

Abstract

The COVID19 pandemic has impacted daily life activity, lifestyle, and well-being. Sleep was shown to be affected by many physical and psychological factors such as quality of life, psychological wellbeing, and levels of physical activity. In the current study, changes in sleep quality during COVID19-induced confinement among adults were investigated. Subsequently, the current study examined the sleep changes during COVID19 using social media venues among adults in Jordan. A total of 1846 participants were recruited in the study, of which >92% reported a variety of confinement procedures such as self-quarantine, physical distancing, banning of public events, school closure, and lockdown. Additionally, the majority of the participants (53.1%-59.4%) reported an increase in most of the sleep parameters except a decrease (49.1% of the participants) in daytime sleep. Age and obesity seemed to contribute to the changes in sleeping hours while age contributed to sleep disturbance. Moreover, change in daytime sleeping was related to age, gender, and job type while the change in nighttime sleeping hours was associated with age, obesity, and job type. In conclusion, multiple factors, namely, age, gender, income, and job type, seemed to play a role in sleep quality during COVID19-induced confinement. The majority of the participants experienced an increase in sleep disturbance, nighttime sleeping, sleeping hours as well as reduction in daytime sleeping. Thus, intervention programs and strategies are warranted to further improve sleep among adults during the current and future disease-induced confinement.



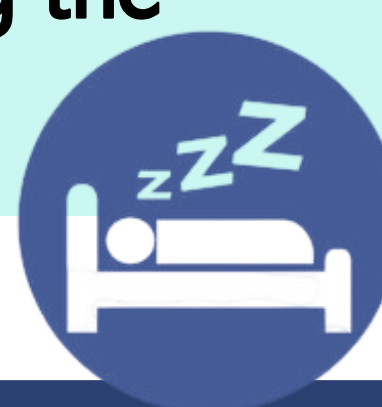
Introduction

- COVID19 has started in Wuhan, China since December 2019 (China National Health Commission, 20).
- Highly contagious diseases and associated with sneezing, coughing, sever headache and fatigue, and in some cases respiratory disorders and possible death (Pfefferbaum, 20).
- Although sleep has been recognized as a time to rest, it is an active physiological process, involving two stages, Rapid Eye Movement (REM) and Non-Rapid Eye Movement (NREM) (Berry, 12).
- Lack of sleep contributes to fatigue, depression, and decreased level of physical activity (Berry, 12).
- Sleep is affected by many physical and psychological factors such as pain, quality of life, medication, anxiety, depression, bladder problems and physical activity level (Berry, 12).
- Additionally, sleep quality improves immunity to viral infection (Gamaldo, 2012), thus it is important for the protection from COVID19.
- Confinement to homes due to COVID19 affected several aspects of people's life quality, including physical activity and mental health (Pfefferbaum, 20).
- However, no studies examined the effect of COVID19-induced confinement on sleep quality.



Purpose

- Explore the changes in sleep quality and quality during COVID19-induced confinement among adults.
- Determine the results can help to determine plans and establish strategies to improve sleep hygiene awareness and pattern during the current and similar calamities.



Methodology

- Design and Participants**
- The study is cross-sectional survey distributed in April and May of 2020 to examine changes in sleep.
 - Adults (age >18 years) of both genders were invited to participate in the study.
 - The Institutional Review Board approved the study procedures.
 - The participants were informed about the objectives of the study and consented electronically prior to filling the questionnaire.
- Questionnaire**
- The questionnaire was distributed anonymously via social media.
 - Components:
 - Demographics include age, gender, and socioeconomic status (i.e. job, education, and income).
 - Perceptions about COVID19 disease.
 - Changes in sleeping hours, daytime sleeping hours, night time sleeping hours, and sleep disturbance during the pandemic-induced confinement.

