The Impact of Social Media Use Towards Negative Emotion and Suicidal Tendency Among Students：A Systematic Review

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Abstract

The fourth industrial revolution has brought the world into the digital age. The rapid growth of communication equipment and network infrastructure has brought the world closer. The speed of information dissemination has been greatly improved, the scope of dissemination has been expanded, and the unparalleled timeliness and convenient accessibility of social media enable users to exert their influence freely. Therefore, some negative information or emotions spread rapidly, affecting users' emotions and attitudes. The purpose of this study is to find out the current evidence that the use of social media has an impact on the negative emotions and attitudes of students. Adapting PRISMA publication standard for systematic review, the study systematically searched articles in four databases: Web of Science, Google Scholar, Scopus and ProQuest. The focus of this study is to use social media, students' negative emotions and suicide attitudes to investigate the use of social media, negative emotions and even suicide attempts by young students. The conclusion shows that students' use of social media may increase the risk of negative emotions such as depression and even suicidal behaviour.

Key Words: *social media, negative emotion, PRISMA, suicide*

Kesan Penggunaan Media Sosial Terhadap Emosi Negatif dan Kecenderungan Membunuh Diri dalam Kalangan Pelajar: Tinjauan Sistematik

Abstrak

Revolusi perindustrian keempat telah membawa dunia ke era digital. Pertumbuhan pesat peralatan komunikasi dan infrastruktur rangkaian telah mengeratkan hubungan. Kepantasan penyebaran maklumat telah banyak dipertingkatkan serta diperluaskan, dengan ketepatan masa yang tiada tandingan. Kebolehcapaian mudah media sosial membolehkan pengguna menggunakan pengaruh mereka secara bebas. Oleh itu, beberapa maklumat atau emosi negatif tersebar dengan cepat, menjejaskan emosi dan sikap pengguna. Tujuan kajian ini dijalankan adalah untuk menjalankan kajian secara sistematik bagi mengetahui bukti semasa bahawa penggunaan media sosial memberi kesan kepada emosi dan sikap negatif pelajar. Menyesuaikan piawaian penerbitan PRISMA untuk semakan sistematik, bagi pencarian artikel dalam empat pangkalan data yang berbeza: Web of Science, Google Scholar, Scopus dan ProQuest. Fokus kajian ini adalah menggunakan terma media sosial, emosi negatif pelajar dan kecenderungan membunuh diri terutama dikalangan pelajar. Kesimpulan menunjukkan bahawa penggunaan media sosial oleh para pelajar boleh meningkatkan risiko emosi negatif seperti kemurungan dan juga kecendurangan tingkah laku membunuh diri.

Kata Kunci: Media sosial, emosi negatif, PRISMA, membunuh diri

1. INTRODUCTION

Social media is an Internet-based application that allows users to create and exchange user-generated content. In fact, it has become an important part of connecting with friends and family, sharing personal content, and getting news and entertainment (Lin et al., 2016)and its association with mental well-being remains unclear. This study assessed the association between SM use and depression in a nationally representative sample of young adults. Methods We surveyed 1,787 adults ages 19 to 32 about SM use and depression. Participants were recruited via random digit dialing and address-based sampling. SM use was assessed by self-reported total time per day spent on SM, visits per week, and a global frequency score based on the Pew Internet Research Questionnaire. Depression was assessed using the Patient-Reported Outcomes Measurement Information System (PROMIS. In the current information explosion, if you don't visit the social media platform for one day, it seems to be out of touch with the world.

As using social media has become one of the most popular activities on the Internet, social media is increasingly inseparable from everyone's daily life, especially young people. Young people in their 20s and 30s are the most frequent users of the Internet (Błachnio & Przepiorka, 2016), more than 90% of young people use social media day and night (Woods & Scott, 2016). Social media is used as a means for young people to take advantage of their social needs. The use of the Internet has become an important part of their daily life and social extension. The use of social media has increased their communication and contact with their peers and the whole society (Müller et al., 2016)if there are additional internet activities related to addictive use. Especially, use of social networking sites has been discussed to be related to excessive use, but only few empirical studies are available. We wanted to explore, if use of social networking sites is related to addiction symptoms and psychosocial distress and which variables (demography, personality. Young people get the latest information through social media platforms, get topics from them, and resonate with their peers through social platforms.

