"DORMIR MEJOR" PROJECT:

Promoting the importance of quality sleep and sleep care

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Resumen:

Un buen hábito de sueño influye en nuestra salud física y mental. De hecho, un mal descanso se ha asociado al aumento del riesgo de padecer ciertas enfermedades. Dada la importancia del sueño, el objetivo de este proyecto era comprobar cómo era la calidad de sueño de la población española y crear un tratamiento para mejorarla. En el primer estudio participaron 593 personas, con una edad media de 48 años (DT= 14,65) siendo el 69,31% mujeres. La medida utilizada fue el *Índice de calidad de sueño de Pittsburgh (PSQI) para población española* administrada mediante la plataforma *Qualtrics*. La encuesta se publicó en diferentes redes sociales y se utilizó la técnica de *bola de nieve* para aumentar la muestra. La puntuación total del PSQI fue de 8,29 (DT = 3,86) y un 83,46% presentaba problemas de sueño. En conclusión, este estudio encontró que los problemas del sueño son prevalentes entre la población española y que, por tanto, era necesario trabajar en la concienciación y el abordaje de este problema. En el segundo estudio se creó un tratamiento virtual autoadministrado en la Plataforma *Psicología y Tecnología*, formado por 2 módulos: Felices Sueños, para población general (18-64 años); y Sueño con Valores, para población mayor (>65 años). Los Módulos de Aprendizaje se diseñaron para concienciar de la importancia de la calidad del sueño y para enseñar estrategias para mejorarla. Además, se pasó el cuestionario CSQ-I sobre viabilidad, aceptabilidad y satisfacción sobre la experiencia tras el uso de los módulos. Los resultados indicaron que las personas que utilizaron los módulos manifestaron una muy buena aceptabilidad y satisfacción (un 92% consideraba los módulos como satisfactorios o muy satisfactorios). Por tanto, los módulos online pueden ser una herramienta muy útil para aumentar la accesibilidad de intervenciones para el sueño a distintas poblaciones

Palabras Clave: Psicología de la salud, Salud mental, Calidad de vida, Calidad del sueño

Abstract:

A good sleep habit influences our physical and mental health. In fact, poor sleep has been associated with an increased risk of certain diseases. Given the importance of sleep, the aim of this project was to check the quality of sleep in the Spanish population and create a treatment to improve it. The first study involved 593 people, with an average age of 48 years (SD= 14.65), 69.31% of whom were women. The measure used was the Pittsburgh Sleep Quality Index (PSQI) for the Spanish population, administered using the Qualtrics platform. The survey was published in different social networks and the snowball technique was used to increase the sample. The PSQI total score was 8.29 (SD = 3.86) and 83.46% had sleep problems. In conclusion, this study found that sleep problems are prevalent in the Spanish population and that it was therefore necessary to work on raising awareness and addressing this problem. In the second study, a self-administered virtual treatment was created on the Psychology and Technology Platform, consisting of 2 modules: Happy Dreams, for the general population (18-64 years old); and Sleep with Values, for the elderly population (>65 years old). The Learning Modules were designed to raise awareness of the importance of sleep quality and to teach strategies to improve it. In addition, the CSQ-I questionnaire on feasibility, acceptability and satisfaction with the experience after using the modules was administered. The results indicated that those who used the modules reported very good acceptability and satisfaction (92% considered the modules as satisfactory or very satisfactory). Therefore, online modules can be a very useful tool to increase the accessibility of sleep interventions to different populations.

Key words: Health psychology, Mental health, Quality of life, Quality of sleep

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FUNDACIÓN MÓNICA DUART — SUEÑOS CON VALORES · UJI UNIVERSITAT JAUME I · labpsitec

INTRODUCTION

There is a strong relationship between sleep processes and the overall state of physical and mental health of an individual (Miró et al., 2005). It is known that adults who report a poor quality of sleep are at a higher risk of morbidity and early mortality (Murawski et al., 2018). Despite the importance of sleep for quality of life and associated health risks, over a quarter of the population reports poor sleep quality, making sleep disorders one of the most important public health problems (Murawski et al., 2018).

Raising awareness of the importance of a good night's sleep for health and providing effective and simple treatments are important to improve sleep quality. Internet-based treatments may be relevant for improving some sleep quality indicators (Murawski et al., 2018). Shin et al. (2017) found that mobile technology interventions are an effective tool for sleep quality improvement in comparison to traditional interventions.

OBJECTIVE

Promote mental health (improving sleep quality) through the innovation of self-applied virtual interventions.
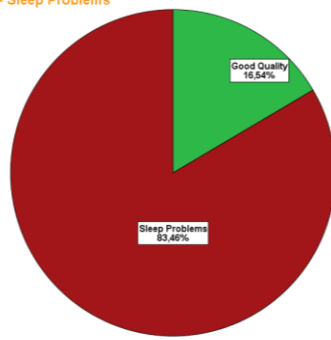
EXPERIMENT 1 - Epidemiological Study on Sleep Quality

The aim of this first experiment was the study of sleep quality in the Spanish population. A total of 593 adults participated in the study. The average age was 48 years (SD= 14.65) and 69.31% were women. The measure used was the *Pittsburgh Sleep Quality Index (PSQI) for the Spanish population* (Buysse et al., 1989; Royuela and Macías, 1997) administered using the Qualtrics platform. To distribute it, it was published in different social networks, in addition to using the snowball technique. SPSS-23 was used to analyze the data.