Results

Table 1. The participant demographics (n=1757)	
Gender (%; female)	30.6
Age (yrs, mean±SD)	33.8 ± 11.1
Weight (kg, mean± SD)	72.8± 16.2
Height (cm, mean±SD)	166.3± 9.8
Level of Education (%)	
High school and less	19.0
Associate degree	13.9
Bachelor degree	51.6
Graduate degree	15.5
Income (%)	
Low	15.5
Middle	77.0
High	7.5
Job type (%)	
Unemployed/retired	35.6
Military/Police	4.8
Education	23.7
Agriculture	1.7
Health	14.1
Manufacturing	2.9
Engineering	5.7
Management	8.3
Crafting	3.2

Table 1: This table shows average age (range: 18-72 years), weight (range: 38-144 kg), and height (range: 120-198 cm). The majority of the participants were women (69.4%), holding a bachelor's degree (51.6%), from a middle-income class (77.0%), and unemployed (35.6%).

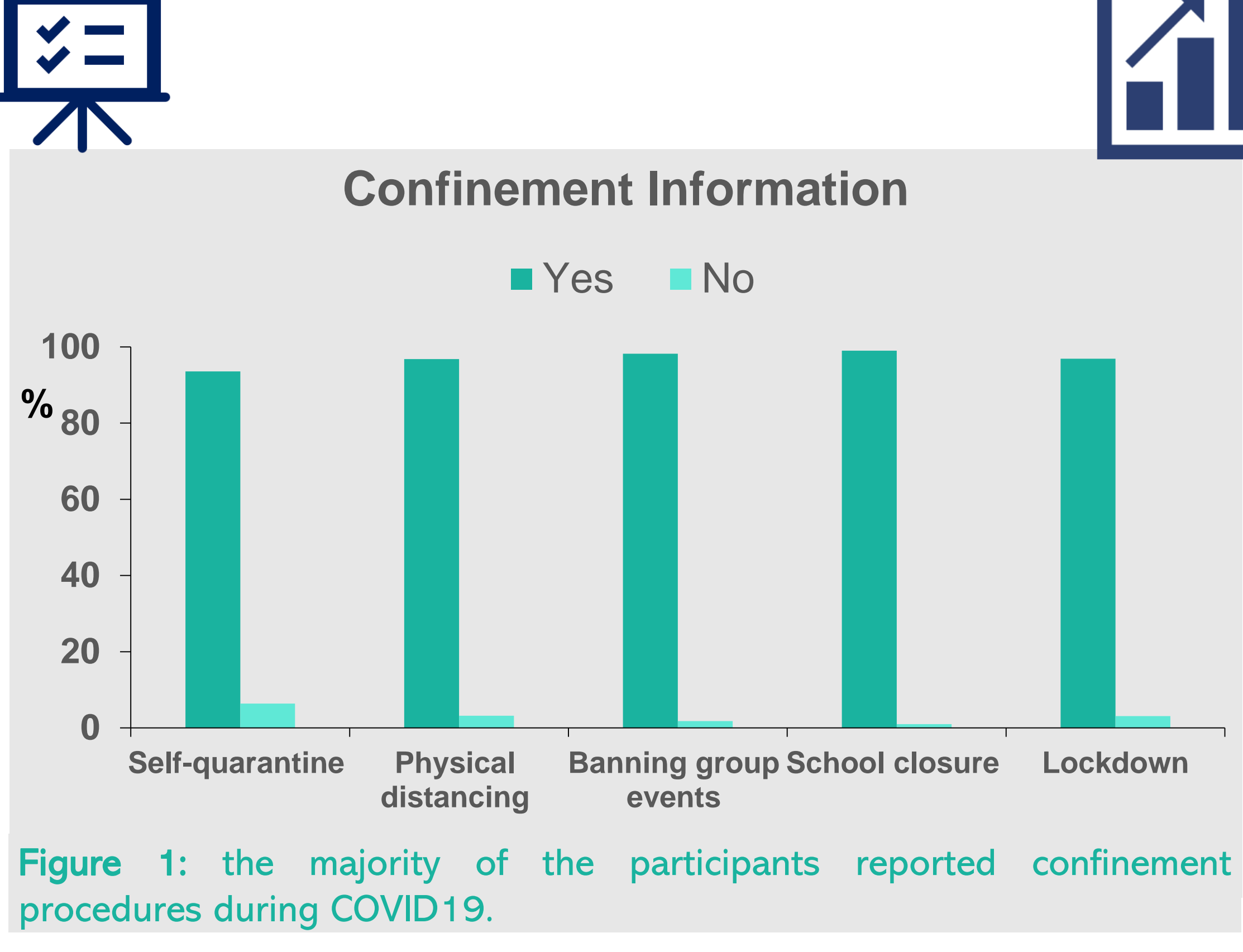


Figure 1: the majority of the participants reported confinement procedures during COVID19.