While social media has brought great convenience to our life, it has also led to many problems and unhealthy habits such as addictive behaviour. It is becoming more and more difficult for people to get rid of social media. There has been overuse (Jasso-Medrano & López-

Rosales, 2018)depression, and suicidal ideation. The questionnaires were applied to a sample of 374 university students where 58.6% were women and 41.4% men, with an average age of 20.01 years (SD = 1.84. As a result, there has been a surge in the number of studies on the use and addiction of social media such as Facebook in recent years. There is growing concern about the impact of social media use, including the possible relationship between social media and negative emotions and attitudes (Błachnio et al., 2017). The use of social media is considered to be a special emerging problem for young people, many people feel uncomfortable when they are separated from their mobile phones and social media for only one hour. It is also common to see people who use social media for more than 8 hours a day. There are also many people who cannot live, work and study normally because they are excessively addicted to social media.

2. LITERATURE REVIEW

Unlike the Internet or computers, social media is different in the social pressure generated by its platform, which is updated in real-time and is allowed to respond immediately to new content (Shen & Wang, 2019)few has examined complex models of different motivations and individual characteristics interact with each other, and the subsequent impact on excessive smartphone use. The present study aims to construct a moderated mediation model to explore the impact of loneliness on excessive smartphone use among Chinese college students and its internal mechanism. Using a sample of 549 smartphone users, we found that for entertainment motivation, it was a mediator between loneliness and excessive smartphone use and perceived stress moderated the relationship between the mediator (entertainment motivation. All social media users are able to post information, participate in the discussion of the same topic, and express their own opinions. The role of users has changed from the simple passive receiver of news information in the era of traditional media to the receiver and active producer of news information in social media. Related studies have shown that young people who spend more time surfing the Internet and using social media sites tend to experience higher levels of anxiety and depression (Shensa et al., 2018). Many young people are used to communicating with others through the social media, but can't adapt to face-to-face communication with others in real life. On the other hand, information on the social media is complicated and chaotic, users have different levels of education, different personalities, and it

is common to hold opposing views on the same issue. However, the unlimited freedom of speech on the Internet platform undoubtedly aggravates such confrontation and attacks on each other. This can be a strong shock and hurt to many teenagers who grow up under the careful care of their parents.

Young people associate social media use with academic stress, limited hobbies, maintaining online social relationships, etc. This group may also be vulnerable to uncontrolled and impulsive emotions, making them more likely to show problems. Moreover, improper use of social media may lead to more than just increasing negative emotions (Anderson & Jiang, 2018). Previous studies have shown an independent direct correlation between heavy use of social media or the Internet and the increase in suicide attempts (Sedgwick et al., 2019)but detecting those at risk is challenging. Novel preventive strategies with wide influence across populations are required. Interest in the potential for both detrimental and supportive influences of social media/internet use on suicidal behaviour has been growing; however, the relationship remains unclear.Recent findingsA systematic search of articles from database inception up to 25 January 2019 across five databases: Medline, PsycINFO, EMBASE, HMIC and CINAHL revealed nine independent studies investigating social media/internet use and suicide attempts in young people less than 19 years old (n = 346 416. In this young group of students, such a terrible hidden danger is very worthy of attention and prevention, which is also the significance of this study.

Conceptual Framework:
When using social media becomes a necessity of daily life, young users will inevitably be affected when they browsing and using social media platforms. According to previous studies, it has been proved that the use of social media will affect people's emotions and attitudes. This study takes students as the research object, aims to ascertain the use of social media and its negative impact on students, and mainly discusses the two aspects of negative emotion and suicidal tendency. Negative emotions refer to emotions that are not conducive to your continued work or normal thinking caused by external or internal factors. Negative emotions include: sadness, anger, tension, anxiety, pain, fear, hatred, etc. Suicidal tendency refers to the dangerous behavior that individuals deliberately or voluntarily take various means to end their lives under the action of complex psychological activities. The conceptual framework of social media use on students' negative emotions and suicidal tendencies is shown below.
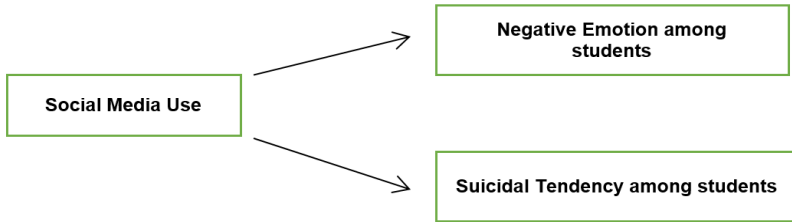
Figure 1: Conceptual Framework on the Impact of Social Media Use towards Negative Emotion and Suicidal Tendency

