# Association between Internet Usage Behaviour and Self-esteem of University Students

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**ABSTRACT**

This research aimed to study the association between internet usage behavior and self-esteem of first year students. The sample was 500 first-year students who were staying at Chiang Mai University dormitory. The data was collected through questionnaires that comprise of 3 parts: General information questionnaire, internet usage evaluation, and self-esteem scale. The statistics used for analysis were frequency, percentage, mean, standard deviation, and Pearson's correlation. The result of this research found that internet usage behavior had negative relationship with self-esteem at a low level, with a correlation coefficient of - 0.358 and a statistical significance of 0.01.

## INTRODUCTION

Self-esteem is a favorable impression of oneself, respecting and accepting oneself as important and able, and capable of achieving goals and accomplishments (1). Self-esteem is essential for daily life and is something that needs to be gradually fostered since childhood (2-4). People with self-esteem are confident in solving problems, tolerant to pressures and conflicts, and optimistic (5-7). On the contrary, people with low self-esteem tend to be defensive. These group of people need to prove themselves or criticize other people. They are not confident about their own self-worth causing them to dare not do anything due to fear of failure, so they opt for criticizing others instead of doing it themselves. They are also prone to violence, substance abuse, and premature sex (5, 8, 9). As mentioned earlier that self-esteem has to be gradually created since a young age, when children become adolescents, they do not only change physically but also mentally and socially (10-14). Late adolescence (approximately 17-21 years old) is the time of change to a sense of freedom from the initial sense of the need to rely on the parents or be under their governance, hence conflicts during middle adolescence change to be an understanding of their parents' love and good will. However, some teenagers with a rough background of development may feel confused and unsure to be free, to take full responsibility of themselves. Occasionally, problems might subsequently arise, which is sometimes called "Crisis of 21", with manifestations of depression, suicide attempts, or emotional issues (5, 8, 15-18). First year students are the period of change from late adolescence to adulthood and many of them choose to stay in university dormitory. This contextual change might allow them to feel free to choose the way of life they want, but they also have to manage things on their own and take responsibility of their own life (13, 14, 19-22).

Since Chiang Mai University has a wireless network called JumboPlus which currently has the total of 2,800 Internet access points covering all areas, with up to 250,000 equipments registering to the system, Information Technology Services Center, Chiang Mai University planned to add 3,500 more access points to accommodate the usage. This would result in the total of up to 6,300 JumboPlus access points for the entire premises (23, 24), which would allow the equipments to connect to the network more conveniently. Moreover, nowadays mobile internet is considered an important information system and takes part in many aspects of our life such as education, commerce etc. due to easy and convenient internet access. As in the year 2016, National Statistical Office conducted a household survey on the use of Information and communication technology and found that, among 29,835,410 users, the population group with the most usage of Information and communication technology was the age group of 15-19 years old, with up to 4,248,553 users (24). It is predicted to have more and more users according to the principle of Person-Environment-Occupation-Performance (PEOP) Model (25) in views of therapeutic activity that says the relationship and balance of 3 components; persons, environment, and lifestyle activities, affect behaviors and the ability to perform meaningful activities. This could be used to explain about internet usage behavior that influences behaviors and the ability to perform activities that excessive Internet use without interest for other activities caused the 3 components to imbalance as defective activity can affect a person's body and duties. It could be seen that, according to all mentioned above, the number of internet users tends to increase rapidly, especially university students who spend relatively great amount of time on the Internet. This aroused the researcher's interest in the Internet usage behavior and self-esteem of first year students with the emphasis on the relationship between internet usage behavior and self-esteem. The subject of this research was the first-year students who stayed in Chiang Mai University dormitory. Thus, the researcher took interest in studying internet usage behavior and self-esteem of first year students. The researcher hoped that the results of this research would reveal the association of internet usage behavior and self-esteem and could be applied as a guideline for planning self-esteem development in the future. Objectives to study

the association between internet usage behavior and self-esteem of the first-year students who stayed in Chiang Mai University dormitory (23).

## METHOD

### Population

3,991 first year students who stayed in a supervised dormitory in Chiang Mai University, Meaung District, Chiang Mai Province, during First semester of academic year 2018.

### Sample

500 Chiang Mai University students in their first year of academic year 2018 that stayed in Chiang Mai University student's dormitory (26), with inclusion/exclusion criteria as follows

    1. Inclusion Criteria
        1.1 18 years of age or older
        1.2 No severe illnesses or disabilities
        1.3 Consent to participate in the research
    2. Exclusion Criteria

The volunteers who suffer severe illnesses or disabilities, or are not consent nor ready to answer the questionnaire, or have concerns with participating in the research

