

Information Handout

Professional Version | US English

Cognitive Behavioral Model of Insomnia (Harvey, 2002)



Description

Insomnia is a highly prevalent sleep disorder characterized by difficulty initiating or maintaining sleep, or having non-restorative sleep for at least one month. Sleep problems are extremely common in people who suffer from mental health problems, and there is increasing evidence that disturbed sleep can be a causal factor for many mental health difficulties. Harvey's cognitive model proposes that cognitive processes contribute to the maintenance of insomnia, irrespective of whether the original cause was psychiatric, circadian, medical, or drug-induced.

What is insomnia?

Insomnia is one of the most prevalent sleep disorders, affecting around 10% of the population. There is a sound evidence base showing that it is an exacerbating factor in many psychological disorders, and it is frequently reported by people struggling with anxiety and depression (although it is not a primary symptom). It has further been established that problems with sleep precede – and may contribute to – the development of depression (Harvey, 2001). Even without knowing the direction of causality, there is a strong relationship between insomnia and psychological disorders. Comorbidity with other mental health conditions is high, and it is listed as a symptom across a wide range of other sleep, mood, neurological and mental health disorders: “insomnia as a symptom of psychological disorder is 10 times more frequent than insomnia related to a physical illness” (Ford & Kamerow, 1989; Harvey 2001). Chronically poor sleep has a significant impact on people's day to day life, affecting concentration, memory, and their ability to work or complete day to day tasks.

Symptoms of insomnia

The core symptom of insomnia is a “dissatisfaction with sleep quantity or quality” (DSM-IV). People with insomnia are preoccupied with their sleep difficulties and the impact it has on their ability to function during the day. Despite sufficient opportunities to sleep and no environmental barriers, clients may report:

- Struggling to fall asleep or initiate sleep.
- Taking a long time to fall asleep (prolonged sleep onset time).
- Waking repeatedly in the night.
- Sleeping for only short periods in the night.
- Waking early and being unable to get back to sleep.
- Non-restorative sleep (not feeling refreshed after a night of sleep).

During the day, they may experience other symptoms:

- Feeling fatigued
- Lacking energy
- Struggling to concentrate
- Having memory problems
- Being irritable or anxious
- Performing poorly on daily tasks at home and at work

People with insomnia often fall within the normal range for sleep duration and time to sleep onset, but they underestimate the amount of sleep they get each night, and overestimate the amount of time it takes to fall asleep (Tang & Harvey, 2004). In fact, a key symptom of insomnia is distress and dissatisfaction related to sleep independent of the actual quantity or quality of sleep that is gained.

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Maintenance of insomnia

Harvey's cognitive model of insomnia (2002) highlights the importance of negative cognitions related to sleep. These occur both at night-time, when the client is trying to fall asleep or finds themselves awake, and during the day, when they are preoccupied with how poor sleep may have affected them, or how they are going to sleep that night.

"A well-documented finding is that patients with insomnia complain that they cannot get to sleep because of unpleasant intrusive thoughts and excessive and uncontrollable worry during the pre-sleep period"

Jansson-Fröjmark, Harvey & Flink, 2020

A detailed account of the cognitive behavioral model of insomnia can be found in Harvey (2002). An important feature of the model is that cognitive factors which maintain insomnia operate both at night and during the day, and both are equally important. The important components are:

- **Excessively negative cognitive activity.** People with insomnia are preoccupied with how quickly they fall asleep, how much sleep they will get, and how much sleep they had. These recurring and intrusive negative thoughts about sleep occur both at night-time and during the day. At night-time, in the pre-sleep period, negative thoughts tend to focus on sleep that night (e.g., "I am never going to get to sleep", "If I don't sleep properly I'll get ill"). Negative thoughts can also occur at night if they wake up (e.g., "I've woken up at 3am and I'll never get back to sleep now"). During the day, negative thoughts about sleep may focus on evaluating the amount and quality of sleep from the previous night, or their levels of fatigue and performance during the day (e.g., "Last night I hardly slept", "I can't work properly today").

