

Psychological Interventions for Sleep Problems during COVID19 Pandemic: What we Know?

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Abstract: Sleep problems have been frequently reported in the context of the COVID-19 pandemic. Although psychological treatment is the first line of treatment for these problems, the evidence is still scant in this context. This paper summarizes the state of the art of the study of the efficacy of non-pharmacological treatment for the treatment of sleep problems in the general population and in health workers.

Keywords: Psychological interventions, Sleep, Insomnia, COVID-19.

LETTER TO THE EDITOR

The COVID-19 pandemic, initially observed in the city of Wuhan, Hubei, China, has been affecting to the vast majority of countries [1]. This pandemic is one of the most significant worldwide public health events of the last decades, causing deaths and affecting quality of lives. It represents an unusual and challenging time, associated with increased stress, anxiety, mood, and sleep problems [2-4]. In this context, a number of scientific publications never reached in such a short period of time has been registered. However, and unfortunately, studies on mental health effects have been limited [5].

Sleep problems are one of the most reported effects by several studies, beyond being able to consider them as a common and expected reaction to the context of the pandemic [6-8].

During the COVID-19 pandemic, the report of sleep problems increased (i.e. insomnia, nightmares, fatigue and exhaustion) [9]. A systematic review of the epidemiology of sleep disorders during the COVID-19 pandemic, that included 78 studies, estimated a prevalence ranging from 2.3% to 76.6% [10].

Sleep problems and stress have a bidirectional relationship. Sleep problems are associated with stress, anxiety, depression, and suicidal behaviour, and sleep disturbances are an independent risk factor for suicidal ideation, suicide attempts, and suicide death [6, 11].

On the other hand, stress is a well-defined factor that seriously impairs sleep quality [12]. Specific stressors of the COVID-19 pandemic include longer home confinement duration [13], infection fears [14], boredom, inadequate or excessive information regarding the pandemic [15], financial loss [16], and stigma [17]. Home confinement results in changes to daily life structure, which can have an impact on sleep patterns. For example, people tend to wake at different times, modify their diet and exercise routines, and are less exposed to daylight [12].

The short-term consequences of sleep disruption include increased stress response; somatic pain; reduced quality of life; emotional distress and mood disorders; and cognitive, memory, and performance deficits. Long-term consequences of sleep disruption include hypertension, dyslipidaemia, cardiovascular disease, weight-related issues, metabolic syndrome, type 2 diabetes mellitus, and colorectal cancer [18].

Specifically, regarding to the reported sleep problems during COVID-19 pandemic, studies included insomnia, increased sleep latency, increased length of time in bed and total sleep time, delayed bedtime and wake-up times, nightmares and worsened sleep quality [19-22].

However, despite the evidence on the impact of COVID and isolation measures in sleep, and considering non-pharmacological as the first line treatment for sleep problems [23], the evidence about this treatment in the context of the COVID pandemic is scarce.

Previous research on treatments for sleep problems has demonstrated the efficacy of cognitive behavioural interventions: sleep hygiene, relaxation techniques for arousal reduction, time in bed restriction and cognitive

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interventions to modify biased cognition [24]. In addition, cognitive therapy, in the form of face-to-face [25], and remote modalities [26], has demonstrated efficacy in different groups of patients.

Additionally, Hu *et al.* conducted a systematic review to assess the efficacy of non-pharmacological interventions for sleep promotion in critically ill adults in an intensive care unit (ICU) [27].

Currently, there is emerging evidence of the effectiveness of certain interventions, as muscle relaxation, for the improvement of sleep quality and the reduction of anxiety in people with COVID-19 [28]. But, in our knowledge, this is the unique randomized controlled trial published up to date.

However, there are several ongoing randomized controlled trials (RCT) assessing online cognitive based interventions in general population [29, 30] and in health care workers [31].

Dominguez-Rodriguez *et al.* aims to assess the efficacy of an intervention program based on the Positive Psychology approach for the reduction of anxious and depressive symptoms, increase of positive emotions and sleep quality during and after the pandemic [29].

Elder *et al.* tests an online intervention (a self-help leaflet with techniques for identifying and addressing sleep-dysfunctional thinking) for poor sleep [30].

Weiner *et al.* evaluates the efficacy of a CBT program developed for healthcare workers to treat immediate perceived stress and on the emergence of psychiatric disorders [31].

In summary, comparing the number of studies in other relevant areas of health, the papers about the treatment of sleep problems are limited.

Considering that sleep problems are associated with the development of mental disorders (especially anxiety and mood disorders) [32], and the impact of sleep deprivation on the immune system [33], it is important to be able to continue developing studies that evaluate the efficacy of treatment for those sleep problems in a context of high psychological vulnerability.

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