



Correlation of Time Management and Sleep Quality in Highschool Student in Bangkok

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ABSTRACT: There are a lot of things students have to do in a day, which is why time management or lists of things to get done are important for them in order to have a good quality. Sleep is the time where they can recharge their energy for the next day. In order to get things done to their full potential, we need to have a good rest at night. It's a sure thing that different people have different amounts of sleep or the time they go to bed each night. This also applies to secondary school students in Thailand, where they have varied amounts of sleep hours and may consequently affect their time management. Thus, our study aims to find out the correlation between sleep quality and time management of secondary school students in Bangkok. To determine the correlation of the factors, we conducted a cross-sectional survey. All data was collected by sending out a survey questionnaire about sleep quality and time management to secondary school students in Bangkok. The data from 216 participants was then analyzed. The outcomes from Pearson's correlation test reveal a positive correlation between the assigned variables, which indicates that increasing sleep hours improve time management of the students. This study would put into picture that time management does affect students' sleep quality and may potentially be put to use backing up potential changes that could be made to our country's educational system.

KEYWORDS: Cross-sectional survey, Questionnaire, Sleep quality, Secondary school students, Time management.

INTRODUCTION

Sleeping is without a doubt essential for all of us to function in our day-to-day lives. Lack of sleep is detrimental and bears serious consequences, especially if a habit is developed, which will undoubtedly disrupt daily life. Getting enough sleep helps keep your body healthy by lowering the risk of serious health problems such as diabetes and heart disease, lowering the risks of migraines and hypertension, improving growth in children, maintaining a healthy weight, maintaining positive mood, reducing stress, and keeping cognitive-related issues at bay [1]. [2], [4]. [5] A study conducted on college students in Indonesia shows that students with poor sleep quality are 4.7 times more likely to have a higher stress level than their good sleep quality counterparts. [8] Another study by the American Sleep Foundation recommends that adults get the optimum of seven to nine hours of sleep each night; however, adults who reported getting less than the recommended hours but with overall good sleep quality also seem to be less likely to contract colds and flus, as well as COVID. [9] On the other hand, insufficient sleep would subsequently not only lead to the aforementioned health and related problems but also will affect the individual's daily life. Consequences range from worsened performance at workplace or school, more risk for personal injury, fatal accidents, development of mental disorders such as depression, disparity in decision making, to degradation of time management could also be affected [4]. [5] This is evidenced in a study by G. Hashwari and Faizan Shaukat on participants from Jinnah Sinh Medical University, in which about 64% of the participants had poor sleep quality and a mean GPA of (-/+1.09) 2.92, out of which 37.7% experienced daytime dysfunction. [7]

Time management plays an important role in a successful student's school life, as planning long-term goals, creating schedules, and working toward them not only let students complete their assignments on time but also set a good habit for responsibility growing up. [3] However, with the laws in Thailand stating that students must spend 9-8 hours in conventional school, it is well known that Thai students spend lots of time cramming their studies; this is not even taking into account tuition and activities in or outside school. Some students may be stressed from overwork, which could potentially put their mental and physical health at risk. Hypothetically speaking, this could also affect their time management abilities.



Thus, we wish to investigate whether the difference in the sleeping hours and the quality of sleep will affect time management of students. Knowing this would not only allow us to prove an unproven myth among Thai parents and students but also yield statistical data as a useful reference for any future studies. If the problem of Thai students over-studying to the point of having no personal or social life outside of it ever rises and comes to light among the community or the government, this study could potentially serve as statistical evidence to back up a possible change to be made to the education system for the better.

