



Health problem among high school students while working from home in Thailand

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Abstract

Background: The epidemic situation of COVID-19 has resulted in a change in the study and work for millions of people who now live at home and may continue to study or work from home in the future. Decisions on how to promote student health while working from home need to be based on the best available evidence to optimize student performance. The objective was to study health problems while working from home on the mental and physical health of individuals students and to study factors affecting health problems among high school students while working from home in Thailand to develop recommendations for schools and students to optimize student health.

Methods: An online survey in the sample that included 100 students in various high schools in Thailand during the period from July 2021 to September 2021 was analyzed by using descriptive statistics such as frequency, percentage, mean and standard deviation.

Results: The results found that most of the respondents were female (70%), aged 16-18 years, with most age 17 years (47%), grade 12 (48%) with most of the period of time to use electronic devices more than 12 hours per day (40%). When considering the high school student's physical health problems, it was found that the sample group had neck pain, back pain, or shoulder pain with mean = 4.15, followed by eye irritation with mean = 3.43, headache with mean = 3.40, and eye fatigue or eye strain with mean = 3.22, respectively. The high student's mental health problems found that the sample group had stress 76 people (76%), and no stress 24 people (24%).

Conclusions: This study identified several health outcomes affected by working from home. The relationship between health and learning is complex and requires consideration of extensive system factors to optimize the effects of working from home on students' health that tend to continue working from home in the future. The schools have to implement a formal policy. This considers support for managing the scope of working from home, content clarity, duration, performance indicators, technical support, facilitating the creation of educational networks, and training for teachers.

Keywords: Health problem, Physical health, Mental health, Working from home, Student

INTRODUCTION

The current global pandemic caused by coronavirus disease 2019 (COVID-19) has resulted in an unexpected situation with extensive health and economic impacts. The study and working environment have been significantly changed with thousands of jobs. For those students able to learn remotely, mostly people who have sufficient electronic devices in their homes. In the current situation, homes become workplace, school, and place for relaxation. According to UNESCO estimated that more than 363 million students and students around

the world are currently affected by the COVID-19 crisis, and it is estimated that there are educational institutions in 15 countries, including Asia, Middle East, Europe and North America has closed teaching at school and university. While educational institutions in many countries adopted various technologies that used to open teaching through online.

In Thailand due to the spread of the COVID-19 virus, the resulting has more impact on classroom teaching that leads to educational reforms (marketingoops,

2020). Many schools in Thailand started to announce online teaching and learning since the outbreak of the COVID- 19 or Coronavirus, it has rapidly and severely impacted all sectors. One of them is the education sector. However, it can create an accelerated rate of reformation in education around the world especially the dimension of applying technology to the teaching system. It can make the education sector to continue, and the teachers and students are able to access education.

Working from home measure has resulted in online teaching and learning in the COVID-19 situation that is a new point for students to adjust that may cause health problems, and stress in online learning. The stress may be more or less due to various factors that will lead to the impairment of the body's functioning system that can cause symptoms such as headache, backache, abdominal pain, fatigue, or physical disease such as fainting, high blood pressure. The psychological impact is degenerate perception, decreased problem-solving ability, disinterest in surroundings, decreased memory, decreased concentration, inability to judge, and inappropriate emotional expressions such as irritability, fear, insomnia, loss of confidence in the ability to manage own life. Therefore, the stress is caused by online learning, it also affects the educational achievement of the students (Moawad, 2020).

The high school students are a youth group that has adapted to adolescence. It is a learning period with behavior change and lifestyle style. They may have the risk of health that influenced by various risk factors that can lead to the basis of health problems in adults. Therefore, the researcher is interested in studying the health problem among high school students while working from home in Thailand due to the diversity of personal factors. While studying online or working from home from the COVID-19 situation may cause high school students to have health problems. Therefore, health problems should be studied both physical and mental health to apply the results to prevent or reduce the risk of health problems that may arise from online learning or working from home during the Covid-19 epidemic situation.

