



## A Study on Effects of Social Media on Physical and Psychological Health in Thai Teenagers

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**ABSTRACT:** Social media is now a part of people's daily life, with an estimated 3 billion social media users worldwide. The relationship between heavy use of social media and mental and emotional health-disorders has long been established. The purpose of this study is to examine the negative effects of the social media on physical and psychological health. Cross-sectional data were collected via an online questionnaire. Two hundred participants completed an anonymous online questionnaire that queried physical symptoms, psychological distress and technology and social media usage. In conclusion, the social media has a greater positive effect on females' psychological distress than on male. Physical symptoms are positively affected by the average time spent on social media. In addition, the result also shows the positive relationship between the physical symptoms and psychological distress.

**KEYWORDS:** Physical health, Psychological distress, Social media, Thai teenagers

### INTRODUCTION

Social media has revolutionized the way we connect with each other. More than half of the world's population is now active on social media, or around 4.2 billion people, in Thailand, there were 55.00 million social media users (We Are Social Inc., 2021). This is due to the fact that the usage of social media has become an integral part of many people's lives, connecting them with friends, family and strangers from across the globe. Although social media have some benefits, it can also negatively impact users' physical and psychological health. Tripathi and Ahad's (2019) study had shown that prolonged hours spent on social media, and networking has not only caused serious damage to the physical health of individuals but has also affected their social relationships and behavior. Several recent studies also found negative associations of social media use with a variety of indicators of psychological health among adolescents and young adults (Bekalu, & McCloud, 2019). Although several studies had been conducted on the effects of social media use on adolescents' physical and psychological health in many other countries, but the social media usage patterns of teenagers in Thailand might differ, therefore the effect on teenagers might be different. Moreover, research on the impact of social media on health among the Thai teenagers population has been scant. Therefore, in this study, we investigated the relationships of social media use with two health-related outcomes: physical symptoms and psychological distress. The finding of current study would help the researcher to identify the negative effects of social media that can influence Thai teenagers' health. Furthermore, the finding could encourage more research to investigate method in order to reduce the negative effects that Thai teenager might face if they overused their social media.

### REVIEW OF LITERATURE

#### *Social media, teenagers and gender*

Social media are defined as any form of electronic communication, which might refer as websites for social connection. Social media are also referred to as social networking such as YouTube, Facebook, Instagram, Twitter, and Pinterest (Ramezankhani et al., 2019). For teenagers, social media is an important tool for express themselves and share interesting things with their friends or even strangers with similar interests. Common Sense Media's survey (2017) found that American teens (ages 13-18) spent about nine hours daily on entertainment media, including social media and entertainment media like TV, online videos, reading, and mobile games. Tweens (ages 8-12) averaged about six hours. For Thai adolescents, Srikos and Kesornrach's study (2018) found that 33% of the total respondents use social media more than six hours per times and 28.5% use social media from 3 hours to 6 hours per times. In addition, based on literatures, gender may affect the way that teenagers share information on social media and the way they use it



to make decisions (Karatsoli, & Nathanail, 2020). For example, Twenge and Martin's (2020) study showed that adolescent girls (13-18 year old) spent more time on smartphones, social media, texting, general computer use as compared to boys. These findings suggest that, when studying the effects of social media, the average time spent on social media and gender variables should include in the study to make it more comprehensive.

### *Impact of social media on physical and psychological health*

Although social media has advantages that allow teenagers to accomplish online tasks, there could be risks of inappropriate content, bullying, losing privacy and interference with sleep or exercise that can be detrimental to youth physical and mental health. Research studies have shown that the frequency of using social media associated with physical symptoms (e.g. Dibb, 2019) and psychological distress (e.g. Radwan, Radwan, & Radwan, 2020), which strongly suggests that the larger number of hours spent on social media, the greater the risk of developing physical and psychological health problems. With an increase in the usage of social media over the last decade, it is important to assess any impact social media might have on physical and mental health (Koehler, & Parrell, 2020). Additionally, there have been few reports on the relationships among social media, physical health, psychological distress, gender and the average time spent on social media in Thai teenager sample. Therefore, this study aims to examine the associations of social media use with these variables. In the present study, physical health refers to body discomforts that faced by social media users when using social media devices such as back pain, stupor, tinnitus, blurred vision, and headache. Psychological health is defined as a combination of symptoms of psychological distress (refers to a state of emotional suffering associated with stressors and demands) and indications of psychological well-being (refers to a state of wellness in which an individual feels good, based on having positive relations with others, a sense of purpose in life, self-acceptance) (Ryff & Keyes, 1995). As this study focused on exploring the negative consequences of social media use, thus we operationalized psychological health by indicators of psychological distress such as losing confidence, anxiety, loneliness, and depression.

