



Assessment of Sleep Quality Among Subjects Using Sleepm™ Biocrystal Pillow, Topper, and Mattress

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Abstract

This study assesses sleep quality among individuals using the Sleepm™ Biocrystal Pillow, Topper, and Mattress. Sleep is vital for health, governed by the circadian rhythm and influenced by environmental factors. Various sleep disturbances can degrade sleep quality, with implications for health. The study involved 20 adult participants using Sleepm™ products for at least two months, with sleep quality evaluated using the Pittsburgh Sleep Quality Index (PSQI). The findings revealed that 80% of participants rated their sleep as "fairly good," with reduced sleep disturbances and improved sleep duration. Qualitative data also indicated increased daytime energy and better mood. The study concludes that Sleepm™ products positively impact sleep quality, recommending future research for pre-and postintervention comparisons to enhance statistical significance.

Keywords: Sleep Quality; Sleepm™; Biocrystal Pillow; Topper; Mattress

Introduction

Background

Sleep is a natural part of the body's daily routine and is guided by the circadian rhythm, also known as the body's internal clock. This sleep/wake cycle is dependent on our environment, specifically light cues, that trigger melatonin release resulting in feeling the urge to sleep. Aside from the circadian rhythm, sleep is also driven by our internal need for rest. Just like how the body feels hunger when it requires food, the body feels the need to sleep when it is exhausted [1-3].

During sleep, the body cycles between two states, the Non-Rapid Eye Movement (non-REM) and Rapid Eye Movement (REM). The non-REM state begins with the onset of sleep, then leading to the slowing of the heart rate and dropping of the body's temperature

to help induce and maintain the sleep state. At this phase, the body feels the most restful and restorative. As the body enters REM, brain activity has been observed to be higher and is the time at which we experience dreams. The body cycles between these two phases around four or five times during sleep for the average 8-hour sleep.

Sleep requirement varies per person depending on their age and other personal circumstances such as health concerns and pregnancy.

Your body cycles between being awake and asleep throughout each day, with certain processes only happening when you're asleep. When you're asleep, your body "powers down" and most body systems - including your brain - become less active.

Age	Average Amount of Sleep Needed
Birth-03 months	13 to 17hours
4-6 months	12 to 16hours
1-5 years old	10 to 14hours
6-12 years old	9 to 12hours
13-18 years old	8 to 10hours
18 and older	7 to 9hours

Table 1: Average Amount of Sleep Required Per Age Group.

Some of the key things that happen while you’re asleep include

- **Energy conservation and storage.** During the day, cells throughout your body use stockpiled resources to keep doing their jobs. While you’re asleep, your body uses less energy. That lets those cells resupply and stock up for the next day.
- **Self-repair and recovery.** Being less active makes it easier for your body to heal injuries and repair issues that happened while you were awake. That’s also why being sick makes you feel more tired and need more rest
- **Brain maintenance.** While you’re asleep, your brain reorganizes and catalogs memories and learned information. This is like a librarian sorting and shelving books at the end of the day. It makes accessing and using things you learn and remember easier and more efficient

Causes of sleep problems Sleep problems can be caused by various factors. Although causes may differ, the end result of all sleep disorders is that the body’s natural cycle of slumber and daytime wakefulness is disrupted or exaggerated. Factors that can cause sleep problems include

- **Physical disturbances** (for example, chronic pain from arthritis, headaches, fibromyalgia)
- **Medical issues** (for example, sleep apnea)
- **Psychiatric disorders** (for example, depression and anxiety disorders)
- **Environmental issues** (for example, it’s too bright, your partner snores)

Short-term or acute insomnia can be caused by life stresses (such as job loss or change, death of a loved one, or moving),

illness, or environmental factors, such as light, noise, or extreme temperatures. Longterm or chronic insomnia (insomnia that occurs at least three nights a week for at least three months) can be caused by factors such as depression, chronic stress, and pain or discomfort at night.