Methods

This study was a cross-sectional descriptive study to study health problems among high school students

while working from home in Thailand during the outbreak of the COVID- 19 situation. An online survey was used to speed up the survey and collection of questionnaires.

Population and sample groups

The population in this study was all high school students in Thailand. The sample group was all high school students both male and female by random sampling method according to the specified criteria for 100 people from July 2021 to September 2021.

Study design

The research instrument was an online survey. The questionnaire was used in the study was examined by three experts to verify the validity of the content and can be used to measure the purpose of the research with a conformity index of 0.50 -1.00. In suggestion, the researcher has developed complete improvements. The questionnaire has an Index of Item Objective Congruence (IOC) value of 0.97 and was divided into 3 parts as follows:

Part 1: General information or personal factors such as gender, age, grade level of education, and the period of time to use electronic devices.

Part 2: Health problems both in physical and mental health such as neck pain, back pain, or shoulder pain, eye fatigue or eye strain, eye irritation, headache, and stress.

Part 3: Additional suggestions and comments.

Likert type scale in health problems level of high school students in Thailand Score 1 indicated 0.05 to 1.49

Score 2 indicated 1.50 to 2.49

Score 3 indicated 2.50 to 3.49

Score 4 indicated 3.50 to 4.49

Score 5 indicated 4.50 to 5.00

Data Collection Process

The sample group was 100 high school students who study in Thailand. The questionnaire was used in the study with a random sample from July 2021 to September 2021. The researcher collected the data that has conducted as follows:

1) The researcher clarified the research objectives and conducted procedures for collecting data, including asking for cooperation in conducting the research with the respondents.

2) The researcher collected the data by creating an online questionnaire and survey for cooperation in collecting data by clarifying the objectives and details of the research for the respondents.

Data Analysis Process

The researchers analyzed the data using SPSS (Statistical package for the social sciences) program, and presented the results by using descriptive statistics such as frequency, percentage, mean, and standard deviation.

Results

Table 1

The demographic characteristics of high school students in Thailand

<i>The demographic characteristics of</i>		
<i>high school students in Thailand</i>		
	<i>Frequency</i>	<i>Percentage</i>
Gender		
Female	70	70.00
Male	30	30.00
Age		
16 years old	42	42.00
17 years old	47	47.00
18 years old	11	11.00
Grade level of education		
Grade 10	20	20.00
Grade 11	32	32.00

The sample group in this study consisted of 100 respondents who were high school students in Thailand. The sample group were 70 female (70%) more than 30 male (30%). Most students found that 47 people were 17 years old (47%), 42 people were 16 years old (42%), and 11 people were 18 years old (11%), respectively. Most of the high school students were 48 people in grade 12 (48%), 32 people in grade 11 (32%), and 20 people in grade 10 (20%), and most of the period of time to use electronic devices found that 40 people spent more than 12 hours a day (40%), 32 people spent 10-12 hours per day (32%), 24 people spent 7-10 hours per day (24%), 3 people spent 4 -6 hours per day (3%), and 1 people spent 2-3 hours per day (1%), respectively (as shown in Table 1).

Grade 12	48	48.00
The period of time to use electronic devices		
2-3 hours per day	1	1.00
4-6 hours per day	3	3.00
7-10 hours per day	24	24.00
10-12 hours per day	32	32.00
More than 12 hours per day	40	40.00

When considering the high school student's physical health problems, it was found that the sample group had neck pain, back pain, or shoulder pain with mean = 4.15, followed by eye irritation with mean = 3.43, headache with mean = 3.40, and eye fatigue or eye strain with mean = 3.22, respectively (as shown in Table 2).

Table 2

Mean (M) and Standard Deviation (S.D.) of the high school student's physical health problems

<i>The high school student's physical health problems</i>		
	<i>Mean</i>	<i>S.D.</i>
Neck pain, back pain, or shoulder pain	4.15	0.978
Eye fatigue or eye strain	3.22	1.143
Eye irritation	3.43	1.103
Headache	3.40	3.367
Total	3.55	1.648

The high student's mental health problems found that the sample group had stress 76 people (76%), and no stress 24 people (24%) (as shown in Table 3).