- **Arousal and distress.** At night-time, negative thoughts trigger a threat response, leading to autonomic arousal, which works in opposition to sleep onset, as it puts the mind and body on alert. This makes it harder to fall asleep, or to return to sleep after waking up. During the day, autonomic arousal causes people to feel anxious and emotional, affecting their ability to concentrate and function during the day.
- **Selective attention and monitoring.** With the mind and body on alert, autonomic arousal causes the individual to selectively pay attention to and monitor themselves for sleep related threats. At night-time, they will monitor for signs that they are or are not falling asleep: perhaps watching the clock to see how long they are taking to fall asleep, or how long they have been asleep if they awake in the night. This reinforces negative thoughts about sleep (e.g., "I'm still awake, I should be asleep by now"). During the day, selective attention and monitoring focus on signs of fatigue, performance deficits (such as not being able to complete day-to-day tasks), or mood. Noticing these may reinforce negative beliefs (e.g., "I wouldn't have made that mistake if my sleep had been better last night").

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- **Distorted perception of deficit.** People with insomnia often have distorted perceptions about their sleep and how poor sleep affects their ability to function. For example, they might underestimate the amount of time spent asleep, and overestimate the amount of time it takes to fall asleep (e.g. “It took me ages to fall asleep and I only slept for about 3 hours the whole night”). They may also have distorted perceptions about their performance, cognitive ability, and mood during the day, such as overestimating impairments in memory, concentration, and the ability to interact properly with other people. Monitoring for fatigue and performance feeds into these distorted perceptions, since monitoring and selective attention make it more likely that signs of impairment will be detected. These distorted perceptions reinforce negative thoughts about sleep (e.g., “My sleep is always terrible, and I can’t do my job properly”).
- **Beliefs.** People with insomnia may hold inaccurate beliefs about sleep quality and quantity that exacerbate recurring negative thoughts about sleep. For example, they may believe that they must get 8 hours of uninterrupted sleep to function properly, or that spending a long time in bed is the best way to get a lot of sleep. These beliefs create unrealistic expectations about what constitutes ‘good’ sleep, and can cause people to adopt sleep strategies that are counterproductive.
- **Safety behaviors.** Preoccupation with poor sleep and its consequences can cause people to adopt safety behaviors that they believe will help them sleep better, or function during the day. These strategies may include:
 - **Thought control.** To get to sleep at night, it is common for people with insomnia to try to suppress or stop negative thoughts. However, attempting to suppress thoughts is counterproductive. It causes an increase in cognitive activity and effort, and may make negative intrusive thoughts more frequent rather than stopping them.
 - **Imagery control.** People with insomnia may also try to inhibit visual imagery, if they think it is not conducive to sleep. However, trying to switch off or stop visual imagery prevents the worries from being resolved, making them more likely to recur.
 - **Inducing drowsiness.** This involves using alcohol or substances to bring on a drowsy state in the pre-sleep period. Though it may help them fall asleep, it will result in poorer sleep over night.
 - **Manage daytime performance.** The fear of poor performance during the day may cause people with insomnia to ‘take it easy’ or catch up with sleep, such as by canceling arranged activities or taking a nap. These behaviors might directly contribute to poorer night-time sleep – a nap will disrupt a person’s normal diurnal rhythm – or feed into negative thoughts (e.g., “My day is ruined, I’ve been too tired to get things done”).
- **Sleep deficit.** Excessive cognitive activity and alertness for sleep-related threats disrupt the individual’s ability to relax, fall asleep, or return to sleep after waking up. Accordingly, the sleep deficit is the result of anxiety triggered by negative thoughts around sleep. During the day, excessive negative cognitive activity and anxiety can also result in a real deficit in daytime functioning.

Description

Evidence-based psychological approaches for working with insomnia

Insomnia can be treated independently of other co-morbid conditions (Harvey, 2001). As it is a risk factor for the development of other disorders, and treatment may aid recovery from other conditions (such as depression and anxiety), there is a strong case for prioritizing the treatment of insomnia (Freeman et al, 2017; Harvey, 2001; Stott et al, 2021). There is good evidence that CBT is an effective treatment for insomnia, both as the primary disorder (Morin et al, 2006; Freeman et al, 2017) and when co-morbid with other conditions (e.g., Harvey et al, 2015). Positive outcomes include improvements in time to fall asleep and time spent asleep, reduced use of medications to aid sleep, and reductions in anxiety, depression and rumination (Morin et al, 2006; Scott et al, 2021).

Harvey suggests that treatment for insomnia should:

- Address selective attention and monitoring of threats to sleep, as well as signs of impaired daytime performance.
- Address distorted perceptions of sleep quantity and quality, and impairments of daytime performance.
- Remove the use of safety behaviors.
- Correct and update beliefs about sleep.