### Research Instruments

*Part 1 General information of the sample*

*Part 2 Internet usage evaluation*

Internet Addiction Test (IAT) Kimbery Young (27), with reliability at 0.89, consisting of 20 questions to evaluate the level of Internet usage. The participants answered by filling in the number that is consistent with their opinions and behaviors as following 1 = once in a while, 2 = sometimes, 3 = often, 4 = regularly, 5 = all the time, and 0 = undefinable. Evaluation scores conversion: The full score is 100 points, divided to 4 levels of None = No Internet Addiction, Mild = lightly addicted, Moderate = temperately addicted, and Severe = severely addicted

*Part 3 Questionnaire regarding self-esteem*

Thai version of Rosenberg Self-Esteem Scale (RSES) by Paritat and Orawan Silpakit (28) consisting of 8 questions, 4 of which are positive inclining and the other 4 are negative inclining, with levels of opinion as strongly agree, highly agree, disagree, and strongly disagree. The scores would then be converted into 3 levels which were Low Self-esteem, Moderate Self-esteem, and High Self-esteem.

*Data analysis and Statistics*

    1. Analyzed the data using descriptive statistics. Frequency and Percentage were used to describe about general information, while Mean and Standard Deviation were used to analyze the scores of the Internet usage and self-esteem.

    2. Distributional test found the analysis of hypothesis testing was done by Inferential Statistics. Since the data distribution was of a normal curve, the researcher thus used the suitable statistics which was Pearson' Product Moment Correlation Coefficient (29).

*The Protection of Rights*

Before conducting the research, the researcher presented the research draft to The Research Ethic Committee, Faculty of Associated Medical Sciences, Chiang Mai University to collect data and to request permission for data collecting by providing information informing the details of this research, the right to participate, and the decision to voluntarily participate or not to. Personal information of the participants would be kept secret and not to be made public. The researcher was granted for this research an approval of ethics of research with human subjects by Research Ethics Committee, Faculty of Associated Medical Sciences, Chiang Mai University. Research Number AMSEC-62EX-017.

## RESULTS

**Table 1** General information and characteristics of the sample (n=500)

| Sample Characteristics | Number (person) | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 165 | 33.0 |
| Female | **335** | **67.0** |
| Total | 500 | 100.0 |
| **Faculties** | | |
| Techno-Sci | 190 | 38.0 |
| Health-Sci | 97 | 19.4 |
| **Human-Social** | **213** | **42.6** |
| Total | 500 | 100.0 |

| Sample Characteristics | Min – Max | Mean ($\underline{x}$) | Standard Deviation |
|---|---|---|---|
| **Age** | **18 – 21** | **19.03** | **0.57** |

**Table: 2** Results of Internet usage behavior

**Table 2.1** Data of Internet usage evaluation (n=500)

| Sample Characteristics | Level of Internet Addiction | | | |
|---|---|---|---|---|
| | None | Mild | Moderate | Severe |
| Male (165) | 22 (13.3) | 68 (41.2) | **73 (44.2)** | 2 (1.2) |
| Female (335) | 56 (16.7) | **183 (54.6)** | 95 (28.4) | 1 (0.3) |
| Total (500) | 78 (15.6) | **251 (50.2)** | 168 (33.6) | 3 (0.6) |

**Table 2.2** Data of Internet usage evaluation of each Faculty (n=500)

| Sample Characteristics | Level of Internet Addiction | | | |
|---|---|---|---|---|
| | None | Mild | Moderate | Severe |
| Tecno-Sci (190) | 22 (11.6) | **88 (46.3)** | 79 (41.6) | 1 (0.5) |
| Health-Sci (97) | 20 (20.6) | **46 (47.4)** | 30 (30.9) | 1 (1.0) |
| Human-Social (213) | 36 (16.9) | **117 (54.9)** | 59 (27.7) | 1 (0.5) |

**Table 3:** Results of Self-esteem

**Table 3.1** Data of Rosenberg Self-Esteem Scale-RSES **(n=500)**

| Level of Self-esteem | Number (person) | Percentage |
|---|---|---|
| Low Self-esteem | 5 | 1.0 |
| Moderate Self-esteem | 175 | 35.0 |
| High Self-esteem | **320** | **64.0** |
| Total | 500 | 100.0 |

**Table 3.2** Scores of Rosenberg Self-Esteem Scale-RSES **(n=500)**

| Lowest Scores -Highest Scores | Mean | Standard Deviation |
|---|---|---|
| 11.0 – 32.0 | 24.87 | 4.02 |

**Table 3.3** Internet Usage Behavior and Self-esteem

| | Low Self-esteem | Moderate Self-esteem | High Self-esteem | Total |
|---|---|---|---|---|
| **No Internet addiction** | 1 (1.3) | 8 (10.3) | 69 (88.5) | 78 (100.0) |
| **Mild Internet addiction** | 2 (0.8) | 81 (32.3) | **168 (66.9)** | 251 (100.0) |
| **Moderate Internet addiction** | 2 (1.2) | 84 (50.0) | 82 (48.8) | 168 (100.0) |
| **Severe Internet addiction** | 0 | 2 (66.7) | 1 (33.3) | 3 (100.0) |
| **Total** | 5 (1.0) | 175 (35.0) | 320 (64.0) | 500 (100.0) |

**Table 4** Correlation Coefficient of the data between Internet Usage and Self-esteem

| | Self-esteem | |
|---|---|---|
| | Correlation Coefficient (r) | Statistical Significance (p) |
| **Internet Usage** | - .358** | 0.01 |

** $p < 0.01$

According to Table 4, which shows correlation coefficient using Pearson' Correlation, the relationship of the data is that Internet usage behavior of the sample has low level of negative relation with self-esteem, with a correlation coefficient of - 0.358 and a statistical significance of 0.01.