The mean of the total PSQI score was 8.29 (SD = 3.86) and 83.46% reported sleep problems. 39 % reported poor or very poor sleep quality, 36 % reported that sleepiness affected daily life and 54 % reported that it affected mood. Using t-student analysis, people older than 50 years and women were found to have worse sleep efficiency.
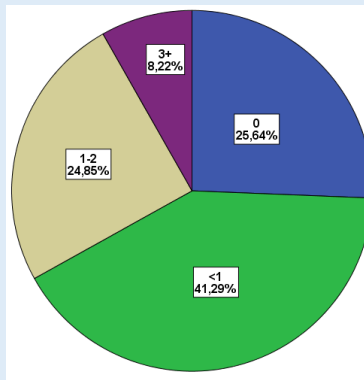
To conclude, this study showed that sleeping problems are widespread in the Spanish population. Therefore, it is necessary to work on awareness, evaluation and treatment of this problem.

< 5 = Sleep Problems

Good Quality 16,54% / Sleep Problems 83,46%
Total Score PSQI (0-20)

Average values of the different components

Component	Mean (Value 0-3)	ST
1 - Subjective Quality	1,28	0,824
2 - Latency	1,34	0,958
3 - Duration	1,32	0,881
4 - Efficiency	1,40	1,062
5 - Disturbances	1,26	0,537
6 - Medication Use	0,54	1,043
7 - Diurnal Dysfunction	1,16	0,900

3+ 8,22% / 0 25,64% / 1-2 24,85% / <1 41,29%
Component 7 - Diurnal Dysfunction

Experiment 2 - Online treatment to improve sleep quality

Method

In the Psychology and Technology Platform, 2 modules were created: *Happy Dreams*, for the general population (18-64 years old); and *Sleep with Values*, for the older population (>65 years old).

The modules are divided into several sections: 1) Demographic Data Questionnaire, 2) Technological Profile Questionnaire, 3) Pittsburgh Sleep Quality Index Questionnaire (PSQI), 3) Learning Module and 4) Satisfaction Questionnaire (CSQ-I).

The Learning Modules are designed to make participants aware of the importance of sleep quality. This is done by providing information on "sleep" and recommendations on how to improve it.

Procedure: We first created the modules with the help of Psychology and Technology platform technicians. Demo tests were then conducted to check that everything worked well on different mobile devices.
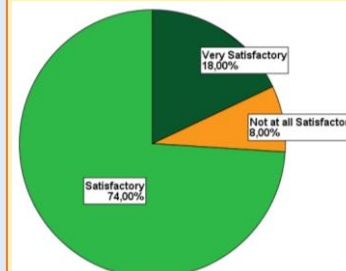
Distribution: 3 different methods were used: Snowball technique, social media, and localized posters.

Sample: 78 participants (only 5% over 65 years old)

Results CSQI: 16 questions on feasibility, acceptability and satisfaction with the experience after using the modules. Each item is scored on a scale from 1 (strongly disagree) to 5 (strongly agree). The mean total score was 66.2 (SD = 8.73). 92% considered the modules as satisfactory or very satisfactory.

Average values in Satisfaction with modules (CSQI) → 0-5

	Mean	ST		Mean	ST
The module is of good quality	4,38	0,64	The module can help me with my sleep problems	4,01	0,75
I found the module attractive	4,12	0,69	Overall I am satisfied with the module	4,40	0,70
I liked the module	4,10	0,78	I would recommend this module to others	4,16	0,79
El módulo me resultó útil	4,02	0,88	I would use this type of module again	4,02	0,80
I found the module useful	4,52	0,68	I am satisfied with the online format in which the module was presented.	4,40	0,70
I found the module aversive	0,90	1,20	I liked the design of the module	4,18	0,74
I am satisfied with the amount of information I received through the module.	4,06	0,65	The videos and images in the module helped me to better understand the information.	4,26	0,75
I found the module too long	3,02	1,02	The exercises in the module helped me to assimilate the information better.	4,32	0,74

Very Satisfactory 18,00% / Not at all Satisfactory 8,00% / Satisfactory 74,00%
Percentage of satisfaction with the modules

El sueño y la edad

Conclusions

Those who used the modules reported very good acceptability and satisfaction with the modules. They expressed good overall satisfaction, usefulness, ease of use. They also expressed good acceptability with regard to specific aspects: videos, images, content (information). They indicated that they found it useful in coping with their sleep problems and that they would recommend the modules to others. To sum up, **online modules can be a very useful tool to increase the accessibility of sleep interventions to different populations.**

Limitations: Users mostly under 65 years of age. This population may find the self-administered format too difficult. Importance of offering the module in a caregiver-assisted format.

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