Other factors that can interfere with sleep include

- **Genetics:** Researchers have found genetic basis for narcolepsy, a neurological disorder of sleep regulation that affects the control of sleep and wakefulness.
- **Night shift work:** People who work at night often experience sleep disorders, because they cannot sleep when they start to feel drowsy. Their activities run contrary to their biological clocks.
- **Medications:** Many drugs can interfere with sleep, such as certain antidepressants, blood pressure medication, and over-the-counter cold medicine.
- **Aging:** About half of all adults over the age of 65 have some sort of sleep disorder. It is not clear if it is a normal part of aging or a result of medications that older people commonly use.

Effect of Sleeping Problems Having poor quality sleep, especially a lack of sleep, cause major consequences to one’s health. Lack of sleep for a night often manifests as excessive daytime sleepiness, erratic mood change, and poor memory and concentration. Chronic sleep loss and sleep disorders, which have more drastic effects, are found to have a direct correlation to an increased risk of conditions such as hypertension, diabetes, heart disease, depression, and obesity.

Evidence of biocrystals used in healing

Crystals are solid minerals that have been harvested and used in many different cultures. Different forms of crystals are believed to hold energy and have the capability to heal and impart strength to our bodies.

Sleepm™ products make use of 16 ancient biocrystals + gold and silver for their health benefits. These crystals can help balance the bioelectrical field of the body as you sleep, allowing for natural healing to take place.

Crystal	Properties
Amethyst	Helps the brain, diarrhea, eye nerves, hepatitis, liver, lung conditions prostate problems, respiratory system, concentration, focus and stress.
Venturine	Helps with lung, heart urogenital and muscular system, natural calming. It helps to balance negative and positive thoughts and emotions.
Citrine	Helps with circulatory and digestive system, it also helps with depression, constipation, and diabetes
Jasper	Helps with immune system, it helps digestive system by proper toxin elimination and purifies the blood. Regenerates cartilages too.
Pederal	Supports the lungs and liver, generates body generator, and helps to recover from illness.
Sodalite	Helps in psyche problems like anxiety, panic attacks and autism.
Flourspar	Helps with renal system, improves joints, ulcers, respiratory tract, flu, lung, and anxiety
Heliotrope	Helps with immune system, liver, insomnia, pancreas, heart, digestive system, and eyes.
Leonard Jasper	Helps to eliminates toxins and odor reduction. Strengthening immune system and improves urinary system.
Calcite Orange	Helps with reproductive system, improves fatigue, calcium assimilation. Mental and emotional balance. It also helps with intestinal disorders
Natural Jasper	Helps with digestion, stomach and stress
Selenite	Cellular and physical electrical body regenerator helps kidney issues, and calms stress and anxiety.
Quartz	Repels EMF radiation, electromagnetism, smog, and negative emotions
Jade Serpentino	Srengthen kidneys, improves circulatory system, balancing the nervous system.
Rose Quartz	Helps with heart and brain disorders and cell rejuvenation
In addition to that it includes *Gold and *Silver	*Gold Helps with Rheumatoid Arthritis, Parkinson’s disease, improves studying in meditation and promotes positive attitude. While *Silver has soothing effects and antimicrobial functions to reduce and prevent diseases.

Table 2: Crystals Used in Sleepm Products and Their Healing Properties.

The Pittsburgh Sleep Quality Index (PSQI) is a selfreporting assessment tool used to analyze a person’s sleep over a one-month period. It provides an overview of a person’s sleep patterns and disturbances to better assess any sleep conditions and identify appropriate treatments.

Aim of the Study

To identify trends and variations in sleep quality of subjects after using Sleepm™ products.

Objectives

- To report subjects’ sleep quality according to the following subcategories:

- Subjective sleep quality, Sleep latency, Sleep duration, Habitual sleep efficiency, Sleep disturbances, Use of sleeping medication
- Red JasperHelps to eliminates radiation, Daytime dysfunction
- To evaluate the patterns in the subjects’ electromagnetic treatment response and environmental pollution. It helps to increase body enery and clears
- To summarize observations among the subjects the mind and their relation to the determined benefits of Sleepm™ products

Methodology

The Participants The participants selected for the study are adults, of legal age, and have been using one or more Sleepm™

products, including the Biocrystal Pillow, Topper, and Mattress for a time period no shorter than 2 months.