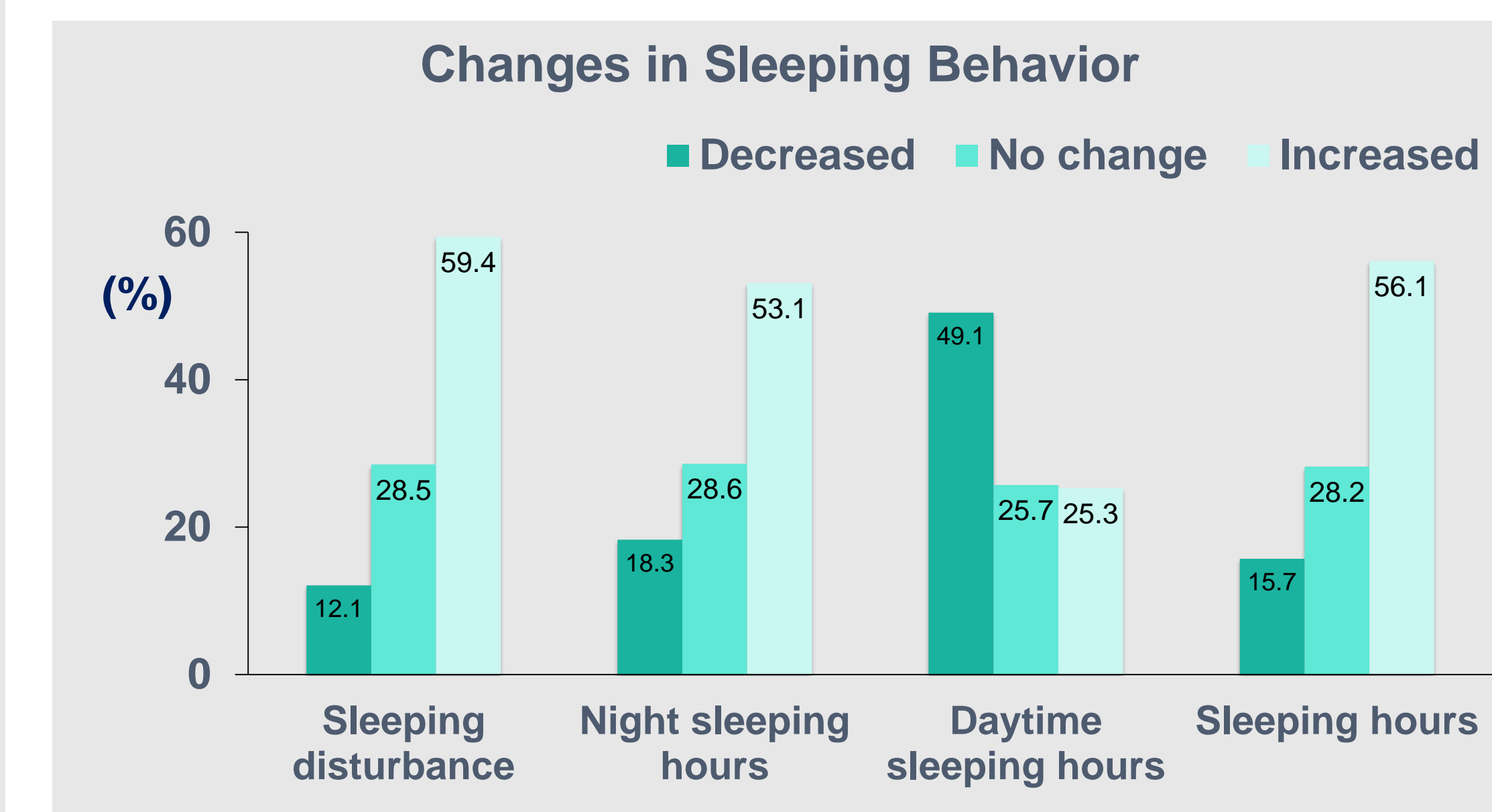


Figure 2: The majority (53.1%-59.4%) of the participants reported an increase in most of the sleep parameters during COVID19 pandemic except a decrease (49.1% of the participants) in daytime sleep.

