

Cross-Cultural Perspective: A Literature Review of Social Media Use and Psychological Adaptation Among Chinese International Students

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Abstract

Nowadays, studying abroad has gradually become a natural or common phenomenon. As the largest source of international students in the world, the issue about Chinese students' adaptation in foreign environments has always been the focus of scholars. Since social media has become an important tool for international students to adapt to the host country, studies on the relationship between social media usage and adaptation are gradually increasing. Using electronic and manual retrieval methods, this paper reviewed 14 quantitative studies on Chinese students' social media usage and psychological adaptation from 2010 to 2020. This literature review indicated the main characteristics of current research from five aspects, namely publication time, types of social media, theories, measurement of the main variables, and conceptual framework. Results found that there existed conflicting conclusions about the relationship between social media usage and psychological adaptation, one of the main reasons was that the measurements of the two variables were different. Secondly, the location of the study also played a role. The cultural differences between the East and the West may lead to different conclusions in studies conducted in Asian and western countries. Although these studies collected data through questionnaires to verify the impact of social media use on psychological adaptation, it is difficult to determine the causal relationship through a cross-sectional survey.

Key Words: *Cross-cultural adaptation, psychological adaptation, social media usage, international students*

1. Introduction

As the continuous acceleration of globalization in the world, assisted by the rapid growth of global communication and transportation systems, studying abroad has gradually become a natural or common phenomenon. According to United Nations Educational, Scientific and Cultural Organization (UNESCO), in 2017, more than 5.3 million international students were studying in the world, compared with only 2 million in 2000 (UNESCO, 2019). As the biggest source country of international students, China has sent a total of 5.5871

million Chinese students to study abroad from 1978 to the end of 2018. International students entering into a new environment may suffer from increased stress and decreased well-being (Mikal, et al., 2013), their cross-cultural adaptation, especially psychological adaptation has become a hot issue among scholars with the increasing number of international students (Shafaei & Razak, 2015). A series of studies have found that Chinese students face many challenges in psychological adaptation. (e.g., Forbush & Foucault-Welles, 2016; Galchenko & Vijver, 2007; Han et al., 2013).

Hao (2007) mentioned that media played an important role in cross-cultural situations because individuals usually encounter greater communication needs when adapting to a new environment. International students have faced immense obstacles in the past due to the disconnection from the home country's social relations and the new social connectedness in the host country has not yet been established. Nowadays, international students can not only keep in contact with their home country but also develop a social relationship with their host country through social media (Sawyer, 2011). As Wilkin et al. (2009) stated, the use of media is the key driving force for adapting to new surroundings. Even though social media has become the most important media consumption choice for international students (Lim & Pham, 2016), whereas the literature examining the impact of social media on the psychological adaptation of international students is relatively scarce (Park et al., 2014). Moreover, scholars have inconsistent conclusions about the impact of social media usage on psychological adaptation in the limited researches. Some researches indicated that social media played a positive role (Park et al., 2014; Plaza & Plaza, 2019; Yang, 2018; Zaw, 2018). For example, social media helps to improve subjective well-being and life satisfaction (Kim & Lee, 2011). On the contrary, Lup et al. (2015) suggested that the use of social media leading to negative emotions such as loneliness and depression. The reasons behind inconsistent conclusions need to be explored. This is also the main purpose of the current literature review. In addition, there is no systematic literature review related to social media usage among Chinese students in foreign countries, which is urgently needed due to a large number of Chinese students studying abroad and the widespread use of social media.

Taking Chinese students as the research object, the paper reviews the articles concerning the influence of social media on psychological adaptation from 2010 to 2020, aiming to find out what is the relationship between social media usage and psychological adaptation? What are the mechanisms behind social media influencing psychological adaptation? What are the gaps in the current research? It is hoped to provide a clear guiding map for future research in this field.

This paper mainly answers the following three questions:

1. What are the sample characteristics, theories, and conceptual frameworks among previous studies of the influence of social media on psychological adaptation among international students from China?
2. What is the relationship between social media usage and psychological adaptation among Chinese international students from 2010 to 2020?
3. What are the gaps in the literature on the psychological adaptation of Chinese international

students from 2010 to 2020?

2. Methods

2.1. Sources

Electronic search and manual search methods were both used in the current literature review.

Electronic retrieval was mainly conducted in Google Scholar and Scopus databases, while manual retrieval was mainly to search for articles that meet the criteria in previous studies, such as previous literature reviews. The main reason for choosing Google Scholar and Scopus is that these two databases contain a large number of articles of different types, such as journals, books, conference papers, and cover a wide range of subjects, providing as much literature as possible. Manual searching of relevant literature in the process of reading literature can compensate for the omission of electronic search.