Study Settings

The conduct of the questionnaire was performed in a private office where the participants were physically present to answer the questionnaire. The subjects’ sleep observations were done in their own private residence over a duration of 2 to 6 months.

Evaluation Tools The first questionnaire collected demographic information about the participants. (Age, Gender, Hours and Intensity of weekly physical activity, Employment status and Hours of work). The second questionnaire used was adapted from the Pittsburgh Sleep Quality Index (PSQI). It is a questionnaire that consists of a combination of Likerttype and open-ended questions. The third questionnaire consists of # self-reported items about their observations of the Sleepm™ products.

Ethical Considerations A written consent form was given to all participants. All participants were given corresponding identifying codes for the purpose of data collection and presentation of results. No contraindication is expected from the use of Sleepm™ products.

Results

Demographics

A total of twenty participants took part in this study. Majority of the participants are female, making up 60% of the population, while the other 40% are males. Participants in the age range of 45-54 years old make up 40% of the population while those of the age group of 35-44 years old are 35% of it Six participants said they perform over 150 minutes of physical activity per week while another six said they did between 61 to 150 minutes. The rest of the population did less than 60 minutes per week. The average physical activity is determined to be light, although some participants did moderate to vigorous workouts.

Seventy-five percent of the participants had full-time jobs while the rest had either part-time or contractual work. Almost all the participants had 20-40 hour work weeks while others did between 40 to 60 hours.

Apart from demographic information, the participants were asked supporting questions regarding their work schedule. It was found that 75% of population had only day shifts while the other 25% had both day and night shifts which often changed on a weekly basis.

PSQI questionnaire results

Average bedtime	11:00 pm
Average onset of sleep	15 minutes
Average wake up time	6:00 am
Average hours of sleep	7 hours

Table 3: Results of PSQI Questionnaire.

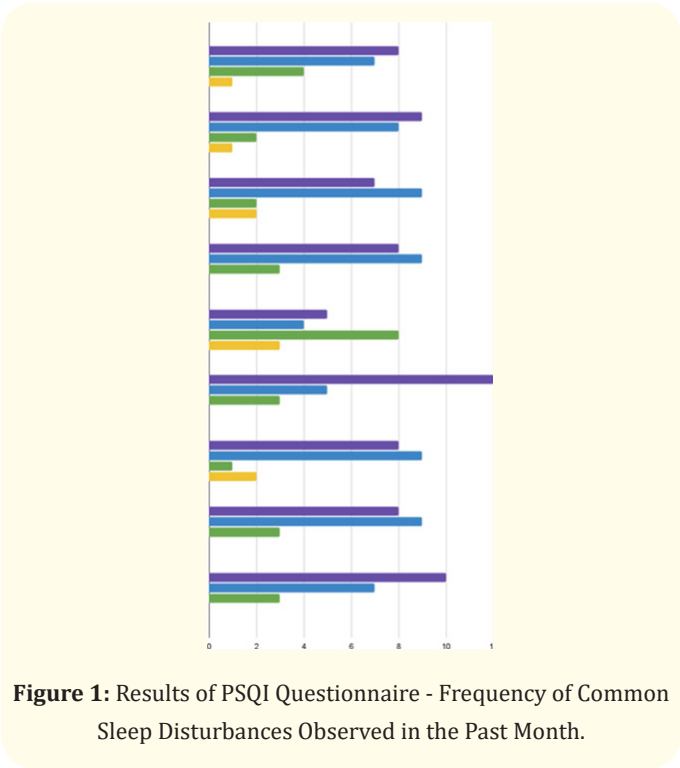


Figure 1: Results of PSQI Questionnaire - Frequency of Common Sleep Disturbances Observed in the Past Month.

Sleep quality assessment

- Not during the past month Less than once a week.
- Three more times a week
- Cannot get to sleep *than 30 minutes
- Wake up in the middle of the night early morning
- Get up to use the bathroom more than 3 times.
- Cannot breathe comfortably
- Cough or snore loudly
- Feeling too cold
- Feeing too hot
- Having bad dreams
- Experiencing pain

From the answered Pittsburg Sleep Quality Index questionnaire, it was found that most of the participants reported to experience common sleep disturbances less frequently. Sleep interruptions such as waking up in the middle of the night and having to go to the bathroom were not experienced by almost half of the participants. This may indicate that they are having deeper sleeps and better non-REM and REM cycles throughout the night A sleep onset of less than 30 minutes is also observed by almost all participants and is considered to be normal by health standards.

