

# **A Study on the Effects of the Use of an Instant Messaging Application on Interpersonal Relationship and Internet Addiction**

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**ABSTRACT:** *This study mainly explores the impact of LINE usage behaviour on interpersonal relationships and Internet addiction among junior high school students in Kaohsiung City, and compares the differences in LINE usage behaviour, interpersonal relationships, and Internet addiction among students with different background variables. This research uses the questionnaire survey method for data collection, using the "LINE Use Behaviour, Interpersonal Relationship and Internet Addiction Questionnaire" as the research tool, and selects students from public junior high schools in Kaohsiung City as the research object. The research results hope to provide specific suggestions for education-related units, schools, parents and teachers, and future research directions for reference.*

**KEY WORD:** *LINE usage behaviour, interpersonal relationship, Internet addiction*

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## **I. INTRODUCTION AND LITERATURE REVIEW**

### **1.1 Research motivation and background**

According to the survey of mobile phone numbers by the Ministry of Economic Affairs in the first quarter of 2013, there are 23.11 million mobile phone numbers in my country that can access the Internet, of which 67.7% have activated mobile data services, which means that modern people use mobile phones to access the Internet more and more. universal. The instant messaging software on the traditional personal computer can only be limited to a fixed location, lacks mobility, and can no longer meet the needs of users to receive and transmit messages anytime and anywhere. Faster, more instant, and easier to form the characteristics of community group communication, attracting more and more users to use it, and allowing mobile instant messaging software such as LINE, WhatsApp, WeChat, etc. to develop rapidly.

With the rapid development of instant messaging software, many teenagers often communicate with others through LINE. Friends are very important in the teenage stage, so it is easy to be influenced by peers in all aspects, and occasionally there will be unhappiness between friends, which will affect interpersonal relationships. At this time, LINE is a good communication platform. In order to avoid embarrassment face-to-face You can use LINE to resolve disputes, and you can also chat with the right person through LINE. But such a convenient way of communication has also created some problems. Taiwan Awakening (2014) Social networking sites and instant messaging software are very popular. Many people who use the communication software LINE see that the other party shows that the message has been read but has not replied, which causes interpersonal anxiety. There are also many male and female friends because the other party did not reply. own information, resulting in negative emotions such as suspicion, uneasiness, and anxiety. Adolescents are not fully developed physically and mentally, and have poor self-control. They are more likely to be addicted to social networking sites or instant messaging software, and neglect their studies or interpersonal interactions. LINE's "read" messages are only one-sided messages. Many teenagers want to get a response from the other party to affirm their interpersonal relationship, and it is easy to lose touch with real life. Therefore, the researchers wanted to explore the influence factors of LINE on adolescents' interpersonal relationships.

Whether instant messaging software is used on different information devices such as computers or smart phones, it must be used through the Internet. The development of the Internet has brought convenience and entertainment to people's lives, but there are also many problems. problems, including cybercrime, cyberpornography, cyberbullying, and Internet addiction. Therefore, we want to understand the current situation of junior high school students using LINE and its impact on interpersonal relationships and Internet addiction, so

as to provide schools and parents with a further understanding of what junior high school students should pay attention to and avoid when using LINE.

## **II. RESEARCH OBJECTIVES**

Based on the above research motivations, the research objectives of this study are as follows:

- (1) Discuss the current situation of junior high school students in Kaohsiung City with different background variables, using the instant messaging software LINE, real and Internet interpersonal relationships, and Internet addiction.
- (2) Discuss the differences in Kaohsiung junior high school students with different background variables, the use behavior of the instant messaging software LINE, real and Internet interpersonal relationships, and Internet addiction.
- (3) To explore the differences between the usage behaviour of different instant messaging software LINE and real interpersonal relationship, Internet interpersonal relationship and Internet addiction among middle school students in Kaohsiung City.
- (4) To analyze the correlation between the interpersonal relationship and Internet addiction among middle school students in Kaohsiung City.

## **III. Literature Review**

### **Line**

LINE is an instant messaging application for smartphones developed by NHN Japan Corp. The name LINE is hoped that it can connect people to people, telecommunication companies to telecommunication companies, operating systems to operating systems, and spaces to spaces, just like a line. As long as users use the Internet, they can make free voice calls, picture transfers or message transfers with other users, regardless of whether they are in different countries, different telecom operators or Internet companies.

