

The Effect of Social Media Use on Interpersonal Competence: A Longitudinal Study

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Abstract: Social media is important to the research of interpersonal communication ability. according to Interpersonal communication in social networking sites: a survey literature supporting the theoretical framework of use and satisfaction This paper will shows that whether social media have impact on empathy and interpersonal skills. Through the longitudinal study, we examine 52, 59 and 160 people in the three surveys with a one-week interval. In the third surveys, 32 groups were evaluated by peer. Derived from the questionnaire, the result shows that social media has an impact on empathy, also, there is significant difference between others' evaluation and self-view. The significant difference between self-evaluation and others' evaluation in the article provides extensibility and exploration for subsequent research.

Keyword: social media, interpersonal competence, self-report, peer-view, longitudinal study

1. Introduction

Through the continuous progress and development of society, media era has gradually become the dominate of today's society. The use of social media can be well known to the people. In recent years, with the development of the era of we media, the use of social media has been more and more widely spread. People have a strong interest in social media use time and psychological development.

These studies show that the use of social media can have various effects on people's psychological development, such as friendship and communication, self-esteem and self love[1], the use of social media can cause psychological changes to adolescents, such as irritability and depression[2].

An important aspect of psycho-social development that has received surprisingly little attention in social media research is interpersonal competence. Interpersonal competence is defined as a practical ability and perhaps even an anti-intellectual orientation[3]. It has importance in children's peer group popularity[4] and adults' marital satisfaction[5]. People often use social media to communicate with their friends, doing academic research, and also do some entertainment. Thus, the increasing duration of using social media affects interpersonal communication ability in different ways[6], social media may also lead to poor relationship quality with parents and perceived isolation[7]. In fact, it is becoming more and more reasonable for young people, especially teenagers of how many hours a day they spend using social media and whether it may enhance or reduce their social ability has become more and more reasonable.[8].

Social media is now widely spread, like door to door, for men, women and young, with a wide audience. Because of the large audience, the need to study its value is even stronger. Some studies have shown that social media use has a psychological impact, such as whether it increases the risk of depression or whether they become irritable and lonely. The emergence of social media is naturally associated with the necessary ability to communicate with people in their daily life, which is what we usually refer to as interpersonal skills. This ability is both important and necessary. Because everyone needs to communicate with people, interpersonal skills are an essential part. So if these two important factors are linked, something get explore.

Given that there are few studies on the relationship between social media use and social skills, one of the aims of the research in this study, is to investigate the relationship between social media use and social skills in a longitudinal design. The second aim is to investigate whether there is a difference between self-reported social skills and peer-view.

2. Method

2.1. Participants and Procedure

The target audience for the surveys was made up of Teenagers (13-17years old) and a small number of adults (18-45 years old). The participants of the three tests were 52, 59 and 160 people respectively. The questionnaire to the subjects was sent to their mobile phones through Wechat (a Chinese social media platform) in the form of a questionnaire star. This was distributed, in a total of three times, with an interval of one week. The questionnaire star uses a matrix scoring table which translates and enters the existing scales for the participants to fill in. For each participant's social media use time, data was recorded data via objective indicators. The screen usage time data, in the mobile phone settings, of each subject, was recorded. In the last test, everyone's report on their social ability was tested, in addition, friends of the same age, was invited to comment on each other.

2.2. Measures

Social media use. The screen usage time data in the mobile phone settings of each subject was recorded. For every task participants had to send screenshots of their screen usage time interface. This therefore ensures, that the data is more authentic and accurate. I think this objective indicator is more accurate than most estimates, by using directly from the data on the network[9].

Empathy. The adolescent and adults measure of empathy was used at both three points[10]. This measures consist of 7 statements that measure Interpersonal Reactivity Inventory. For each statement, respondents indicated how often the behavior occurred on a nine-point scale: the numbers from 1 to 9 represent the degree from very consistent to very inconsistent, respectively. Number 5 represent neutrality. Example items are *"I often tend to have concerned feelings for people less fortunate than me."* *"When I see someone being taken advantage of, I feel kind of protective towards them"*.

Interpersonal Competence. Brief form of Interpersonal competence questionnaire was used to examines adolescents and adults assessment of social ability[11] . This measures consist of 15 statements and for each of the statement, respondents were invited to measures whether or not the items are suitable. For nine-point scale, the number from 1to 9 represent the degree from very consistent to very inconsistent. Examples items are *"Being able to admit that you might be wrong when a disagreement with a close companion begins to build into a serious fight."* *"Helping a close companion get to the heart of a problem s/he is experiencing."*

2.3. Analytic Approach

First, each respondents social media usage time, was investigated and examined. From various pictures and data given it was discovered that most people would use their phone for about 25 hours per week, thus, one can deduce that social media was actually having lots of impact on adolescents and adults. For the objective research, the respondent's screen usage time per week was analyzed.