2.2. Inclusion/Exclusion Criteria

According to the questions of the current review, the selected articles must meet the following criteria. First, include a sample of Chinese international students. Second, only research articles in the journal included, including “Review papers, books, preprints, book chapters, series, theses, and conference proceedings” are excluded (Tang et al., 2021, p.4). Third, since this review intends to discover a causal framework between social media and psychological adaptation, only quantitative research articles were selected. Fourth, due to the language barrier, articles published in English were included. Finally, articles must be published between 2010 and 2020.

Since China has special national conditions, China includes mainland China, Taiwan, Hong Kong, and Macao. Therefore, articles involving the above samples can be included in the current review.

Table 1. Keywords of Article Retrieval

Database	Search Keywords
Scopus	TITLE-ABS-KEY ([“social media use*” OR “social media usage*” OR Chinese OR “Chinese student*” OR “Chinese sojourner*” OR “international student*” OR “college student*” OR “university student*” OR sojourner*] AND [“psychological adaptation” OR “psychological adjustment”] OR depression OR happiness OR “life satisfaction” OR “well-being”)
Google Scholar	allintitle: Chinese student "social media usage" OR "social media use" OR "social media uses" OR "social media usages" OR "psychological adaptation" OR "psychological adjustment" OR "mental health" OR "well-being" OR "life satisfaction" OR depression OR happiness

Table 2 Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Timeline	2010-2020	<2010 and >2020
Literature Type	Research paper	review papers, books, preprints, book chapters, series, and conference proceedings

Language	English	Non-English
Research Object	Chinese students	Non-Chinese students
Research Method	Quantitative	Qualitative, mixed-method

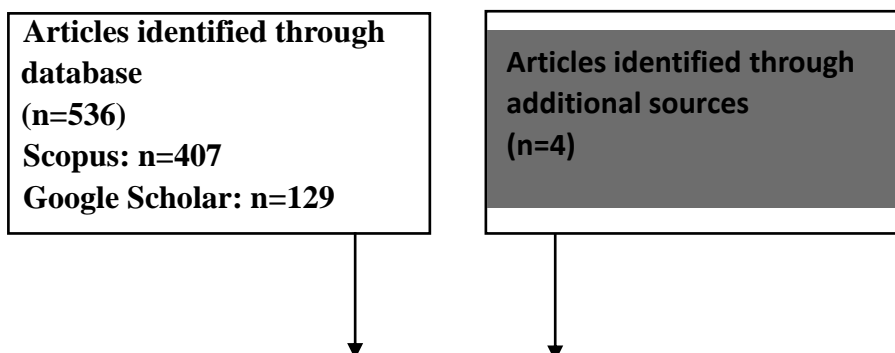
2.3. Search Procedure

Chinese students, social media, and psychological adaptation are the focus of the current review,

and all possible combinations and derivations related to the three words are searched as keywords. Specifically, search terms were used to identify articles that focus on Chinese international students including Chinese students, Chinese sojourners, international students, sojourners. Since the terms "adaptation" and "adjustment" are often used interchangeably in research (Gurieva & Kinunen, 2019), both psychological adaptation and psychological adjustment are listed as keywords. To obtain more literature, life satisfaction, happiness, depression, distress, and well-being, which are associated with the process or results of psychological adaptation (Ng et al., 2017; Wang & Quan, 2013), are also searched as keywords. Therefore, psychological adaptation, psychological adjustment, life satisfaction, happiness, depression, and well-being were used to identify articles that related to psychological adaptation (see Table 1). In addition, articles also were manually searched from previous relevant studies. All searches took place in the first week of October 2021.

After an initial search, 407 articles, 129 articles, and 4 articles were retrieved from Scopus, Google

Scholar, and additional sources respectively. After manually deleting some irrelevant and duplicate documents, a total of 110 articles were identified for full-text review. Thoroughly read the title, abstract, and full text of all the articles, 14 articles were identified that meet the inclusion criteria. The process of article selection was shown in figure 1 and specific information on the selected articles was presented in table 3.