In 2020, the United States had slightly over 284 million internet users, one of the biggest online markets worldwide. Compared with developed countries such as the United States, according to the 47th "statistical report on the development of China's Internet" released by China Internet Network Information Center (CNNIC) on February, 2021, till December 2020, the number of Internet users in China has reached 989 million, and the Internet penetration rate has reached 70.4%. The ratio of male and female Internet users is 51.0:49.0, consistent with the ratio of males and females in the overall population. Middle school students accounted for 21.00% of the Internet users, accounting for the largest proportion (CNNIC, 2021). Therefore, to study the relationship between the use of social media and negative emotions and suicide tendency, students will be the most representative group.

Another key element in this study is suicide among students. Suicide is the second leading cause of death among 10-to 24-year-olds worldwide, and it is extremely challenging to prevent suicide in advance. With the deepening of relevant research, people increasingly realize that social media / Internet use may be related to negative emotions and attitudes. However, the relationship is still unclear (Lin et al., 2016)and its association with mental well-being remains unclear. This study assessed the association between SM use and depression in a nationally representative sample of young adults. Methods We surveyed 1,787 adults ages 19 to 32 about SM use and depression. Participants were recruited via random digit dialing and address-based sampling. SM use was assessed by self-reported total time per day spent on SM, visits per week, and a global frequency score based on the Pew Internet Research Questionnaire. Depression was assessed using the Patient-Reported Outcomes

Measurement Information System (PROMIS. Throughout recent years, many college students jumped off buildings, and young people committed suicide one after another., The negative emotion of depression and anxiety among students has seriously affected youngsters' daily life. Understanding the relationship between the use of social media and negative emotion, attitude and behavior are helpful to formulate intervention measures or prevention strategies for high-risk groups. And to avoid the young group to make extreme choices, fall into emotional difficulties, and guide the students to form a healthy and positive psychological state

3. METHODOLOGY

The SLR in this study adapts PRISMA 2020 publication standard. Four steps were involved in conducting the review. The four steps involved were: (i) formulation of research questions, (ii) systematic search strategy, (iii) quality appraisal and (iv) data analysis.

Formulation of Research Questions
The PRISMA for system review was used in this study to detail the database search. The data is filtered by the following search term: (social media and emotion), (social media and attitude) (Facebook and emotion), (social media and depression), (social media and suicide). Facebook is the most popular social media tool worldwide, has a certain representation, that is why choosing Facebook as one of the keywords.

Search Strategy
In order to determine articles that meet our standards, the researcher searched the relevant literature from 2016 to the present through 4 related databases: Web of Science, Google Scholar, Scopus and ProQuest about the impact of social media use towards emotion and suicidal tendency among students. Young people like students are taken as the research subjects, and the literature inconsistent with the subject's age is excluded.

Quality Appraisal and Data Analysis
In order to ensure that the search results meet the standards and research topics, the researcher made a simple preliminary attempt to search. After entering the keywords for the first time, researcher found that due to the wide scope of application of the word "attitude", there were a large number of documents unrelated to the subject such as business, economy and marketing. After

roughly exclude this kind of article, the researcher conducted a secondary search to determine the literatures that meet standards.

Findings

By comparing the number of results from the four databases from 2016 until May 2021, it can be found that excluding the data for less than half a year in 2021, the number of research on social media towards emotions and attitudes in the web of science and Scopus is increasing year by year, presenting a significant increasing trend. In Google Scholar and ProQuest, the peaks were mainly concentrated in 2016 and 2017, but overall, the number of related studies in 2016-2021 has not changed much, and the results are as follows:

Database	Keywords	2016	2017	2018	2019	2020	2021.5
Web of Science	social media and emotion	333	400	527	626	759	223
	social media and attitude	807	927	1014	1330	1634	463
	Facebook and emotion	81	92	126	147	177	36
	social media and depression	172	259	327	408	677	204
	social media and suicide	52	82	99	135	174	51

In Web of Science, it can be seen the results of keywords increasing year by year, especially in 2018-2020. The number of literatures on Social Media use towards Attitude and Emotion has increased significantly, and the growth rate is faster. According to the search results, the research on "Social Media and Attitude" is the most in 4 keywords. The result of "Social Media and Depression" is second. Rank according to the number of search results and keyword extraction of the search content, as follows:

"Social Media and Attitude" : covid-19, social panic, mental health, anxiety, political attitude, brand attitude (purchase intention), social media marketing, use attitude and public opinion orientation

"Social Media and Emotion" : Emotional expression (disorder), depression, emotional fluctuation (Covid-19 panic), attitude change, reputation (personal & brand), mental health, social cognition, things cognition (brand, politics, events), social comparison, content viral transmission

"Social Media and Depression": anxiety and depression, mental health, social isolation, loneliness, depression prediction, emotional dependence, covid-19

"Facebook and Emotion": mental health, emotional amplification, depression, sense of belonging and obsessive-compulsive disorder, emotional contagion, social comparison, addictive behaviour, marketing, political participation and publicity, Internet exclusion, Emotion regulation, expresses emotion (positive and negative),

"Social Media and Suicide": depression, public stigma, anxiety, celebrity suicide, suicide mimicry, victim guilt in social media, psychological pressure, Internet suicide method communication, cyberbullying, self-loathing

Table 2 Search results from Google Scholar database

Database	Keywords	2016	2017	2018	2019	2020	2021
Google Scholar	social media and emotion	72,900	68,800	61,900	53,000	41,200	13,500
	social media and attitude	131,000	120,000	96,900	81,000	59,800	22,800
	Facebook and emotion	44,600	46,700	45,400	41,700	35,400	11,300
	social media and depression	71,900	71,900	63,700	49,700	48,700	21,000
	social media and suicide	43,500	41,500	39,700	33,000	32,100	8,570

Google Scholar is the most commonly used Database, and the number of search results is undoubtedly the most in the four databases. Moreover, the number of related research during 2016-2021 is a lot. About the results of keywords, "Social Media and attitude" is still the most. The results of "Social Media and Emotion" and "Social Media and Depression" are similar in 2016-2020, ranking second, and keyword extraction of the search content, as follows:

"Social Media and Attitude" : covid-19 attitude, reporting attitude, brand attitude, purchase intention, learning attitude, attitude polarization, social isolation, emotional connection, peer pressure, emotional orientation.

"Social Media and Emotion" : emotional contagion, stress perception, well-being, emotional regulation, depression, emotional expression Emotional exhaustion.

"Social Media and Depression": depression, adolescents, social media addiction, loneliness, anxiety, poor sleep, low self-esteem, emotional support, prevention and self-regulation, stigma, stress and anxiety, covid-19.

"Facebook and Emotion": emotional expression, emotional prediction and detection, self-esteem correlation, social media addiction, information virus transmission, emotional and attitudes affect.

"Social Media and Suicide": suicide prevention, adolescent, suicide attempts, suicide transmission of celebrity suicides, suicide detection, adolescent depression.

Table 3: Search results from Scopus database

Database	Keywords	2016	2017	2018	2019	2020	2021
Scopus	social media and emotion	400	478	642	778	1,058	418
	social media and attitude	1,058	1,112	1,354	1,562	2,116	807
	Facebook and emotion	1,008	1,065	1,318	1,502	2,048	792
	social media and depression	193	271	326	469	856	331
	social media and suicide	74	98	138	176	252	88

In Scopus, the results of five search keywords are increasing year by year, and the growth was the fastest in 2019-2020. Among them, the number of researches on "Social Media and attention", "Facebook and emotion" is the largest among the five keywords, and keyword extraction of the search content, as follows:

"Social Media and Attitude": covid-19 emotion, brand marketing, purchase intention, political attitude, adolescent psychological.

"Facebook and Emotion": cognitive function, emotional health, emotional regulation, happiness and emotional contagion, information virus transmission, marketing communication, depression, conspicuous consumption, self-promotion, adolescent.

"Social Media and Emotion": depression Mental health, emotional impact, panic transmission during covid-19, stress, emotional comfort, mental health, anxiety and suicide, social comparison, sleep disorder, adolescent.

"Social Media and Depression": (most titles are similar and close to this study, adolescents are widely mentioned) such as mental health, covid-19, addictive behaviour, mental disorders, sleep quality, anxiety, social support, suicide prevention.

"Social Media and Suicide": mental health, depression, Internet bullying. Internet slander, anxiety, covid-19, false information, celebrity suicide infection, self-mutilation, suicide prevention.

