. J., Middleton, B., Foster, R. G., & Joyce, E. M. (2012). Sleep and circadian rhythm disruption in schizophrenia. *The British Journal of Psychiatry*, *200*(4), 308-316.	Yes	No
Yesavage, J. A., Noda, A., Hernandez, B., Friedman, L., Cheng, J. J., Tinklenberg, J. R., ... & Landsverk, E. (2011). Circadian clock gene polymorphisms and sleep–wake disturbance in Alzheimer disease. *The American Journal of Geriatric Psychiatry*, *19*(7), 635-643.	Yes	No

Reference	Sleep diary	Event marker
Young, C. R., Jones, G. E., Figueiro, M. G., Soutière, S. E., Keller, M. W., Richardson, A. M., ... & Rea, M. S. (2015). At-sea trial of 24-h-based submarine watchstanding schedules with high and low correlated color temperature light sources. *Journal of biological rhythms*, *30*(2), 144-154.	Yes	No
Zhang, J., Ma, R. C., Kong, A. P., So, W. Y., Li, A. M., Lam, S. P., ... & Zhang, B. (2011). Relationship of sleep quantity and quality with 24-hour urinary catecholamines and salivary awakening cortisol in healthy middle-aged adults. *Sleep*, *34*(2), 225-233.	Yes	Yes
Zheng, H., Harlow, S. D., Kravitz, H. M., Bromberger, J., Buysse, D. J., Matthews, K. A., ... & Hall, M. (2015). Actigraphy-defined Measures of Sleep and Movement Across the Menstrual Cycle In Midlife Menstruating Women: SWAN Sleep Study. *Menopause*, *22*(1), 66-74.	Yes	No

Articles that either report or cite a stepwise procedure for setting the rest interval

Chow, C. M., Wong, S. N., Shin, M., Maddox, R. G., Feilds, K. L., Paxton, K., ... & Steinbeck, K. (2016). Defining the rest interval associated with the main sleep period in actigraph scoring. *Nature and science of sleep*, *55(1)*, 321-328.	No	Yes
Dudley, K. A., Weng, J., Sotres-Alvarez, D., Simonelli, G., Cespedes Feliciano, E., Ramirez, M., ... & Zee, P. C. (2017). Actigraphic sleep patterns of US Hispanics: The Hispanic community health study/study of Latinos. *Sleep*, *40*(2).	Yes	Yes
Eidelman, P., Gershon, A., Kaplan, K., McGlinchey, E., & Harvey, A. G. (2012). Social support and social strain in inter-episode bipolar disorder. *Bipolar disorders*, *14*(6), 628-640.	Yes	Yes
Facco, F. L., Grobman, W. A., Reid, K. J., Parker, C. B., Hunter, S. M., Silver, R. M., ... & Louis, J. M. (2017). objectively measured short sleep duration and later sleep midpoint in pregnancy are associated with a higher risk of gestational diabetes. *American Journal of Obstetrics and Gynecology*, *217*(4), 447e1-447e13.	Yes	Yes
Hasler, B. P., Bootzin, R. R., Cousins, J. C., Fridel, K., & Wenk, G. L. (2008). Circadian phase in sleep-disturbed adolescents with a history of substance abuse: a pilot study. *Behavioral Sleep Medicine*, *6*(1), 55-73.	Yes	Yes
Morgan, E., Schumm, L. P., McClintock, M., Waite, L., & Lauderdale, D. S. (2017). Sleep Characteristics and Daytime Cortisol Levels in Older Adults. *Sleep*, *40*(5), zsx043.	Yes	Yes
Mossavar-Rahmani, Y., Weng, J., Wang, R., Shaw, P. A., Jung, M., Sotres-Alvarez, D., ... & Ramos, A. R. (2017). Actigraphic sleep measures and diet quality in the Hispanic Community Health Study/Study of Latinos Sueño ancillary study. *Journal of sleep research*, *26*(6), 739-746.	Yes	Yes
Patel, S. R., Weng, J., Rueschman, M., Dudley, K. A., Loredo, J. S., Mossavar-Rahmani, Y., ... & Sotres-Alvarez, D. (2015). Reproducibility of a standardized actigraphy scoring algorithm for sleep in a US Hispanic/Latino population. *Sleep*, *38*(9), 1497-1503.	Yes	Yes
Simonelli, G., Dudley, K. A., Weng, J., Gallo, L. C., Perreira, K., Shah, N. A., ... & Sotres-Alvarez, D. (2016). Neighborhood factors as predictors of poor sleep in the Sueno ancillary study of the Hispanic community health study/study of Latinos. *Sleep*, *40*(1), zsw025.	Yes	No
Twedt, R., Bradley, M., Deiseroth, M. D., Althouse, A., & Facco, F. (2015). Sleep duration and blood glucose control in women with gestational diabetes mellitus. *Obstetrics and gynecology*, *126*(2), 326-331.	Yes	Yes
Watson, N. F., Buchwald, D., Delrow, J. J., Altemeier, W. A., Vitiello, M. V., Pack, A. I., ... & Gharib, S. A. (2017). Transcriptional signatures of sleep duration discordance in monozygotic twins. *Sleep*, *40*(1).	Yes	Yes

Sigrun B. Austad & Hanna S. Follesø

Setting the Rest Interval in Actigraphy

NTNU
Norwegian University of
Science and Technology