METHODOLOGY

An online survey was conducted in a sample of students in Bangkok, Thailand, to see the correlation between sleep quality and time management of the students. We designed the questionnaire consisting of 30 questions, which are grouped into 3 sections: (1) general information of the participants; (2) sleep quality; and (3) time management. In terms of sampling procedure, participants were from Bangkok, Thailand. There were approximately 5 minutes for the participants to fill out the survey. A total of 216 participants were collected and were then followed by data analysis. The questionnaire was accessed based on a 5-point Likert scale. Each statement was ranked on a scale of 1 to 5, from strongly disagree to strongly agree. The response was to express to what extent they agreed or disagreed with a particular statement. Subsequently, the Index of Item-Objective Congruence (IOC) was used to evaluate each question in the questionnaire by three specialists to find the validity of the content. The items that had scores lower than 0.5 were revised. On the other hand, the items that had scores higher than or equal to 0.5 were reserved. The quantitative data were analyzed by using Statistical Product and Service Solutions (SPSS) software, version 29.0. The internal reliability value (Cronbach's alpha) from the pilot study group (consisting of 20 students) was calculated to ensure whether the survey results were reliable, where we obtained an acceptable reliability score of 0.778. Lastly, Pearson's correlation coefficients were calculated to measure how strong a relationship is between two variables, sleep quality and time management.

Instruments:

The following questions were sent to survey participants to collect data.

General Information

- Please select your age group (in school grade/ year group)
- Your gender
- Select between Thai or international school
- On average how many hours of sleep do you get
- How many hours do you spend in school

Sleeping quality (Rating scale)

- I have difficulty falling asleep
- I fall into a deep sleep
- I wake up while sleeping
- I never go back to sleep once I wake up in the middle of the night
- I feel refreshed after sleep
- Poor sleep gives me headaches
- My sleep hours are enough
- Poor sleep makes it hard for me to think
- Poor sleep causes me to make mistakes at work
- Poor sleep makes it hard for me to concentrate at work
- Sleepiness interferes with my daily life
- I have difficulty getting out of bed

Time management (Rating scale)

- I put off tasks that are difficult
- I work late at night or on weekends
- For each activity, I ask myself "Is this the best use of my time right now?"



- How often do I procrastinate
- Interruptions (social media) continually disrupt my day
- I organize my schedules for weekly objectives
- I organize my working schedules for the school-semester
- Even without clear planning, I could still complete my work on time
- I cannot deal with sudden-multiple works at the same time
- I try to avoid time-consuming distractions, e.g. long phone calls
- In my schedules, I reduce my personal free time
- I often compare the amount of time I spent with what I actually planned out

RESULTS

Table 1: General information about participants

Personal Information	Number of Participants	Valid Percentage
Age group (School class)		
M) 1Grade 7, Year (8	20	8.7
M) 2Grade 8, Year (9	8	3.5
M) 3Grade 9, Year (10	42	18.3
M) 4Grade 10, Year (11	34	14.8
M) 5Grade 11, Year (12	96	41.7
M) 6Grade 12, Year (13	30	13
Total	230	100
Gender		
Male	66	28.7
Female	154	67
Others	10	4.3
Total	230	100
Average Sleep Hours		
less than 3hours	2	0.9
4hours	13	5.7
5hours	49	21.3
6hours	85	37
7hours	61	26.5



Greater than 8hours	20	8.7
Total	230	100
Hours you spend in school		
less than 5hours	5	2.2
5hours	3	1.3
6hours	12	5.2
7hours	54	23.5
8hours	113	49.1
9hours	27	11.7
More than 9hours	16	7
Total	230	100

Table 1 shows that the majority of the participants are M) 5grade /11year (12, with up to %67being female, with only %28.7male and %4.3others. The majority of participants claim to have around 7hours of sleep, which is slightly more than the initially expected 6hours, this result alone could as well shake the myth surrounding Thai high school students having insufficient sleeping hours. %49.1of the participants claim to take around 8hours in school, which is considered the average school time in Thailand, followed by 7hours in school for %23.5of participants.

Table 2: Descriptive Statistics (Mean and standard deviation)

	Mean	Std. Deviation	N
Sleep hours	3.0575	71581.	216
Time Management	3.2251	47854.	216

Table 2 shows the survey scores of each variable. Sleep hours mean was found to be average for our study group with a score of 3.0575. Meanwhile, time management was found to have a mean score of 3.2251 which indicates that Thai students can manage their time at a moderate scale.