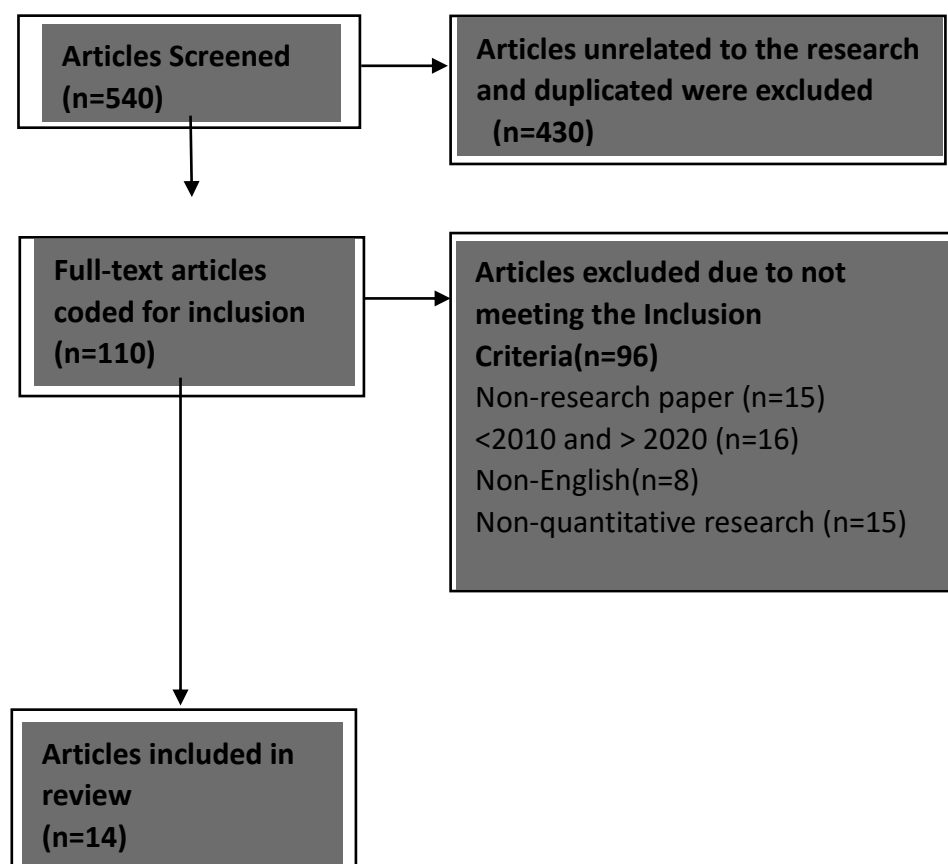


Fig. 1. Flow diagram for the process of article selection.

Source. Adapted from Brunsting et al. (2018)

Table 3. The specific information of the Articles Selected for Analysis

Author/ Year	Sample Characteristics	Theory/ Model	Study Design	Social media Type	Topic
Li et al. (2013)	N=170 from a university in the US	Not list	Cross-sectional survey	No specific social media	examine the relationships of acculturation, Internet use, and psychological well-being
Wang & Quan (2013)	N=268, From 21 U.S. universities	Uses and gratifications theory	Cross-sectional survey	No specific social media	the impact of ethnic Internet use on cross-cultural adaptation
Du & Lin (2019)	N=121, In New Zealand	Acculturation model	Cross-sectional survey	No specific social media	the relationship between social media usage, acculturation, and psychological

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					well-being
Pang (2018a)	N=206, In Germany	Not list	Cross-sectional survey	No specific social media	The relationship between different function of social media, social support, and well-being
Pang (2018b)	N=212, In Germany	Not list	Cross-sectional survey	WeChat	Correlations between WeChat use intensity, social support, and psychological well-being
Pang (2018c)	N=228, from a university in Germany	Not list	Cross-sectional survey	WeChat	The relationship between time spent and subjective well-being
Guo et al. (2014)	N=142, from a university In Japan	Not list	Cross-sectional survey	No specific social media	The relationship between social media use, social support, and psychological well-being
Rui & Wang (2015)	N=202, Chinese students (27.56%) form a university	Anxiety management theory (AUM)	Cross-sectional survey	No specific social media	The role of the social networking site in cross-cultural adaptation.
Yu et al. (2019)	N=368, from 3 universities in the UK.	Not list	Cross-sectional survey	No specific social media	Influences of social media usage on psychological and behavioral aspects.
Lee et al. (2011)	N=166, from a university in Korea	Not list	Cross-sectional survey	No specific social media	Effects of internet use motivations on international students' college adjustment
Hsu & Chen (2020)	N=152, from a university in the US	Anxiety management theory (AUM)	Cross-sectional survey	No specific social media	Influences of ethnic internet use on sociocultural and psychological adaptation.
Pang (2020)	N=298, from a university in Germany	Cross-cultural adaptation theory	Cross-sectional survey	No specific social media	The influence of social media use type on cross-cultural adaptation
Park et al.	N=283, Chinese(94),Kore	Not list	Cross-sectional survey	Cyworld RenRen	The relationship between SNS or

(2014)	an(189) From 2 universities in the US			Facebook	other media use and psychological well-being
Yang (2018)	N=408, In the US	Uses and Gratifications theory	Cross-sectional survey	Facebook Twitter	The influence of US-based social media use on adaptation.