### RESEARCH QUESTIONS

- 1) Are there difference in the physical health and psychological distress between female and male teenagers?
- 2) Are there difference in the physical health and psychological distress between different average times spent on social media?
- 3) Are there relationships among gender, age, times spent on social media, physical health and psychological distress?

### METHODOLOGY

The survey was distributed via online platforms (such as Instagram and Twitter) to people aged 16 – 20 years in Thailand in May 2021. There are 19 questions in this questionnaire, divided into three parts including personal information, physical health, and psychological distress. Non probability sampling was used in this research. After receiving 200 responses from people, Microsoft Excel and The Statistical Product and Service Solutions (SPSS) were used to perform statistical analysis for answering the research questions. The second and the third parts of the questionnaire contained 4-point Likert scales, from never to always, measuring physical health (6 items) and psychological distress (11 items). Each number is interpreted differently – 1 = never, 2 = sometimes, 3 = often, 4 = always. Cronbach's alpha coefficient was adopted to test reliability of scales after data had been collected. Cronbach's alpha values were found to be acceptable for both physical health and psychological distress scales ( $\alpha = 0.64$  and  $0.79$  respectively, which greater than  $0.60$ ) (George, & Mallery, 2003).

### DATA ANALYSIS

Microsoft Excel was used to retrieve data from Google Spreadsheet and to create the data file. Then, data file was entered at SPSS sheet to analyze descriptive statistics (percentage, mean, and standard deviation), mean difference between female and male teenagers on physical health and psychological distress (independent sample t-test), mean difference between the different groups of the average time spent on social media (F-test ANOVA), and Pearson's bivariate correlations among gender, age, times spent on social media, physical health and psychological distress. Detailed results were presented in Table 1 to Table 7.



**RESULTS**

**Table 1** The frequency and percentage of samples regarding participants’ personal information: gender and age. (n=200).

Personal Information	Frequency	Percentage
1) Gender		
Male	33	16.52
Female	167	83.50
Total	200	100.00
2) Age		
16 years old	65	32.50
17 years old	89	44.50
18 years old	20	10.00
19 years old	6	3.00
20 years old	20	10.00
Total	200	100.00

According to Table 1, the majority of samples was female, consisting of 167 people, accounting for 83.5 percent of the respondents. In addition, most of the respondents are 16 and 17 years old, consisting of 65 and 89 people, accounting for 32.5 percent and 44.5 percent, respectively.

**Table 2:** Average hours per day spent on social media for the sample (n=200).

Average time spent on social media	Frequency	Percentage
Less than 3 hours	22	11.00
3-5 hours	63	31.50
6-8 hours	70	35.00
More than 9 hours	45	22.50

According to Table 2, the majority of respondents spent around 6-8 hours on social media per day, while the minority, 11 percent of the respondents, spent less than 3 hours on social media per day.

**Table 3:** Mean and standard deviation (S.D.) of the psychological distress from the usage of social media (n=200)

Psychological distress	N	Mean	S.D.
Feeling anxious or irritable when not using social media	200	2.01	0.74
Think of social media lethargy while doing other things	200	2.20	0.72
Does not focus on the surroundings	200	2.43	0.88
Feel that you lose confidence in yourself	200	1.80	0.83
Worried about your image on social media	200	2.41	0.85
Feel that you are inferior to others	200	2.13	0.86
Try to be like other until you lose yourself	200	1.82	0.75
Do not want to meet people in real life	200	1.44	0.67
Having relationship problems with those around them	200	1.52	0.67
Feeling stressed out from the news on social media	200	2.33	0.94
Overall social media effects related to psychological	200	2.01	0.47



According to Table 3, the overall mean score of psychological distress from the usage of social media is 2.01 which is the level of the neutral view. In addition, the majority of respondents does not focus on the surroundings and worried about their image on social media, which the mean number is 2.43 and 2.41, respectively. On the other hand, the minority of respondents do not want to meet people in real life and having relationship problems with those around them, which the mean number is 1.44 and 1.52, respectively.

**Table 4:** Mean and standard deviation (S.D.) of the physical symptom from the usage of social media (n=200)

Physical symptom	N	Mean	S.D.
Stupor, tinnitus, blurred vision	200	1.67	0.72
Numbness, symptoms of arms and hands	200	1.77	0.79
Pain in the occipital, back, or shoulder muscles	200	2.20	0.90
Eyestrain and headache	200	2.22	0.92
Decreased sexual pleasure	200	1.15	0.53
Overall social media effects related to physical	200	1.80	0.50

According to Table 4, the overall mean score of physical symptom is 1.80 which is lower than the level of neutral view. In addition, the greatest mean score was found in the symptom of eyestrain and headache and pain in the occipital, back, or shoulder muscles, accounted for 2.22 and 2.20, respectively. On the other hand, the smallest mean score is found in the symptom of decreased sexual pleasure and stupor, tinnitus, blurred vision, which accounted for 1.15 and 1.67, respectively.

