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Case Report

Effectiveness of a Brief Cognitive Behavioral Intervention in Insomnia: Case Report

Horacio Balam Alvarez-Garcia*

Sleep Disorders Clinic, Research Division, Medicine Faculty, National Autonomous University of Mexico, Mexico

***Corresponding Author:** Horacio Balam Alvarez-Garcia, Sleep Disorders Clinic, Research Division, Medicine Faculty, National Autonomous University of Mexico, Mexico.

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Abstract

The clinical case of a 38-year-old man with chronic insomnia lasting two years is presented. The problem has begun to affect their work, social and sexual performance. The patient reports that the problem has been present since his adolescence, but worsened when he began to work independently. Due to excessive daytime sleepiness and poor sleep quality, she decided to take care of her problem. After an assessment, it was decided to implement Brief Cognitive Behavioral Therapy for Insomnia. The intervention components were: sleep restriction, stimulus control therapy, sleep hygiene, muscle relaxation, and cognitive restructuring. The intervention lasted six sessions divided into: one for evaluation, and five for treatment. Pre-treatment and post-treatment measurements were made with psychometric instruments and sleep diaries. Finally, it is observed that the symptoms of insomnia decreased and the quality of sleep increased, however, the limitations of the clinical case study are shown.

Keywords: Insomnia; Cognitive Behavioral Therapy; Sleep Disorder

Abbreviations

CBT-I; SCT; SR; PMR; CR CBTB-I; ISI; PSQI; AIS

Introduction

Insomnia is one of the sleep disorders with the highest prevalence rate, 35% of the population worldwide has this condition [1]. In Mexico, insomnia is the second highest incidence sleep disorder below obstructive sleep apnea [2]. The repercussions of insomnia in social and work areas decrease the quality of life of the patient [3].

The psychological treatment of insomnia; It is the first treatment option due to its high degree of effectiveness, easy application, low cost, no side effects and the absence of addictive potential. This intervention has been called Cognitive Behavioral Therapy for Insomnia (CBT-I), integrated by techniques such as Stimulus Control Therapy (SCT), Sleep Restriction (SR), Progressive Muscle Relaxation (PMR), Cognitive Restructuring (CR) and Measures of Sleep Hygiene [4]. Standard treatment consists of 12 weekly sessions of 1hour duration, having a high level of efficacy reported in the latest systematic review [5].

As a result of the research, the CBT-I regulates have had considerable modifications in the duration of the number of sessions, going from an average of 12 to an average of 6, preserving the previously mentioned techniques. This version is called Brief Cognitive Behavioral Therapy for Insomnia (CBTB-I), having a level of efficacy similar to the conventional intervention, but with lower cost in the health sector [6].

The interventions are theoretically based on the 3 P model [7], which mentions that the origin of insomnia is due to predisposing factors (genetic or biological aspects) of the patient, which in com-

bination with precipitants (stressful situations) generate the onset of the condition. In addition to this, there are perpetuating factors of insomnia (dysfunctional habits) that do not allow a spontaneous recovery of the quality of sleep to be achieved [8].

Case Report

38-year-old male patient (C.) lives with his partner, but they have not married. He mentions within his family there have been a history of excessive sleepiness and breathing disorders during sleep. Within his life history, varied bedtime schedules are reported during his childhood and adolescence. He currently has his own business on advertising and digital marketing. This activity is your source of income. He reports that for about 2 years his insomnia problem has worsened having difficulties falling asleep, going to bed at 12:00 am and starting sleep at 3:00 am. Once sleep begins, you have abrupt awakenings during the night, taking about 30 minutes to go back to sleep. During the day he reports drowsiness, which affects his performance in his business and in the preparation and delivery of materials related to the campaigns.

History of the problem

C. mentions that 2 years ago he founded his digital marketing and advertising business. In the first 6 months, he became accredited in the market, which is why he began to receive more advertising campaigns, which translated into a greater workload for him. He mentions that, in order to deliver the campaigns in the agreed time, he carried out activities at home which delayed bedtime until 3 am; the time to get up was at 6 am because he started his activities at 8 am. During the day, he was tired and sleepy, so he drank coffee to stay awake or took short 30-minute naps. This routine has been maintained and has begun to have an impact on their job performance.

Evaluation

The evaluation process was carried out in the first consultation and consisted of a semi-structured interview based on the criteria of the International Classification of Sleep Disorders in its third edition [9], a sleep diary and the following questionnaires:

- **Insomnia Severity Index**: Self-applied questionnaire that assesses the impact of insomnia during the day and at night. It is made up of five items that are rated on a Likert scale that ranges from 0 (not at all) to 4 (very serious). The total score is assessed as follows: 0-7 = absence of clinical insomnia, 8-14 = subclinical insomnia, 15-21 = clinical (moderate) insomnia, 22-28 = clinical (severe) insomnia; It should be mentioned that this instrument has a Cronbach's Alpha of 0.82 [10].