### **Theory and Research on Internet Addiction**

Zhang Gaobin (2009) With the advancement and popularization of computer information and the Internet, people's habit of processing and obtaining information has gradually changed, and the previous method of consulting books to obtain information has gradually been replaced. Obtaining life knowledge through the Internet has become a basic skill, and because of the convenience and diversity of the Internet, many users can't put it down and become addicted to it. In addition to the traditional personal computer accessing the Internet, there are currently many mobile vehicles such as smart phones, tablet computers, and notebook computers that can access the Internet through the mobile network. All can be easily accessed. If these Internet devices can be used to make good use of network resources and combine them with real life, the use of the Internet will be quite convenient and helpful. Conversely, excessive Internet access may cause symptoms of Internet addiction.

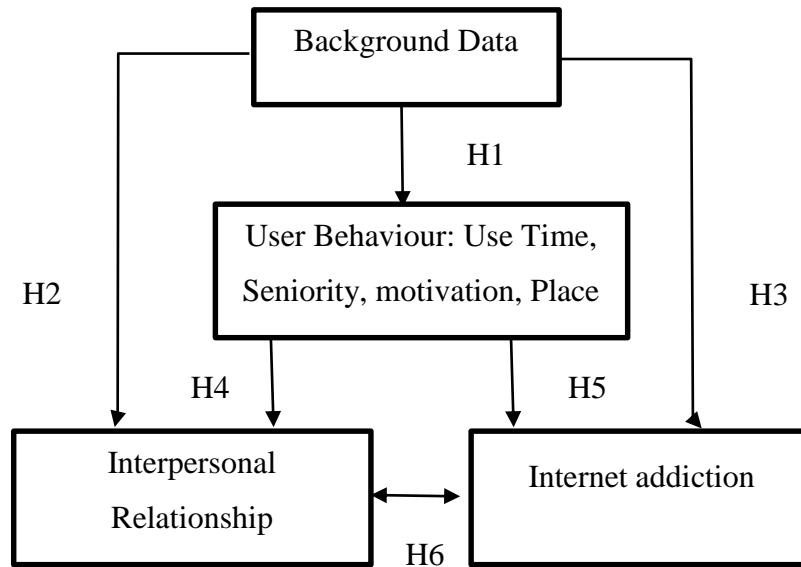
In 2014, Google announced the results of the children's Internet safety survey conducted in December last year in the "Community Funding Program", an advocacy activity to support children's Internet safety programs. There are 4,085 subjects in the first and second grades of senior high school. The survey found that as many as 50% of children surf the Internet every day, with an average weekly online time of 16.1 hours, and nearly 30% spend at least 3 hours a day on the Internet during the week, and as high as 80% during holidays of children surf the Internet continuously every day, and nearly 30% of them spend at least 5 hours online on average during holidays, which shows that children are highly dependent on the use of the Internet, and surfing the Internet has become the main leisure activity after school or during holiday leisure time.

Griffiths (2008) believed that Internet addiction is a kind of "technology addiction", which belongs to the behavioural addiction of human-computer interaction without substance intake. At present, students' Internet addiction is a difficult issue for parents and teachers, because at the school teaching site, when the teacher finds that the child's attendance in class is not normal, the class is not energetic, or the seriousness of problems such as frequent use of smartphones at school, etc. Only then did I realize that my child was addicted to the Internet and couldn't extricate himself. Because serious "Internet addiction" is also accompanied by mental problems, the school not only prepares for difficulties in counselling, but some cases even have to seek help from the medical system (Brammer, 1993). Therefore, with the development of modern technology, in addition to the frequent use and reliance of students on computers, such as instant messaging software LINE, Weibo, Twitter and other social software and the use of online games, in addition, smart phones and other mobile vehicles through the mobile network The frequent use of instant messaging systems, social software, and mobile online games often confuses front-line parents and teachers about the boundaries of "addiction". The term Internet addiction was first coined by American psychologist Goldberg in 1995. Set up an Internet survey called "Internet Addiction Disorder", which is used to describe the behaviour of excessive Internet addiction that leads to insanity, a behaviour similar to behavioural addiction. He cites the definition of pathological gambling in the fourth edition of the Diagnostic and

Statistical Manual of Mental Disorders (DSM-IV) for comparison, and formulates a theory about pathological Internet addiction, but he has doubts about the existence of Internet addiction. The term "Internet addiction" was changed to "pathological compute use". (Jeong, Shu & Gweo, 2020)

#### IV. Research methods

Based on the above-mentioned research motivation, research purpose, research questions and the results of related literature discussion and analysis, this study puts forward the research framework shown in Figure 1 for the main variables related to this study.