**CONCLUSION AND DISCUSSION**
The sample showed mild Internet addiction (Table 3), which could discuss Internet usage behavior and self-esteem as follows.
1. Most of the sample had a mild Internet addiction but had an average time of Internet usage at 7.23 hours per day. From the information of Internet usage obtained, most of the sample used mobile Internet, followed by computer/notebook. And almost all of the sample used Internet for entertainment or relaxation. However, the sample did not use Internet for entertainment only but also to contact and communicate with friends (Table 1). As currently Internet usage has many benefits, be it educational, commercial, entertainment, or online social networks such as Facebook, Twitter, Line, Instagram etc. These online social networks are very popular among children and teenagers because they answer to their emotional needs to be a part of social group, to be accepted, and to have personal space, which is consistent with a research conducted by Kwunkao Pholphet and Benjaporn Tuntasood (30) that studied the relationship between Facebook addiction and self-esteem of secondary school students. The research revealed that Facebook addiction related to self-esteem with statistical significance (p<0.05), as the sample with low self-esteem

was addicted to Facebook more than that with moderate and high self-esteem.

2. Most of the sample had high self-esteem. This is because in order for a person to pass an examination for higher education, they have to endure pressure and expectation from people around them causing them stresses. And when they finally get into the university they desired; it make first year students feel accomplished. This experience of accomplishment is an important factor that makes a person feel confident with their ability and respect themselves more than those who fail, causing most of the first-year students to have high self-esteem (Table 3) According to this study, it was found that Internet usage behavior had negative relationship with self-esteem at a low level, with a correlation coefficient of - 0.358 and a statistical significance of 0.01. This agreed with the hypothesis that the first-year students staying in Chiang Mai University dormitory had Internet usage behavior that related to their self-esteem (Table 4). This relationship indicated that the first-year students who were severely addicted to the Internet subsequently had a low self-esteem. This was because the sample for this study was the first-year students that stayed in Chiang Mai University dormitory, and Chiang Mai University had the policy that emphasized its dormitory to be a Living, Learning and Caring Center. One of the purposes of the dormitory was to be a residence of quality with welfare services and the environment that supported and encouraged academic education by having reading rooms, computer rooms, libraries, activity rooms, and also installing Internet access points that covered all areas of the university, which allowed the sample an easy Internet access. And the society of the sample might consider it normal to use the Internet, which agreed with an information from National Statistical Office that reported the age range with the maximum use of the internet and information media was adolescence (31, 32) and with a tendency for more usage. Moreover, therapeutic activity theory of The Person-Environment-Occupation Performance (PEOP) Model says that occupational performance is the result of an interaction between the factors of persons, environment, and lifestyle activities. Changes in any of the factors affects the balance of the relation of a person, environment, and their activities. A person develops the feeling of accomplishment from the ability to maintain the balance between personal needs and those of the environment.

However, the factors that affect one's self-esteem were successes, self-confidence, surrounding environment such as family, friends, teachers who give reflective information about one's self-image (33). These are the factors for the source of self-esteem more than Internet usage. More, Rosenberg Self-Esteem Scale is a self-evaluation that reflects only one side of a person's view of one's self (1, 2, 28, 34-37). When social factors do not accommodate activities participation, self-esteem declines, this could explain that first year students' excessive use of the Internet had an impact on their studying or other activities in life, which could cause emotional irregularities, insomnia, a decline of self-esteem, impulsiveness, health problems such as Migraine, back pain etc., or even suicidal thought (38-42). But since the purpose and characteristics of the sample's Internet usage were not only for entertainment but also for communication and contacts regarding their education, additional academic research, or even online trading, these various activities were small factors that if a person could accomplish as they planned, would promote their self-esteem. Thus, the results of this research revealed a negative connection between internet usage behavior and self-esteem at a low level.

## SUGGESTIONS

### Suggestions from this research

1. It can be basic information for guideline development to promote alternative free-time activities for students instead of using the Internet

2. It can be used to develop guidelines for Internet usage to promote students' self-esteem.

### Suggestions for future research

1. Research more on other factors involving Internet usage behavior and self-esteem, for example family, economic status, school record etc.

2. Perform qualitative research regarding self-esteem and Internet usage behavior.

3. Study the impacts of internet usage behavior on different age groups.

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