- **Pittsburg Sleep Quality Questionnaire (PSQI):** Self-applied questionnaire that assesses symptoms of insomnia, symptoms of other sleep disorders, quality of sleep; as well as daytime symptoms. It is made up of 24 items, of which 19 are added to obtain an overall score. It is evaluated on a Likert scale from 0 (quite good) to 3 (quite bad). The total score ranges from 0 to 21 points; a total score between 0 and 5 indicates good quality of sleep; Compared to a total score greater than 5 points that is interpreted as a poor quality of sleep, in the Mexican population it obtained a Cronbach's Alpha of 0.78 [11].

- **Athens Insomnia Scale (AIS):** Self-applied questionnaire that assesses the impact of insomnia in four dimensions: total sleep time, quality of sleep and impact of daytime symptoms (there are only three, the fourth is missing insomnia symptoms). It is composed of 8 items that are rated on a Likert scale from 0 (no problem) to 3 (did not sleep at all). The total score is obtained by adding the items. The total score between 0 and 6 is interpreted without insomnia, between 7 and 12 mild insomnia, between 13 and 18 moderate insomnia and greater than 18 corresponds to severe insomnia. In population, a study carried out in Mexico obtained a Cronbach's Alpha of 0.90 [12].

Analysis and description of the problem

An integration of the information was carried out under the Model of the 3 P, in which it is observed that in the problem of C. they had a relevant hereditary history of having relatives with sleep disorders, in addition to this there were poor hygiene practices of sleep in childhood and adolescence, these predisposing factors led to the stress generated by the start of the business of C. (precipitating factor) that prolonged waking hours were presented in order to be able to fulfill the workload the time in sleep (perpetuating factor); C. began to perform behaviors that counteract the symptoms of drowsiness (perpetuating factor) such as drinking coffee or taking naps, which interfered with the circadian rhythm.

Depending on the symptoms and the personal characteristics of the patient, it was decided to use the CBCT-I for the case of C.

The objectives were:

- Reduce the symptoms of insomnia.
- Increase the quality of sleep.
- Increase total sleep time.
- Reduce daytime sleepiness.
- Reduce awakenings at night.

The intervention was integrated into 6 sessions divided as follows: 1) evaluation of the patient with a semi-structured interview, the application of questionnaires and a sleep diary, 2) initiation of SR techniques, 3) initiation of SCT, 4) start of MRT and HSM, 5) cognitive restructuring and 6) closure of treatment and collection of questionnaire results.

Results and Discussion

In the first session, C. obtained the following scores in each questionnaire: ISI (total = 16), PSQI (total = 15) and AIS (total = 11). At the end of the intervention, C. obtained the following scores in each questionnaire: ISI (total = 5), PSQI (total = 5) and AIS (total = 3) (See table 1).

Questionnaire	Pre-Treatment	Post-Treatment
ISI	16	6
PSQI	15	5
AIS	11	5

Table 1: Results of the questionnaires applied to C.

Note: ISI: Insomnia Severity Index, PSQI: Pittsburg Sleep Quality Index: EAS: Athens Insomnia Scale.

Regarding the results collected in the sleep diary, an increase in total sleep time is observed, obtaining an average of 2 hours of sleep in the first week and having an average of 5.8 hours of sleep at the end of the treatment. In addition, a decrease in the number of awakenings per night is observed, with an average of 6 in the first week and 0 at the end of the treatment, while daytime sleepiness obtained an average of 6 in the first week and 2 at the end. the treatment (see figure 1).

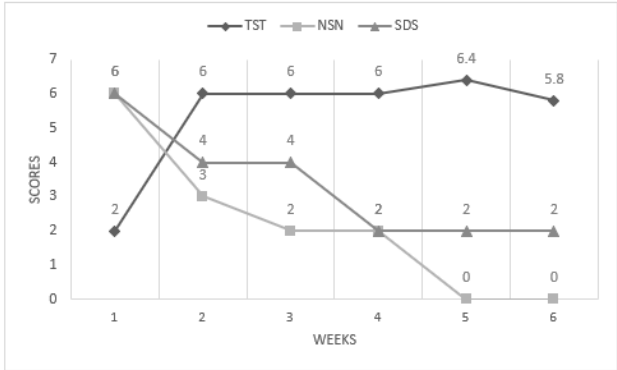

Figure 1: Results from the sleep diary of C.

Note: TST: Total Sleep Time, NSN: Number of sleepless nights, SDS: Subjective daytime sleepiness.

Conclusion

With the results obtained, we can conclude that TCCB-I was effective in C. since the treatment objectives were met; Furthermore, C. reported that sleepiness decreased from the second session, in addition to reporting that, upon waking up, he feels rested and has observed an improvement in his work performance.

Despite the data consistent with the effectiveness of the TCCB-I [13,14], there were difficulties when collecting the final data from the questionnaires, because C. considered that it was no longer necessary to evaluate them and changed the appointment twice, so they should be taken with caution. Despite this, the present study marks a precedent for the implementation of BCBT-I in the Mexican population.

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Conflict of Interest

The author has no conflict of interest.

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