**Figure 1: Research Structure**

#### Research hypothesis

- H1: Junior high school students with different background variables have significant differences in LINE usage behaviour.
- H2: Junior high school students with different background variables have significant differences in interpersonal relationship.
- H3: Junior high school students with different background variables have significant differences in Internet addiction.
- H4: Junior high school students with different LINE usage behaviours have significant differences in interpersonal relationships.
- H5: Junior high school students with different LINE usage behaviours have differences in Internet addiction.
- H6: Interpersonal relationship among middle school students using LINE is related to Internet addiction.

#### 1.4.1 Research object

The parent group of this study is junior high school students in Kaohsiung area. Six middle schools were selected by cluster sampling, and a total of 330 students were surveyed in the "Questionnaire on LINE Usage Behaviour, Interpersonal Relationship and Internet Addiction among Junior High School Students".

A total of 330 questionnaires were administered on the "Questionnaire on LINE Usage Behaviour, Interpersonal Relationships, and Internet Addiction among Junior High School Students", and 330 questionnaires were returned, with a recovery rate of 100%. Deducting 5 incomplete answers and 9 questionnaires for those who did not use LINE, the real reward There were 316 valid questionnaires, with an effective rate of 95.8%.

#### Scale compilation

The questionnaire on interpersonal relationship was compiled with reference to the "Interpersonal Relationship Scale for Adolescents" compiled by Xie Longqing (2012) and according to research needs. The pre-test questionnaire is divided into two parts: interpersonal relationship questionnaire A (to investigate the interpersonal relationship in students' daily life) and interpersonal relationship questionnaire B (to investigate the LINE interpersonal relationship of students).

### **Internet Addiction Scale**

The researchers sought permission from Professor Chen Shuhui to use the "CIAS-R" compiled in 2003 to compile the "Internet Addiction Pre-test Scale for Junior High School Students" as the Internet Addiction Questionnaire for Junior High School Students in this study, and the scale is It is a mature questionnaire, so it has good reliability and validity, and the consent form is attached in Appendix III. In order to prevent respondents from evading answers or concealing the real situation due to the name "Internet Addiction", the title of the scale was changed to "Internet Use Behaviour Survey Scale".

The Internet Addiction Scale includes two parts: Internet Addiction Core Symptoms and Internet Addiction-related Questions. 5 questions on "Internet Addiction Tolerance" and 4 questions on "Internet Addiction Tolerance". Questions related to Internet addiction have two levels: 7 questions on "Interpersonal and Health Issues" and 5 questions on "Time Management Issues".

### **V. Analysis results and Conclusion**

Based on the individual results of the above statistical analysis, they are summarized in the following:

1. Junior high school students of different genders and grades have significant differences in LINE usage behaviour.
2. Junior high school students of different genders have no significant differences in interpersonal relationships, and junior high school students of different grades have "different significant differences were achieved at the level of "friendship".
3. There are significant differences in Internet addiction among junior high school students of different genders, but the differences in Internet addiction among junior middle school students of different grades are not significant.
4. There is no significant difference in interpersonal relationship and Internet addiction among junior high school students in different places where LINE is used. There were significant differences in all addictions.
5. The motives for using LINE are "schoolwork needs", "chatting and making friends", "publishing dynamic messages", "relieving stress and leisure and entertainment". There are differences in interpersonal relationships.
6. There are differences in interpersonal relationships between the LINE functions "message chat", "play games" and "group chat".
7. The motives for using LINE are "needs for schoolwork", "chatting and making friends", and "publishing dynamic messages". There are differences in Internet addiction.
8. There is no difference in Internet addiction among middle school students with different LINE usage functions.
9. The Internet addiction of middle school students LINE users has a significant negative correlation with the overall real interpersonal relationship; the Internet addiction of middle school students LIN users has a significant positive correlation with LINE interpersonal relationship.

### **VI. Suggestions**

According to the aforementioned research conclusions, specific personal suggestions are put forward for reference in relation to education-related units, schools, parents and teachers, and future research directions for the purpose of the research.

1. The information courses contribute to the cultivation of information literacy and the promotion of club activities: Schools can use information courses to strengthen the cultivation of students' information literacy, promote the ethics and norms of correct use of the Internet, and prevent students from breaking the law by doing incorrect behaviour on the Internet; Let students vent their academic pressure.
2. Improve the sense of accomplishment and self-esteem of low-achieving students in real life: Many children with low academic achievement may be too addicted to the Internet and neglect their studies, or they cannot get a sense of accomplishment in real life, so they seek achievement in the Internet. Schools should provide remedial instruction to improve study skills or support student achievement in skill areas outside of school.
3. Provide youth counselling and counselling: Schools should provide immediate and long-term psychological counselling to help adolescents express their emotions and improve their depression

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