3. Results

3.1. Publish date

In general, from 2010 to 2020, a total of 14 articles met the inclusion criterion. From the literature search, only one relevant article was published from 2000 to 2009 (Wang & Sun, 2009). Since 2011, the volume of literature has increased. In particular, in the three years from 2018 to 2020, eight articles illustrated the increasing interest in this area. This has to do with the rapid increase in the number of Chinese students studying abroad since 2010. According to data released by the Ministry of Education of the People's Republic of China in 2019, the number of Chinese studying abroad increased from 60,000 to 265,000 from 2001 to 2010, the number increased by 200,000 in ten years (Ministry of Education of the People's Republic of China, 2019). With the implementation of "the Belt and Road policy" by the Chinese government and the increasingly frequent exchanges between China and other countries, the increasing number of Chinese students has attracted the attention of some scholars in recent years (Emang et al., 2015; Shi & Ek-Iem, 2020; Nachatar Singh, 2018; Yakin & Totu, 2018).

3.2. Sample Characteristics

Of the 14 studies, 2 studies selected samples more than just Chinese students. Rui & Wang (2015) selected international students from all over the world, and Chinese students accounted for about 27.56 percent. A comparative study was conducted on Chinese students and Korean students in the United States (Park et al., 2014).

For research location, except for one study that did not specifically introduce research location, 5 studies were conducted in the United States, 3 in Germany, 1 in New Zealand, 2 in the United Kingdom, 1 in Japan, and 1 in South Korea. Most studies focus on the psychological adaptation of Chinese students in western countries (n=11). In addition, only three of the studies selected Chinese students from two or more universities, while the rest were from a single university.

3.3. Social media type

With the development of information technology, there are various kinds of social media. This review

focuses on Chinese students studying abroad who increase their use of social media in the foreign country alongside their use of social media in China. Therefore, in the study, social media in different countries will be focused on. In the study, 3 studies divided social media into host social media and ethnic social media (Du & Lin, 2019; Hsu & Chen, 2020; Park et al., 2014). Three studies only considered the effects of ethnic social media use on psychological adjustment (Pang, 2018b, 2018c; Wang & Quan, 2013), and one study looked at the effects of host social media use (Yang, 2018). Specifically, four studies proposed specific media types, namely WeChat (2), Facebook (2), Twitter (1), and Cyworld (1). WeChat and Facebook, the two representatives of social media in China and the English-speaking countries respectively appeared twice in 14 studies, the other 10 studies did not mention specific social media

3.4. Theory

In the study of social media use and psychological adaptation of Chinese international students, four theories were used, namely uses and gratifications theory (U&G), acculturation theory, anxiety/uncertainty management theory (AUM), cross-cultural adaptation theory (CAA).

U&G was applied in two studies. Wang & Quan (2013) applied the theory to indicate that personal factors (English ability, length of stay, acculturation attitude, the degree of loneliness) and media use motives (social involvement, acculturation, pass the time, information, entertainment, convenience, companionship) affects media consumption. Cross-sectional survey results suggested that entertainment use and social involvement motives positively predict ethnic internet use, respondents who used ethnic internet heavily had a better psychological adjustment. In this study, individual factors and motivations for internet use predicted the time spent on media and thus had an impact on the adaptation of international students. U&G theory provides a basic research framework, establishing the relationship between personal factors, use motivation, and media consumption. Similarly, according to U&G, Yang (2018) hold that international students may choose different ways of using media for different needs. Taking Facebook and Twitter as examples, the study explored the influence of frequency of use (active use and response) and network size on participants' adaptation. The results of the comparative study found that the more frequent responses received on Facebook and Twitter, the better they adapted. In this study, U&G provides an entry point for the study from the perspective of participants, which regards their use of social media as proactive behavior based on personal needs.

AUM theory was put forward by Gudykunst in 1988 and is often used to explain the adaptation of sojourner, which mainly refers to people who live in other cultures temporarily (Gudykunst, 2005), so it is suitable to study the adaptation of international students (Rui & Wang, 2015). The core concepts of this theory are "anxiety" and "uncertainty". Sojourners can better adapt to a foreign culture when there is less uncertainty and anxiety (Gudykunst, 2005). Based on the theory, Rui & Wang (2015) hold that social networking site usage was

useful to relieve anxiety and uncertainty and thus facilitate students' adaptation. Similarly, Hsu & Chen (2020) also applied the theory to build a research framework to explore the relationship between social media use, uncertainty reduction, and adaptation. The results found that host social media use is a benefit to reduce uncertainty, which in turn promotes psychological adaptation. These two studies combine the theory with social media use, verified that social media is a significant factor in reducing uncertainty and anxiety, and demonstrated the core of the theory, and broaden its application. In particular, Hsu & Chen (2020) applied this theory to explain how social media use affects psychological adaptation.