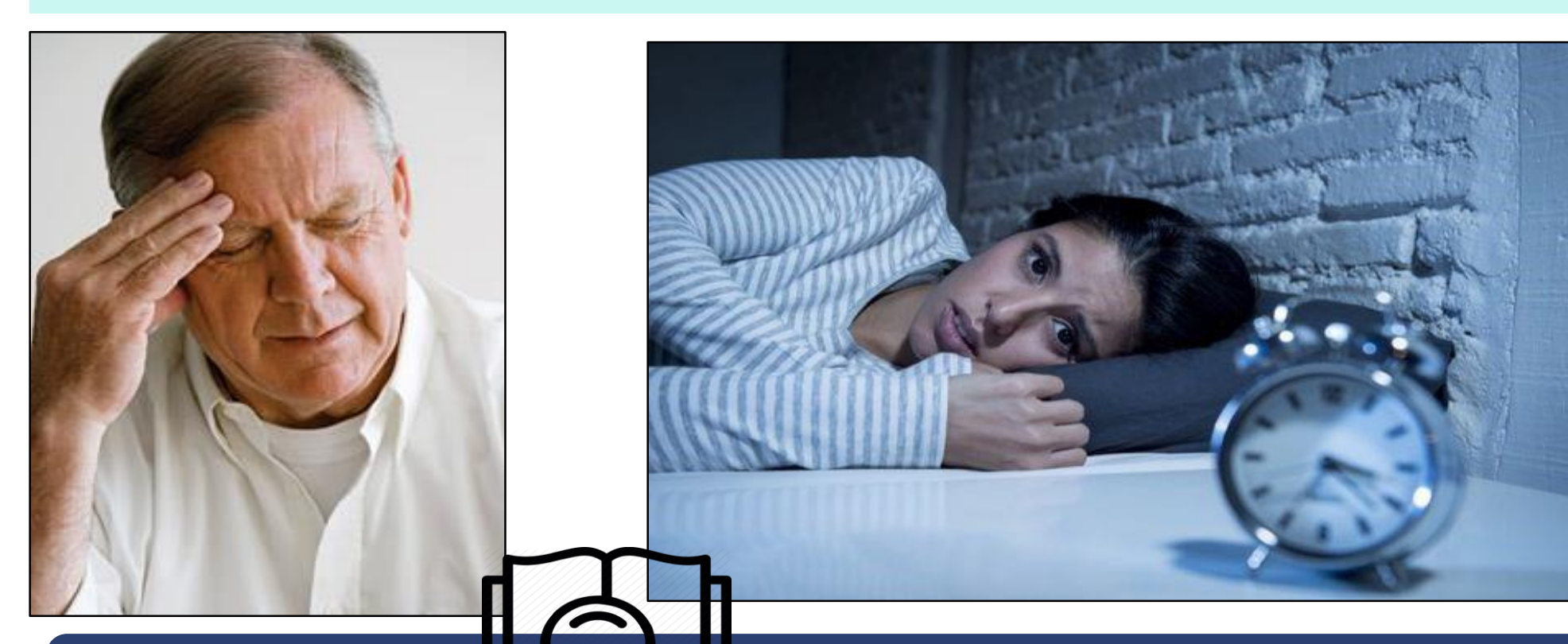
Discussion

- The majority of the participants reported an increase in sleeping hours (56.1%), night time sleeping hours (53.1%), and sleep disturbance (59.4%) and a reduction in daytime sleeping hours (49.1%) during COVID19 pandemic.
- Age, gender, obesity, and job type seemed to contribute to the changes in SB:
 - ✓ Age and obesity were related to sleeping hours.
 - ✓ Age contributed to sleep disturbance.
 - ✓ Changes in daytime sleeping were related to age, gender, and job type.
 - ✓ Changes in nighttime sleeping hours were associated with age, obesity, and job type.



Conclusions

- Sleep disturbance, nighttime sleeping, sleeping hours increased while daytime sleeping decreased among the majority of the participants during COVID19-induced confinement.
- Age, gender, obesity, income, and job type seemed to contribute to these changes.



References

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