Correlation Matrix

Correlation Matrix		T1social media use	T2empathetic thinking	T3interpersonal competence-self report	T3interpersonal competence-peer view
T1social media use	Pearson's r	—			
	p-value	—			
T2empathetic thinking	Pearson's r	-0.083	—		
	p-value	0.515	—		
T3interpersonal competence-self report	Pearson's r	-0.270	-0.093	—	
	p-value	0.031	0.463	—	
T3interpersonal competence-peer view	Pearson's r	0.185	0.005	-0.034	—
	p-value	0.143	0.971	0.788	—

Figure 1: result of the longitudinal study.

3. Results

3.1. Descriptive Statistics

Through longitudinal research, one found that the subjects' social media use time almost occupied most of their daily life. After separately entering into jamovi software for three times of collected data analysis, it showed that there was a negative correlation between social media use and self-report of social ability, although (p-value=0.031) was not significant, the basic trend had emerged. As a result, there was no obvious p-value. On reflection this analysis, research and study was restricted through a serious shortage of subjects, but a certain number of subjects can be increased in the future to define this research and investigation methodology even further. As for the interpersonal competence peer view and social media use it also has interesting findings. Through this investigation, research and analyst it discovered that the longer the subject uses social media, the peers think their social skills will be improved. Since (p-value=0.143) was not an outstanding data, the trend of the two different between self-report and peer view have been revealed. The self-reported social ability is completely opposite to the value reported by others. Although there is little difference between the positive and negative values, the trend direction is completely opposite. T3 interpersonal competence self-report and social media use related Pearson's r was -0.270, T3 interpersonal competence peer view and social media use related Pearson's r was 0.185, thus one can clearly identify the difference between self-report and peer view.

3.2. Longitudinal Relationship between Social Media Use and Interpersonal Competence

By investigating the social media usage time of adolescents or adults on the frequency of their phone use, takes a long time. From the statistical data point of view and with each time period stage, it can be said that interpersonal skills becomes improved via social media usage time. From the individuals self-report, they considered that the longer an individual uses social media, the lower their social ability becomes, however on the contrary others think that the social skills have improved.

4. Discussion and Conclusions

In previous publications, various of literature have shown that social media would influence respondents in plenty of ways. Especially on medicines care help, children's peer group popularity[5]and adults' marital satisfaction[6]. In previous publications, concerns have been expressed lack of empirical evidence in the existing literature, so the main aim of the present study was to investigate the influence of social media use on interpersonal competence in both adolescents and adults.Overall, the findings of this study suggest that, in contrast to concerns that have been raised, we discovered that social media actually may decrease respondent's interpersonal competence.

4.1. Longitudinal Effect of Social Media on Interpersonal Competence

Based on the theories of the development of interpersonal skills and social media usage time, we hypothesized that social media use may have a negative influence on self report and have a positive influence on peer-view. To illustrate that, once respondents may have longer usage time, they may considered themselves to be less communicating. However, if their friends or parents watch their behavior, then they may think that their friends or kids may be more communicating. For the first time we collected the data usage time, we found out that the more time respondent use social media, the less for the self cognitive of whether or not gain much interpersonal skills.

In addition, we investigated whether interpersonal skills via empathy related to social media use. First, because there is no face-to-face interaction in online communication and, as a result, individuals have to imagine the emotional state of others, we hypothesized that social media would influence interpersonal competence(for the self report). Our findings did not provide support for this hypothesis. This seems to indicates that for individual's social skills, there's no need to have more social time usage time to improve it. Nevertheless, the findings have shown that a third perspective may assess whether social skills will be improved or reduced by using social media time.

Furthermore, our findings showed no significant impact on social media and empathy. This suggests that the frequency of social media use is not related to changes in concern about some ones distress.

4.2. Implications and Suggestions for Future Research

The present study is the first to provide longitudinal empirical information on the relationship between social media use and Interpersonal competence. Based on the theories, it was found that social media may have a negative influence on how to communicate with people, which means that the longer a person uses social media, the lower their ability to communicate with others. This discovery was not found in previous studies.

In addition, the results showed that the relationship between compassion and social media is not clear, and of course, the effect is not obvious due to insufficient amount of information at the time. To sum up the trend of the relationship between empathy and social media are still problems worthy of studying and researching further.

As this was a longitudinal study, one must understand the importance of these results and help provide some suggestions for future research. In the current study, one only measured the time spent on using social media, so one needs to have a new definition standard in order to measure other aspects of social media use. For example, it can be investigated as to whether the frequency of subjects using social software is related to their social ability, or whether they are in contact with close friends, as well as whether they have more subjects to conduct experiments.

In this research, one tried to explore whether empathy is used as a mediator variable to evaluate the impact between social media and social competence however the results are not significant at this stage and require further investigation and as well as incorporating and finding more subjects to

survey for future research in this area. There is also a new direction within this research, that is, peer assessment. Of course, this is also the part mentioned in the previous research that one hopes can be extended. After the statistics of relevant processes and analysis, an interesting topic emerged as a point of discussion and for future research, whereby one discovered that there is a significant difference between self-evaluation and others' evaluation.

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