The acculturation theory suggested by Berry (2005) indicated that when two or more different cultures contact in the process of cross-cultural adaptation, bicultural identity will come into being. Simply input, Individuals maintain the original cultural identity and establish a new cultural identity with the host country at the same time (Li & Tsai 2015). The theory rejects the unidirectional view that two cultural identities cannot coexist. Based on this theory, Du & Lin (2019) proposed the hypothesis that Chinese students' use of different social media in New Zealand influenced identification with New Zealand and China and then influenced their adaptation. The results indicated that the frequency of social media usage in New Zealand positively predicted identification with New Zealand, but negatively affected identification with China. This theory provides a perspective for studying cultural identity from the host country and the home country and explains the mechanism behind the influence of social media use on adaptation.

Cross-cultural adaptation theory is the classic theory of cross-cultural adaptation research. Early studies mainly focused on immigrants and proposed that immigrants would encounter a series of psychological and sociocultural problems in the face of different cultural exchanges. With the diversification of transnational groups, especially the increasing number of international students, international students' cross-cultural adaptation attracted the attention of scholars. Since the main goal of international students is to pursue their studies, academic adaptation has also become an important aspect. Some scholars believe that academic adaptation is a part of sociocultural adaptation (Rienties et al., 2012; Sam & Berry, 2010). Pang (2020) applied cross-cultural adaptation theory to set psychological, sociocultural, and academic adaptation as dependent variables and establish a research framework.

3.5. The measurement of social media use and psychological adaptation

In the limited research, there exist different opinions about the role of social media in adaptation. 10 articles indicated that social media can help international students to get better psychological adaptation due to it provides them with many benefits, such as relieve psychological stress and improve well-being (Pang, 2018b), perceived life satisfaction (Guo et al., 2014). Rui and Wang (2015) maintained that "SNSs are effective to adaptation because they can help international students connect with individuals from different cultural backgrounds and provide additional communication opportunities with local host nationals"

(p. 409). A survey on 268 Chinese students in the US indicated that indicated ethnic Internet use could improve psychological adaptation (Wang & Quan, 2013). Differently, Lee et al. (2011) demonstrate that social media usage brought a negative impact on international students' emotional adaptation. The study analysis on 170 Chinese international students in the US indicated that internet use hurts psychological adjustment. A comparative study on the effects of social networking site use on psychological adjustment among Chinese and Korean students in the United States found that there was no relationship between social networking site use and psychological well-being (Park et al., 2014).

There is no clear conclusion among scholars about the impact of social media on psychological adaptation, and there are two main explanations. Firstly, the measurement of social media usage is incoherent. Unlike common social media users, international students need to use social media from both home and host countries to keep in touch with people of different cultures. 2 studies measured the influence of the use of ethnic and host social media on psychological adaptation respectively (Hsu & Chen, 2020; Park et al., 2014). Differently, Wang & Quan (2013) concentrated on ethnic social media use and Yang (2018) only focus on host social media use. In terms of specific measurement, 7 studies measured social media (internet, SNS) use by the time spent daily or per week self-reported by respondents (Guo et al., 2014; Hsu & Chen, 2020; Lee et al., 2011; Li et al., 2013; Park et al., 2014; Pang, 2018b; Wang & Quan, 2013). 2 studies pay attention to the usage frequency (Du & Lin, 2019; Rui & Wang, 2015). 6 studies concentrate on types of use, including different use functions (Guo et al., 2014; Pang, 2018a), active or passive use (Pang, 2020). different use motives or purposes (Lee et al., 2011; Yu et al., 2019;). Other factors, such as social network size (Park et al., 2014; Yang, 2018), frequency was also used to measure social media use. Even when measuring the purpose of use, different studies have different classifications. Pang (2018a) classified social media usage into social and entertainment use. Yu et al. (2019) suggest that the purposes of use include knowledge sharing, interaction, and entertainment. In addition to these three purposes, Lee et al. (2011) added homeland orientation purpose. In terms of specific social media platform, one study focusses on one social media (Pang, 2018b). 2 studies compared the use of two or three social media, Facebook and Twitter (Yang, 2018), Cyworld, Renren, and Facebook (Part et al., 2014), while 11 studies took social media as the research object. Second, there are also differences in the measurement of psychological adaptation among studies.

Secondly, there are great differences in the measurement of psychological adaptation in the research. Some scholars linked psychological adaptation with participants' psychological emotions (Du & Lin, 2019; Li et al., 2013; Pang, 2018a, 2018b), including positive and negative feelings, such as depression, happiness, loneliness, homesickness. Some scholars suggested that psychological adaptation was related to well-being (Pang, 2020; Park et al., 2014) and life satisfaction (Guo et al., 2014; Hsu & Chen, 2020; Pang, 2018a, 2018b, 2020; Wang & Quan, 2013), and some scholars measure psychological adaptation by stress (Lee et

al., 2011; Rui & Wang, 2015; Yang, 2018). Therefore, there are various scales for measuring psychological adaptation in research, and scholars do not have a relatively unified perspective.