Instructions

This is a Psychology Tools information handout.

Suggested uses include:

- Client handout – use as a psychoeducation resource.
- Discussion point – use to provoke a discussion and explore client beliefs.
- Therapist learning tool – improve your familiarity with a psychological construct.
- Teaching resource – use as a learning tool during training.

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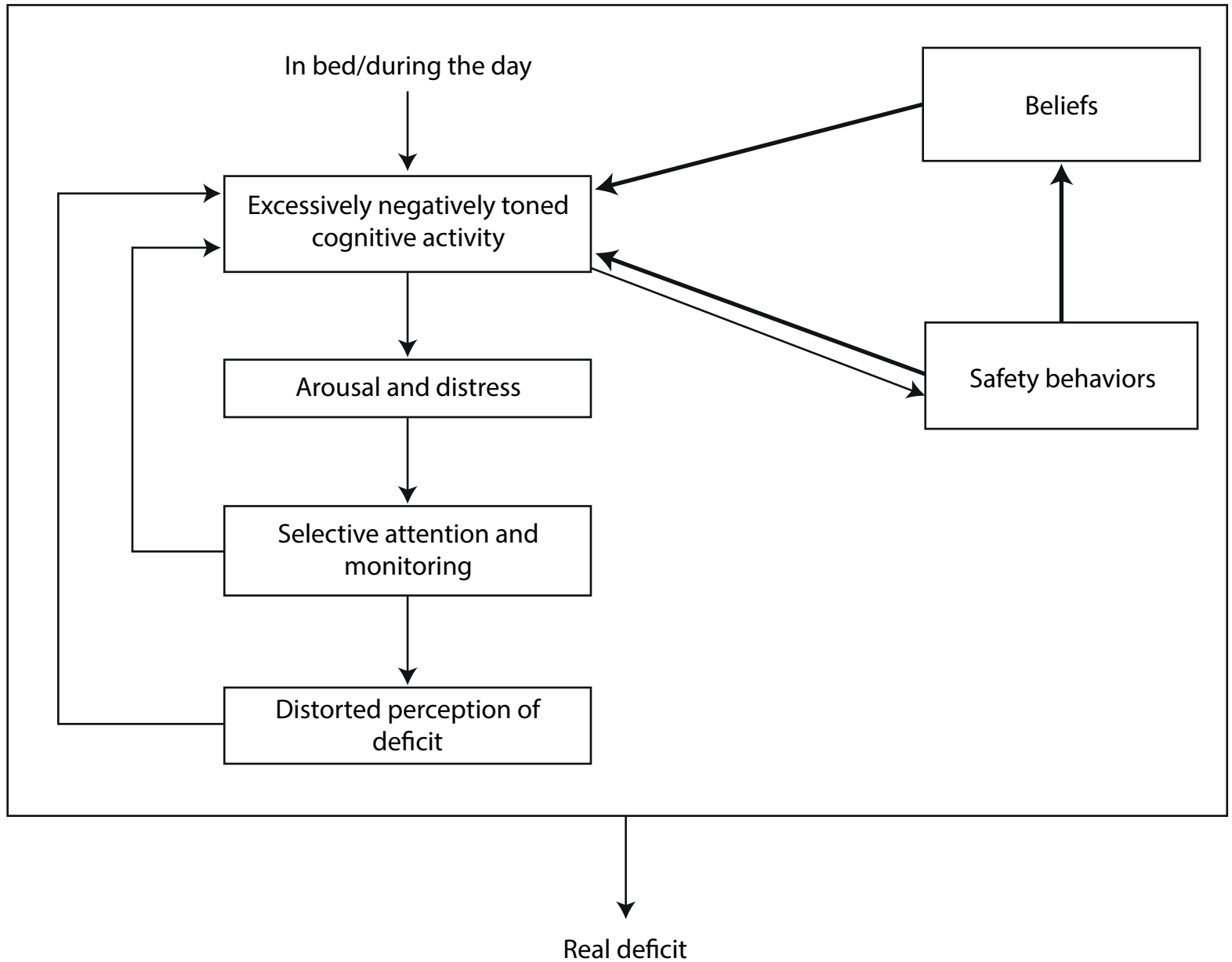
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