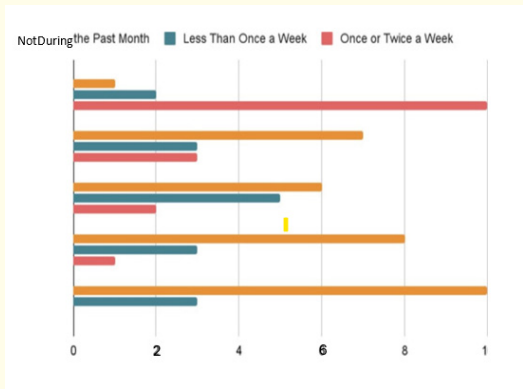


Figure 2: Results of PSQI Questionnaire - Observations of Roommates or Bed Partners on Sleep Disturbances of Participants
Observations of Roommates or Bed Partners.

A high number of participants (80%) rated their overall sleep quality as fairly good, with the rest of them rating their sleep as very good, over the past month of using Sleepm™ products. It was found that half of the total participants have been taking medications to aid their sleep less than once a week. With regards to the participants daily enthusiasm, the responses were spread out between being no problem at all to being somewhat of a problem. This may be affected by other factors apart from just the quality of sleep.

Loud snoring

Long pauses between breaths while asleep
Legs twitching or jerking while you sleep
Episodes of disorientation or confusion during
Other restless while you sleep.

Of the participants with room mates, majority have declared to not observing most of the common sleep disturbances among their room mates. These disturbances include long pauses between breaths, leg twitching or jerking, and episodes of disorientation or confusion, although loud snoring was still evident on a lot of the participants.

Qualitative observations

The participants were asked open-ended questions on observations they have made about any physical pain they have. These questions are meant to identify, if any, improvements on pain points they have and how the use of Sleepm™ products could have aided this.

Majority of the participants declared to have some significant observations about any physical pain they have. That also show significant improvements in their sleep quality and sleep duration have significantly allowed for better rest, and over time, led to having more energy during the day. They also declared to feel less fatigued and have better concentration and focus on work. Waking up feeling rested for most days in the week have the participants reporting to have an all-around better mood feeling throughout the day.

Discussion and Conclusion

The Pittsburgh Sleep Quality Index questionnaire provided a great perspective on the sleep quality of the participants.

The average time of onset of sleep and number of hours of sleep were within normal ranges for the ages of the participants. The frequency of sleep disturbances were found to be really low, if not completely absent. These factors measured play a major role in ensuring good sleep quality and its low occurrence provides a quantitative perspective of the participants' sleep have improved.

Having all the participants rate their sleep quality to be at least "fairly good" and correlating this with the qualitative responses, it can be concluded that the use of Sleepm™ Biocrystal Pillow, Topper, and Mattress played a role in the participants' improved sleep quality.

It is recommended for future research to administer the questionnaire before starting to use the sleep products. This would provide a better comparison and perspective of the possible improvement it could impart and produce more statistically significant data regarding their efficacy.

Bibliography

1. Buysse DJ, *et al.* "The Pittsburgh Sleep Quality Index (PSQI): A new instrument for psychiatric research and practice". *Psychiatry Research* 28.2 (1989): 193-213.
2. Colten, H.R. Altevogt, B.M., (2006). Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem. Institute of Medicine (US) Committee on Sleep Medicine and Research. Washington, D.C (2006).
3. George G., *et al.* "Evaluation of Sleep M Biocrystal Pillow/Topper/Mattress in Clinical Trials using 20 Subjects to Test for Pain Reduction, Sleep Improvement, Stress Reduction and Improvement in Circulation for Clients with Diabetes over 3 Months". *Journal of Gynecology* 5.1 (2020): 000189.