Table 4. the Measurement of social media use and psychological adaptation

Reference	Main Variables	Measurement	Findings
Wang & Quan (2013)	Ethnic Internet use	time spent daily	ethnic Internet use → psychological adaptation (+)
	Psychological adaptation	Depression and Satisfaction with Life	
Li et al. (2013)	Internet use	time spent daily	Internet use → psychological well-being (-)
	Psychological well-being	measure positive and negative affective states	
Du & Lin (2019)	Social media use (ethnic and host)	Use frequency	Indirect effect: Host social media use → Identification with New Zealand (full mediated) Happiness
	Psychological well-being	depression and happiness level	
Pang (2018a)	Social media use	use function (social and entertainment use)	Time spent on WeChat subjective well-being (+)
	Subject well-being	Gratification with life, positive feelings, and the negative feeling	
Guo et al. (2014)	Social networking sites use	amount of time, frequency of reply, and functions of SNS use	Social and informational → Perceived life satisfaction (+) Entertaining recreational functions → levels of loneliness (+)
	Psychological adaptation	life satisfaction and loneliness	
Yu et al. (2019)	Social media usage	use purpose (knowledge sharing, interaction, and entertainment)	Social media → usage psychological cultural acculturation (+)
	Psychological adaptation	Changes in individuals' psychocultural orientations	
Rui & Wang (2015)	Social networking sites use	use frequency use patterns	Social networking sites use → psychological adaptation (+)
	Psychological adaptation	acculturative stress	
Lee et al. (2011)	Internet use	use motives (homeland orientation, Information seeking, entertainment, social interaction) time spent daily	use motivations → emotional adjustments (+) homeland orientation use → Emotion adjustment (-)

	Emotion adjustment	Homesick, cope with distress	
Hsu & Chen (2020)	Ethnic and host social media use	Time spent daily	Host internet use → psychological adaptation (+)
	Psychological adaptation	Comfortable or satisfied in the host country	
Pang (2018b)	Social media use (WeChat)	Time spent daily	time spent on WeChat subject well-being (+)
	Subject well-being	Gratification with life, positive feelings, and the negative feeling	
Pang (2020)	Social media use	Active and passive use	active use → psychological adaptation (+)
	Psychological adaptation	Well-being and life satisfaction	
Park et al. (2014)	Ethnic (Cyworld, Renren) and host social media (Facebook) use	Time spent per week	There is no relationship between social networking site use and psychological well-being.
	Psychological well-being	Mental Health	
Yang (2018)	US-based social media use (Facebook and Twitter)	Active use, response, network size	More frequent response received → adaptation (+)
	adaptation	psychological and sociocultural stress	

3.6. Conceptual Frameworks

According to Mohammed et al. (2010), a research framework includes exogenous variables, moderating variables, mediating variables, and endogenous variables. Although all the articles in this literature review focus on the relationship between social media use and psychological adaptation, different studies focus on social media use and psychological adaptation from different perspectives. Besides, some studies explored the mechanism behind such influential relationships, and different mediating variables have emerged. In a word, researchers have established different research frameworks according to different research problems. Except there were no moderating variables, the exogenous variables, endogenous variables, mediating variables, and control variables involved in the 14 papers were shown in Figure 2. Since the different measurement methods involved in independent and dependent

variables have been discussed in detail in the above section, the following was mainly to discuss the mediating variables and control variables.