Table 3: Pearson’s correlation coefficient between sleep hours and time management

	Sleep Hours		Time Management	
Pearson’s Correlation	1	**0.355	1	**0.355
Sig		<0.001		<0.001
N	216	216	216	216



Table 3 shows the correlation between sleep hours and time management. Pearson's correlation test reveals a significant positive correlation between the 2 variables with R value of 0.355 and p-value of .001

DISCUSSION

The effect of sleep, whether it's getting sufficient or inadequate sleep, on performance at school varies differently with each student. Among our group, whose members stem from different academic backgrounds, the curriculum of Bangkok, Thailand, raises the question whether time management will be affected in any way, as a successful student is often associated with good time management. A study carried out by S. Nasrullah and M.S. Khan [11] on the impact of time management on students' academic achievements has found the importance of time management, with the effects of careful time management stretching far beyond the scale of an individual's overall performance. An individual's (in this case, student's) time management skill goes to show their capacity to arrange their daily activities to match their lifestyle and requirements at hand, as well as to make their routine flow steadily each day. For example, some individuals' lifestyles may prefer cramming their work in a short period of time, and arranging for when to take on the tasks and finishing them would count as "good" time management. In contrast, individuals who plan months ahead but fail to achieve their objectives in due time are more questionable. And with sleep itself having such a major role in a human's life, whether as a maturing young adult or as a student where it is essential for growth and keeping your body physically healthy or to manage your sleeping hours to maximize your performance during school time. We also observed this positive correlation between sleep quality and time management in our study (Table 3). This is in good agreement with the study from S. Nasrullah and M. S. Khan where they show that good time management is vital for students to perform to their maximum potential, this includes managing their work and sleep time efficiently to work toward getting into their dream university. [11]

A study carried out by A. Chanpisut investigating time management capabilities of undergraduate students in a private Thai university shows that female students report a higher capability in time management than their male counterparts [12]. Not to overlook this influence, we would like to address that the questionnaire we sent out had up to 67% of the responses being female participants (Table 3). It is indisputable that the Pearson's correlation we obtained between sleeping hours and time management in Table 3 may shift the significance slightly due to the majority of the responses being female. Should another questionnaire be sent out to an equal number of male and female students, the results could possibly differ.

So far, our result successfully gives us one answer to the questions we set: that time management is indeed dependent on the sleep quality of students (Table 3). Part of the related factor is that the majority of our respondents are from M) 5 Grade 11, Year (12, which is a crucial time in a student's life involving preparing for university and placement exams in M) 6 Grade 12, Year (13; therefore, it is only natural that good time management and, especially, sufficient sleep hours are involved. However, this contradicts a previous study by the faculty of health sciences, Biruni university which conducted on students of Turkey university and showed no significant correlation between the Pittsburg sleep quality scale, stress coping scale, and time-management questionnaire. [10] Another possible factor that swayed the result is that about 40% of the responses have chosen an average of 6 hours of sleep, with nearly 30% who have chosen 7 hours coming in second place (Table 3). This is just about what we predicted the result would fall under before launching the questionnaire. However, we also hypothesize another possibility where students M 5 and above would have even lower sleeping hours due to a significant part of their sleeping hours being invested in studying and other preparations. The result with 11.7% of participants taking around 9 hours in school could have been due to including extracurricular after school classes, or mistaking classes outside school, whether it'll be music or sports, as part of the questionnaire and taking that into account. Admittedly, this should have been stated more clearly before the questionnaire was released.

CONCLUSION

In summary, this cross-sectional study reveals a significant correlation between sleep quality and time management ($R = 0.355$, p -value = 0.001) among Thai secondary school students. It can be safely concluded that an individual with good time management skills goes hand in hand with having adequate sleeping hours, as managing your time well to draw out the most potential in your life also includes knowing when one should go to sleep or wake up. However, with the collected result on the international school side's ration being only about $\frac{1}{4}$ of the total collected data, we cannot comfortably come to a reliable conclusion. For further improvement, it is suggested to take into account other factors that may affect an individual's time management and sleep quality. This could potentially range from the financial situation in the country where the research is being carried out to whether an



individual is extroverted or introverted socially, as some flaws in this study could potentially be related to the suggested example. For further studies, we can try to do the survey on a larger scale or in different age groups to see alternative results. This research can serve as a warning to students or schools regarding time management. It can act as a guideline for them to focus more on the amount of sleep and on their schedule each day.

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