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Relative Effects of Sleep Hygiene Behavior and Physical Exercise on Sleep Quality

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Introduction

Sleep is an important factor in everyday life and researchers have often looked to find ways to improve sleep quality. In the present study 6 behavioral domains were found that contributed to sleep quality.

• Physical Activity
• Diet Quality
• Sleep Hygiene
• Stress Management
• Social Engagement
• Cognitive Stimulation

The present study examined the implications of each of these behavioral domains on sleep and how great of an effect they may have.

This is the first study to our knowledge to study all 6 domains in such an innovative way.

Additionally, the study wanted to determine whether the act of trying to improve one’s sleep quality improved sleep quality or whether physical exercise had a greater effect.

Methods

• All data was obtained using an innovative new smartphone app.
• Participants were permitted to choose which behavioral domains they wanted to work on.
• Statistical analyses were then performed using SPSS.

Results

• The 6 behavioral domains could be separated into 2 latent factors, the Mental Emotional and Physical Body group.
• The Physical Body latent factor was significantly associated with improved sleep quality after the 6 months.

Table 1: Different Latent Groups and Their Significance

<table>
<thead>
<tr>
<th>Behavioral Factor</th>
<th>Mental Emotional</th>
<th>Physical Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental/Emotional Behavioral Factor</td>
<td>0.068</td>
<td>.52</td>
</tr>
<tr>
<td>Physical Body Behavioral Factor</td>
<td>-0.294</td>
<td>-2.241</td>
</tr>
</tbody>
</table>

* Shows significance within that grouping

Figure 1: Images of the Smartphone App

Conclusions

1. Those who focused on Physical Activity and Diet Quality had greater improvements in Sleep Quality.
2. The results were the same when controlled for both gender and age among the participants making these results potentially universally applicable.
3. This study can be used in the future to potentially evaluate the daily, weekly, and yearly effects of such an intervention.