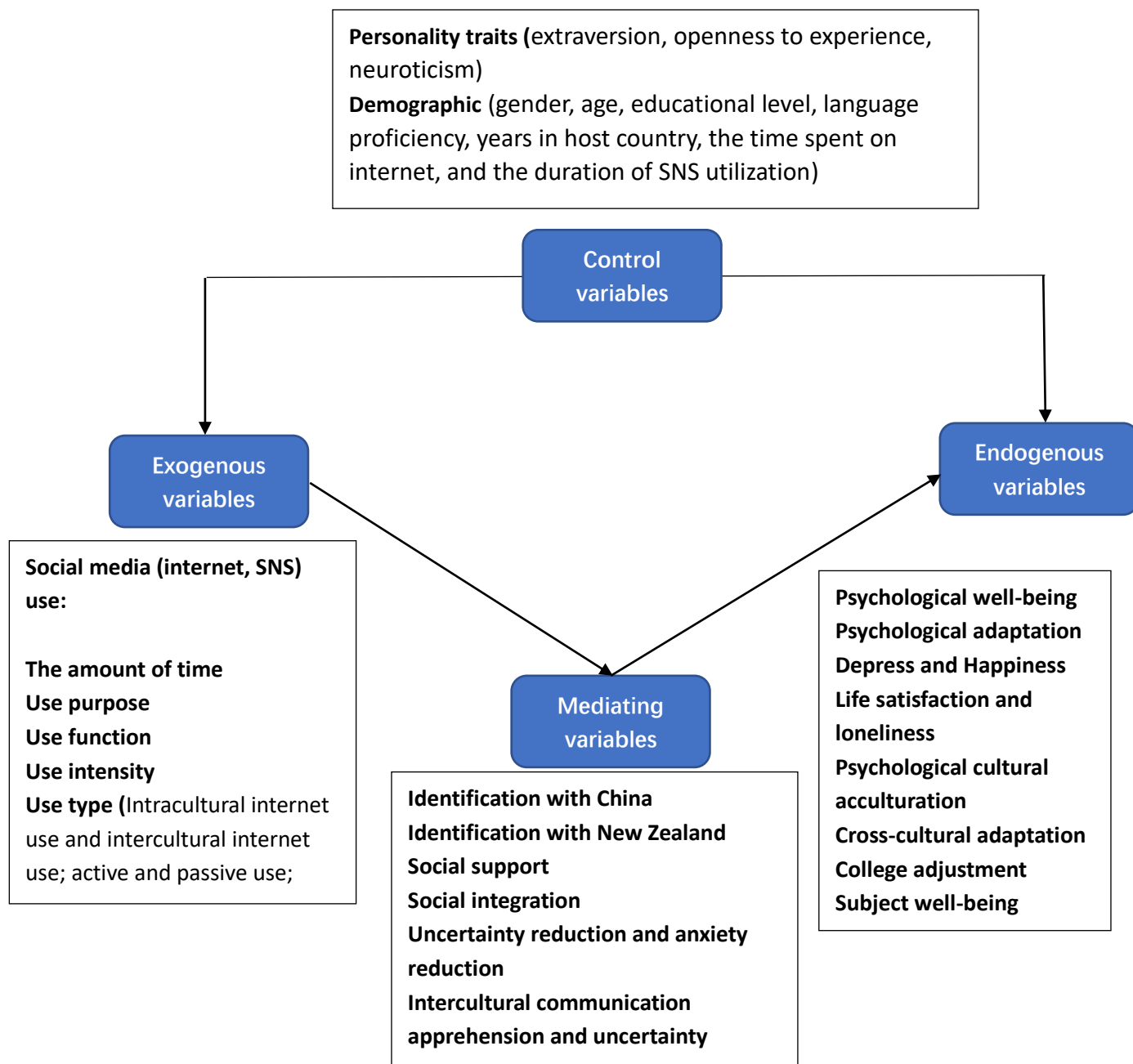


Figure 2. The conceptual framework for selected articles

Source. Adapted from Tang et al. (2021)

3.7. Mediating Variables

As mentioned before, the relationship between social media use and psychological adaptation is inconsistent, one of the reasons is the inconsistent measurement of the two variables. Besides, previous studies have found that social media does not directly affect psychological well-being, but maybe influenced by some mediating factors (Li & Peng, 2019;

Yoo & Jeong, 2017). In 14 articles, Identification with ethnic and host country (Du & Lin, 2019), social capital (Pang, 2018a, 2018b, 2018c), social support (Pang, 2020), social integration (Pang, 2018c), uncertainty and anxiety reduction (Rui & Wang, 2015), intercultural communication apprehension and uncertainty reduction (Hsu & Chen, 2020) were indicated as mediating variables to explore how the social media usage influenced psychological adaptation. A survey with 121 Chinese in New Zealand investigated the influence of Chinese social media use and New Zealand social media use on psychological well-being, identification with China and New Zealand were considered as the mediating variables. The results indicated that only identification with New Zealand mediated the relationship between New Zealand social media use and psychological well-being (Du & Lin, 2019). Although social media use and psychological adaptation were measured differently, Pang considered the mediating role of social support in all four of his studies. The scholar's recent study found that social support from home and host society mediated the relationship between active social media use and psychological adaptation (Pang, 2020). Pang (2018a) indicated that social use of SNS has an impact on psychological well-being by bonding and maintained social capital while bridging social capital has no mediating effect. Similarly, only bonding and maintained social capital mediated the relationship between WeChat use intensity and psychological well-being (Pang, 2018b). In addition to social capital, Pang (2018c) indicated the mediating effect of social integration on the relationship between WeChat use time and subjective well-being. In the four studies, social media use was measured from the use types (Pang, 2020), use functions (Pang, 2018a), WeChat use intensity (Pang, 2018b), and time (Pang, 2018c), and dependent variables were included psychological well-being (Pang, 2018a, 2018b), subjective well-being (Pang, 2018c), and psychological adaptation (Pang, 2020). It was found that the mediating effects of social support, social capital, social integration have been verified in most cases. Based on AUM theory, Rui and Wang (2015) demonstrated that SNS use cannot influence psychological adaptation through uncertainty and anxiety reduction. Differently, Hsu & Chen (2020) hold that uncertainty reduction played a mediating role between host social media use and psychological adaptation. Besides, the mediating effect of intercultural communication apprehension was also proved.