**Table 5:** t-test result for mean difference of psychological distress and physical symptoms across gender

Dependent variables	Male		Female		t	p-value
	Mean	S.D.	Mean	S.D.		
Psychological distress	1.74	0.39	2.06	0.47	3.641**	0.000
Physical symptoms	1.70	0.58	1.82	0.48	1.187	0.237

\*\* p < 0.01

From Table 5, result showed that there was a significant difference between male and female teenagers' psychological distress,  $t(198) = 3.641, p < 0.01$ . The results also suggested that female teenagers have more psychological distress as compared to male teenagers.

**Table 6:** F-test (ANOVA) result for mean difference of psychological distress and physical symptoms across average time spent on social media per day

Dependent variables		Sum of Squares	df	Mean Square	F	p-value
Overall psychological distress	Between Groups	1.152	3	0.384	1.731	0.162
	Within Groups	43.252	195	0.222		
	Total	44.403	198			
Overall physical symptoms	Between Groups	2.370	3	0.790	3.207*	0.024
	Within Groups	48.027	195	0.246		
	Total	50.397	198			

\* p < 0.05

As Table 6 reveals, there is a significant difference between physical symptoms of teenagers who spend different amounts of time on the social media ( $F=3.207; p < 0.05$ ). The multiple comparison results also suggested that teenagers spend 9 hours or more on



social media each day (mean=1.95) have more physical symptoms as compared to teenagers spend 3 hours or less on social media each day (mean=1.59).

**Table 7:** Pearson’s correlation coefficients among gender, age, average time spent on social media, psychological distress, and physical symptoms

	(1)	(2)	(3)	(4)	(5)
(1) Gender	1	0.050	0.333**	0.250**	0.084
(2) Age		1	0.261**	0.007	0.027
(3) Time spent on social media			1	0.159*	0.216**
(4) Psychological distress				1	0.234**
(5) Physical symptoms					1

\*\* p<0.01, \* p<0.05

From Table 7, correlation analysis results showed that there were significant positive relationships between gender and the average amount of time spent on social media per day ( $r=0.333$ ,  $p<0.01$ ), between gender and psychological distress, ( $r=0.250$ ,  $p<0.01$ ), but no relationships between gender and physical symptom. And age was positively related with the average amount of time spent on social media per day ( $r=0.261$ ,  $p<0.01$ ). The average amount of time spent on social media per day has positive relationships with psychological distress and physical symptoms ( $r=0.159$ ,  $p<0.05$  and  $r=0.216$ ,  $p<0.01$ , respectively). There were also significant positive relationships between psychological distress and physical symptoms ( $r=0.234$ ,  $p<0.01$ ).

**DISCUSSION**

According to the responses submitted via Google Form, 167 respondents are female, while 33 respondents are male. The finding suggested that there was correlation between gender and psychological distress caused by the usage of social media, female were psychologically affected significantly more than male. This may due to the fact that there are differences between genders in terms of social and psychological needs. Previous studies showed that females tend to use social media to gain emotional support, reduce loneliness, and connect with their friends to get information about their lives (e.g. Buran, & Doğan, 2018). In addition, females are also more likely to express negative emotions, such as anxiety, fear, anger, and depression both alone and in the presence of others, than male (Radwan et al., 2020). This research study was similar to the previous study conducted by Booker, Kelly, and Sacker (2018) which concluded that there were correlations between gender and effects from social media. Thus, gender should be taken into account when considering differences in term of psychological distress caused by the usage of social media.

In addition, there were correlations between time spent on social media and physical symptoms cause by the usage of social media. This may due to the fact that while people using social media they usually staying in the same posture for long time and that may lead to chronical disease in the long run and physical exhaustion. Thus, the longer people spent time on social media the more severe physical symptoms caused by the usage of social media. This research was similar to the previous study conducted by Dibb (2019) which concluded that there were correlations between time spent on social media and physical symptoms. On the other hand, there was no significant correlation between gender and physical symptoms caused by the usage of social media. This may be because of the fact that there is no difference between males and females in time spent on social media (Ularo, 2014) and the intensity of physiological distress mainly depend on average time spent in social media. In sum, the psychological and physical negative effects of social media vary according to gender and the average time spent on it.

**CONCLUSION**

This research aims to find the relationships among gender, the average time spent on social media, psychological distress, and physical symptom. According to the findings, gender is positively related to the average time spent on social media and psychological distress caused by the usage of social media, but not related to physical symptoms. The time spent on social media has relationship with both psychological and physical health. In addition, this study also reveals that there is significant relationship





between psychological distress and physical symptom. The current findings suggest that the nature of the negative impact of social media among Thai teenagers varies depending on an individual's gender and the average time spent on social media. This may inform future interventions seeking to decrease the negative effects of using social media in Thai teenagers.

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