Table 3

Mean (M) and Standard Deviation (S.D.) of the high student's mental health problems

	<i>The high student's mental health problems</i>	
	<i>Frequency</i>	<i>Percentage</i>
Stress	76	76.00
No stress	24	24.00
Total	100	100.00

Conclusion

Overall, the findings from the results found that the high school students 100 people in Thailand were 70 female more than 30 male. Most students found that 47 people were 17 years old. most of the high school students were 48 people in grade 12, and most of the period of time to use electronic devices for more than 12 hours a day was 40 people.

Overall, when considering the high school student's health problems, it was found that most physical health problems were neck pain, back pain, or shoulder pain, followed by eye irritation, headache, and eye fatigue or eye strain, respectively. The high student's health problems found that mental health problems had stress more than no stress.

Discussion

Most of high school students in Thailand were female, aged 17 years old, high school in grade 12, and employee, and the period of time to use electronic devices for more than 12 hours a day.

For physical health problems, it was found that the high school students had neck pain, back pain, or shoulder pain because it is a group of diseases that are common in people at work or school age who have to sit for a long time uses the muscles repeatedly. It may have the wrong and proper body organizing, and there is a pain in the muscles, the neck, and the shoulder. In accordance with Bangkok hospital (2021) found that working from home during the COVID-19 pandemic can also cause office syndrome, and it may be higher

risk than working at the office under normal situations, followed by eye irritation, headache, and eye fatigue or eye strain with mean, respectively.

For mental health problems, it was found that 76% of high school students were stressed. This may be due to the sample group being in their late teens that will be in the range between children and adults. This is the age to find their own needs. In addition, during the epidemic situation of COVID-19, they have to stay at home that makes the relationship between teenagers and friends more distant in accordance with the research of Jukraphan Chomsuan and Sompob Promyai (2007) indicated that most of teaching and learning is online learning that requires understanding, consistent diligence in studying. Therefore, the students have higher stress levels than usual.

Study limitations

The information obtained from this study will serve as a guideline for the school's health development plan. It is to encourage students to be healthy without any risk factors for future disease especially chronic health problems that the school should set guidelines to promote various health in online learning or arrange periodic health checks for students in order to prevent the presence of risk factors for having such health problems sustainably.

It should be studied other factors such as family wealth, family health problems, examination of the condition with other instruments such as eye exams, blood testing that will give more accurate results.

References

1. Bangkok hospital. (2021). Work From Home, which type is far away from Office Syndrome?. Retrieved 16 September 2021, from <https://www.bangkokhospital.com/content/work-from-home-and-office-syndrome>.
2. Chomsuan, J., & Promyai S. (2007). HEALTH STATUS IN PHARMACY STUDENTS,
3. MAHIDOL UNIVERSITY. Retrieved 16 September 2021, from <http://www.pharmacy.mahidol.ac.th/th/service-research-special-abstract.php?num=42&>.
4. Marketingoops. (2020). COVID-19 Reform education around the world! Use new learning technology 'Thai University' teaches online. Retrieved 13 September 2021, from <https://www.marketingoops.com/exclusive/business-case/covid-19-reinvent-global-education-system-with-educational-technology/>.
5. Moawad RA. Online learning during the COVID-19 pandemic and academic stress in university students. *Revista Romaneasca Pentru Educatie Multidimensionala* 2020; 12(1): 100-7.
6. Oakman, J., Kinsman, N., Stuckey, R., Graham, M., & Weale, V. (2020). A rapid review of mental and physical health effects of working at home: how do we optimise health?. *BMC Public Health*, 20(1), 1-13.
7. Sallis, R., Young, D. R., Tartof, S. Y., Sallis, J. F., Sall, J., Li, Q., ... & Cohen, D. A. (2021). Physical inactivity is associated with a higher risk for severe COVID-19 outcomes: a study in 48 440 adult patients. *British journal of sports medicine*.