3.8. Control Variables

Among the 14 articles, control variables were measured in 7 articles (Hsu & Chen, 2020; Lee et al, 2011; Li et al., 2013; Pang, 2018a, 2018b, 2018c, Pang, 2020; Park et al., 2014). Based on previous findings, demographic variables, especially gender, age, length of stay in host countries, were controlled and verified in these studies. Hsu & Chen (2020) proposed a hypothetical model after controlling the length of stay in the US. In addition to gender and age, the amount of time spent on social media every day was also measured as control variables (Park et al., 2014). Similarly, social media usage experience was controlled for in addition to demographic characteristics (Pang, 2018b). Differently, a study of 156 international students from around the world found that there was no significant relationship between demographic characteristics and variables (Rui & Wang, 2015). The reason for the inconsistent findings with the previous two studies may be that the sample included international students not just from China but from all over the world. In addition to demographic variables, Lee et al. (2011) controlled the effect of personality traits when

studying the relationship between variables. The survey of 166 Chinese students in Korea found that extraversion, openness to experience, and neuroticism were influential among the five major personality traits, while agreeableness and conscientiousness were deleted from the model.

4. LIMITATIONS AND RECOMMENDATIONS

As can be seen from Table 1, among the 14 studies, only 3 articles selected samples from two or more universities, while the remaining 11 studies selected students from one location. Consequently, it is difficult to make the findings generalizable to Chinese students at other universities. Therefore, these studies are very limited in showing the use of social media and psychological adaptation among Chinese international students. Future research can also compare the social media use and psychological adaptation of Chinese students from different universities, and more meaningful findings will be obtained. In addition, most of the studies mentioned above were conducted in Western countries, while limited studies in Asian countries, which greatly restrict the generalization of research results. There are great cultural differences between eastern and western countries. Chinese students will face different difficulties in western and Eastern countries. Whether Chinese students use social media differently in different cultural backgrounds of western and Asian countries? Whether there are different effects on psychological adaptation is something that future researchers can explore.

According to the above analysis, the vast majority of the 14 articles did not mention specific social media. Among the mentioned social media platforms, SNS such as WeChat and Facebook are relatively common. However, the types of social media are diverse. According to Kaplan & Haenlein (2010), social media can be divided into six types, including social networking sites (e.g., Facebook), content communities (e.g., YouTube), collaborative projects (e.g., Wikipedia), blogs (e.g., Twitter), virtual social worlds (e.g., Second Life), and virtual game worlds (e.g., Tower Unite). Social networking sites are the most studied type of social media, other types of social media are rarely involved. Consequently, in future research more types of social media should be taken into consideration to present a more colorful research picture.

As for the research method, all the 14 articles applied the cross-sectional survey method to explore the relationship between variables. However, the associations among variables measured at the same point in time are not sufficient to determine causality relationship (Wang et al., 2018). Besides, cross-cultural adaptation and social media use is a dynamic process, and it is difficult to present the dynamic process with a cross-sectional questionnaire. Longitudinal methods can be applied to obtain more valuable conclusions.

This paper reviews only 14 quantitative research papers selected through electronic and manual search from 2010 to 2020. Future research reviews can expand literature sources and time horizons to explore more studies. In addition to quantitative research articles, articles using qualitative or mixed research methods can also be integrated into to explore whether different research methods have different findings. In addition, the current review only focuses on Chinese international students. Future studies can expand the sample source and

make a comparison of social media use and adaptation among international students from different countries.

5. CONCLUSION

The review of 14 articles found an inconsistent relationship between social media use and psychological adaptation. The reasons behind this mainly lie in the following aspects. First, the measurement of the two variables was inconsistent. In particular, there were large differences in the measurement of social media use. Secondly, the study sites were also different. Studies conducted in western and Asian countries have different conclusions. At present, most studies were conducted in western countries, which calls for scholars to carry out more studies in Asian countries. Besides, with an increasingly rich social media environment, more types of social media should be taken into account.

According to different research objectives and questions, researchers have established different research frameworks to investigate the diverse influence mechanism behind the relationship between social media use and psychological adaptation. But all studies applied the cross-sectional survey method, longitudinal research is needed to demonstrate the causal relationship.

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