Table 4: Search results from ProQuest database

Database	Keywords	2016	2017	2018	2019	2020	2021
ProQuest	social media and emotion	18,541	18,948	19,188	18,529	17,736	2,502
	social media and attitude	27,011	27,180	26,123	25,383	23,871	3,334
	Facebook and emotion	4,971	5,265	5,452	5,432	5,575	795
	social media and depression	13,847	14,021	13,997	13,538	12,929	1,876
	social media and suicide	7,121	7,299	7,110	6,947	6,709	983

The search results of five keywords in ProQuest show a year-on-year growth in 2016-2018. After that, the number decreased slightly, but in general, it is consistent. The results on "social media and attitude" are still more than other keywords, and keyword extraction of the search content, as follows:

"Social Media and Attitude": social media addiction, political attitude, political expression, depression, anxiety, brand consumption, personal opinion

"Social Media and Emotion": self-construction, brand image construction, emotional influence, application in the field of education, social identity

"Social Media and Depression": self-identification, social comparison, social participation, social media addiction, social connection (sense of belonging and happiness), cyberbullying, social skills, social exclusion (loneliness)

"Social Media and Suicide": Depression, anxiety, comparison, self-esteem, social pressure, false information, loneliness

<u>"Facebook and Emotion"</u>: family relationship, emotional regulation, depression and jealousy, emotional expression, addictive behaviour, and Internet harassment

To sum up, by comparing five different keywords, the researcher can see that from 2019 to 2020, the number of researches on "social media and depression" and "social media and suicide" has increased significantly in Scopus and Web of science. In general, the number of studies on social media use towards negative emotions and attitudes has always been large in recent years. In other words, researchers can also think that the topic of social media and negative emotions is concerned by many scholars and has great research significance nowadays.

According to the keywords and content of search results, researcher also found that "covid-19", "mental health", "social comparison", "depression" was frequently mentioned, "Panic", "Youth", "self-esteem", "Internet bullying", "addictive behaviour", "sleep quality", "anxiety", "suicide infection", "suicide and depression prevention", "information viral transmission", "social cognition (politics, something event)" and "social connection" as well. These contents are widely discussed in thousands of search results.

4. DISCUSSION

With the popularity of the Internet and mobile devices, social media has become a communication tool for everyone. The rapid increase in the number of social media users undoubtedly leads to the aggravation of related problems. The number of literatures from four databases showed us that the impact of social media use on emotions and attitudes has indeed been paid more and more attention in recent years. Thus, it has led to an inevitable connection with the rapid growth of social media users. Many people are using social media instead of face-to-face communication in this digital age. Through this review, the researcher also found that social media has an undeniable impact on users' emotions and attitudes, including positive and negative ones.

From the review, it is evident that in the early days of social media, it is easy to see that research began to discuss the influence of social media use and gradually led to research focusing on negative emotions or suicidal behaviour. Many suicide events in recent years are contributed through postings made on social media. The advancement of technology allows users to passed information is through social media. It acted as the medium of communication used by many of us, especially among youngsters, regardless of their locations.

On the other hand, search results showed that during the special period of the recent Covid-19 pandemic, most people worldwide were forced to stay at home for a long time. Social media has become the best tool to obtain information and communicate with the outside world because of its immediacy and rapid divergence. The review has also shown that social panic caused by false information spread through social media is also common. Social media is becoming a necessity in life, but its negative impact on all aspects of our lives has further intensified.

Through the review of many related studies in these databases, it can be found that the main effects of social media on negative emotions and attitudes are loneliness, anxiety, despair and pressure. These negative emotions lead students to suicide tendencies and even suicidal behaviour. Many researchers attribute these to online bullying, sex videos, disseminating of information about self-harm methods and suicide content on social media. Research findings outlined that students' use of social media encourages and forces students to commit suicide (Intahchomphoo, 2018; Popoola et al., 2019). In recent years, the number of Internet bullying and student suicide cases just confirmed this view (Cook, 2021).

The natural attributes of social media's careful editing and positive whitewashing make teenagers mistakenly think that is what life should be like (Tandoc et al., 2015). In contrast, they lose confidence and are dissatisfied with themselves. These have increased the possibility of negative emotions caused by social media use.

