Exploring the relationship between sleep and academic performance among pharmacy students in Team-Based Learning.

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Objective
To examine the relationship between sleep quality and academic performance among pharmacy students in a Team-Based Learning (TBL) setting.

Background
- Prior studies have found a correlation between sleep disturbances and decreased academic performance.
- There are literature describing American undergraduate students’ sleep quality, but published literature regarding pharmacy students’ sleep is scarce.
- Team-Based Learning (TBL) is a revolutionary approach to learning which emphasizes in-class application of conceptual knowledge to real-world, career-specific problems.
- Students work in heterogeneous teams of five to six students, facilitating communication and problem-solving skills.
- There is a lack of literature discussing the relationship between sleep quality and academic performance among students in a TBL setting.

Methods
- Pharmacy students in their P2 or P3 year voluntarily participated in an anonymous survey gathering various student demographic information, average GPA, sleep habits, and tendencies towards leisure activities.
- Data was analyzed using STATA 14.
- A multiple linear regression was conducted to determine the effects of predictor variables on academic performance. Analyses were conducted using student performance in Integrated Pharmacotherapy (IP) courses and non-IP courses.

Results
- A total of 121 students participated in the survey and 117 students were included in the analysis (P2, n=64; P3, n=53).
- An analysis of the combined effects of all independent variables on cumulative GPA revealed no significant results.
- Subsequent analyses found a statistically significant relationship between duration of sleep 0.06 (P=0.017) and ability to concentrate during class 0.11 (P=0.035) on academic performance.

Conclusions
- Increased duration of sleep in pharmacy students resulted in statistically significantly higher GPAs in the Integrated Pharmacotherapy courses.
- Additional research is needed to strengthen and further elucidate the relationship between sleep and academic performance in a Team-Based Learning setting.

Table 2: All Variables on Non-IP and IP GPAs

<table>
<thead>
<tr>
<th></th>
<th>NON-IP (15SSEM)</th>
<th>IP (15SPV)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>Sleep Quality</td>
<td>0.05 (0.05)</td>
<td>-0.02 (0.05)</td>
</tr>
<tr>
<td>Average # of hours of sleep</td>
<td>0.03 (0.03)</td>
<td>0.00 (0.02)</td>
</tr>
<tr>
<td>Trouble staying awake in class</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Concentration during class</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Studying</td>
<td>0.03 (0.03)</td>
<td>-0.01 (0.02)</td>
</tr>
<tr>
<td>Exercise</td>
<td>0.00 (0.02)</td>
<td>-0.03 (0.02)</td>
</tr>
<tr>
<td>Social w/o EtOH</td>
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<td>-0.02 (0.03)</td>
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<tr>
<td>Social w/o EtOH</td>
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<td>--</td>
</tr>
<tr>
<td>TV</td>
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</tr>
<tr>
<td>N</td>
<td>53</td>
<td>64</td>
</tr>
</tbody>
</table>

R²

*Significant values
-- Denotes analyses not performed

References

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