Internet bullying is one of the main risk factors of the negative impact of social media use. In recent years, internet violence has also been discussed by many researchers and attracted social attention. Social media is a common platform for Internet bullying. Criminals harass victims by publishing negative, harmful and false

information, comments and content about victims online through electronic devices such as mobile phones and computers. It may also involve the perpetrator sending out personal information about the victim to shame or humiliate the other party. The characteristics of the rapid spread of social media undoubtedly make this kind of criminal behaviour aggravate the harm to the victims. For sensitive and vulnerable teenagers, this is undoubtedly a heavy blow, making them make extreme choices.

This phenomenon not only occurs in teenagers, but a world-class issue. According to the World Health Organization (WHO), more than 800,000 people in the world commit suicide every year. Suicide is the fifth most important cause of death in China and the first important cause of death among people aged 15-34. The suicide rate of college students is 2-4 times that of the general population of the same age, which has become the main cause of unnatural death of college students. According to statistics, 10.7% of college students say that, they want to end their lives when they encounter setbacks. This shows that the psychological endurance of students is low, and they lack a rational understanding of many problems. In developed countries such as the United States, the situation of youth suicide is also very serious. The annual death rate is higher than that of traffic accidents. Suicide is the tenth leading cause of death in the United States and the most common cause of death among youngsters.

The harm of suicide is not only in the disappearance of one person, but also in the great possibility of infection once suicide occurs. The idea of suicide being infectious explains the tendency of suicide emulation as pointed out in the Werther Effect. Suicide infectivity is likely to cause suicide to imitate, making it negative, producing suicide tendency, exacerbating suicide behaviour. This information is usually transmitted through social media and can become popular in a short period (Zimerman et al., 2018). Social media is like a pushing hand so that these negative emotions are constantly growing like a snowball.

In fact, in addition to negative emotions such as anxiety and suicide, it can be seen from news environment that news messages are updated rapidly, pay attention to timeliness, and the form of communication or news release is becoming more simplified and direct. This is the general trend nowadays. The speed of message delivery is faster, and the length of news content is shorter and shorter. Some complex events may be presented in two ways one minute ago and one minute

later. The emergence of this phenomenon forces the text of the news to be more infectious, attractive, and even extreme incitement. Therefore, some bad emotions quickly invade the audience's brain at the speed of seconds, have an impact, and even change their views on certain things.

For example, everyone emphasizes seizing opportunities, rapid success and all kinds of promising young deeds, but ignores the largest proportion in the factors of success should be effort and persistence. It is undoubtedly wrong, biased and misleading for this kind of public opinion to move towards the social atmosphere. But in the other hand, unfortunately the fact is that we have heard too many stories about persistence and efforts. Stories and experiences of rapid success and promising young deeds are fresher, nerve stimulating and eye-catching, and are more likely to become a better choice to gain attention.

Therefore, this paper endeavours to explain the relationship between bad suicidal emotions and social media, and hope that we can pay attention to unhealthy phenomena exist in social media and even under the guidance of the news market. Only when we realize that this is a problem, which is wrong, rather than blindly conforming to the trend, will our teenagers and our news audience rationally and objectively selectively believe in the chaotic news market and have the ability to distinguish and self-judge, and our journalism will become healthier and better, moving in the direction of progress.

5. CONCLUSION AND RECOMMENDATIONS

As an open and free platform, social media should also be actively used for meaningful things such as psychological problems or negative emotional counselling and suicide prevention. Relevant institutions may use the keyword search to detect people with psychological problems and suicidal tendencies to intervene and help them. Relevant management departments or relevant institutions should also severely eliminate on such bad behaviour as network violence and Internet bullying, this has led to a healthy and positive network environment. Users are able to enjoy the convenient life brought by the digital era, rather than be negatively affected, harassed, interfered and even suicidal.

If schools are willing to add some relevant classes, maybe the phenomenon of social media depression and anxiety will be greatly reduced. If students are aware of some "dangerous" behaviour in

social media, they will deliberately avoid these behaviours in the process of using social media. For example, if the student cannot stop making negative comparisons with friends who seem like they have superior life, they should be aware of the psychological risk.

In order to keep a good mood, students should control the intensity of social media use. In addition, according to this review, to reduce negative emotions, the most important thing is to reduce the inappropriate use of social media consciously. Users are advised not to stalk into other people's social media pages to monitor, browse or compare with them to reduce unfavourable comparison and ruminating ways of thinking consciously. To conclude, social media use is inextricably linked to negative emotions and attitudes. Therefore, students should be more disciplined. Schools or universities, and parents should scientifically guide them to take advantage of social media, make social media play a more positive role and reduce its negative impact.

6. ACKNOWLEDGEMENT

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