

Article

Are mental health problems still a stigma in China? *How social media influences social cognition of mental illness – A case study*

Gefei Li

Abstract

Stigma and discrimination attached to mental illness have long been an obstacle to developing a healthy society. While the source of stigma and possible protective mechanisms have been well-investigated in the Western context, similar studies in the East are currently scarce. In China, Kimi Qiao Renliang, a pop singer who was clinically depressed, committed suicide in 2016. This sensation drew great public attention to mental illness and provoked extensive discussion. The purpose of this study is to explore the online discussion of this case regarding mental disease exemplified by depression and find out whether open discussion on social media (especially Sina Weibo) helps to de-stigmatize the social cognition of mental illness in China. Through analysing the 37 most influential posts and relevant comments on *Sina Weibo* with regard to this case, it was found that depression was not stigmatized in the online discussion. Instead, most of the key opinion leaders on social media took a relatively neutral or even sympathetic stance while describing depression. Also, these posts made some efforts to distribute knowledge of mental health to the public in order to rectify social miscognition. In a nutshell, social media plays a positive role in correcting people's cognition of mental disease from the following four perspectives: (1) raising the public awareness of mental health; (2) clarifying the true attribution of illness and distributing knowledge of etiology and therapy; (3) providing patients with a channel to seek resonance and support; and (4) breaking out of the bondage of self-repression and endurance. Yet it also must be admitted that social media represents merely a bottom-up approach to fighting against mental illness stigma. In order to completely eradicate the deeply-rooted stigmatized view, supports from the government and professional psychotherapy institutes are indispensable.

Key words: stigma, mental illness, social media, Weibo

Introduction

The number of patients suffering from mental health problems has been growing over recent decades. The World Health Organization (WHO) now ranks depression, a common form of mental illness, as one of the most burdensome diseases in the world (WHO, 2012). China is no exception. According to a recent study, mental illness has now become the largest burden on the Chinese health system, affecting 17.5% of the population in the nation (Zheng, Keegan, Rosenthal, Talley, & Hunter, 2016, p. 40).

However, stigma in mental illness seems to be widely endorsed by the general public (Corrigan, 2000). People with mental diseases not only suffer from self-stigma, but also frequently encounter public stigma. As a result, patients are afraid of admitting mental health problems and reluctant to receive treatment. One of the reasons mental health problems are hostage to stigma and discrimination is improper social cognition and societal attitudes. For example, the most common stereotypes about mental illness include: “depression and anxiety are the result of being over-sensitive”, “being diagnosed with mental disease is a social death sentence”, “people with mental illness are crazy and dangerous”. These skewed social cognitions have become the biggest barrier for those who suffer from mental health problems to seek treatment. Consequently, the treatment gap has continued widening.

Given the cognitive bias against mental illness and the increasing demand for mental health care, it is time to rethink social miscognition with regard to mental illness and find new solutions for mental health problems in the Chinese context. In what follows, this paper will first review the literature regarding the mechanism of stigma. And through a case study of online discussion about depression, the role of social media in correcting miscognition will be revisited.

Background

Source of stigma

In order to erase the stigmatized perceptions and encourage patients to seek help actively, scholars have long discussed the source of stigma. Three paradigms have been identified (Corrigan, 1998; Crocker & Lutsky, 1986, cited in: Corrigan, 2000, p. 49): the *motivational biases paradigm* suggests that people’s instinctive reactions to someone who is different or disfavoured generate stigma; the *sociocultural approach* considers that stigma is the product of the culture and social system; and the *social cognitive theories* suggest that inadequate public knowledge and awareness lead to stigmatized viewings. This study explores the source of stigma in the Chinese context mainly from the sociocultural and social cognitive perspectives.

The first is about the sociocultural background. Confucianism, the long-standing secular social theory in China concerning human relations and the way of life, has a profound impact on

social cognition. Confucianism advocates self-restraint and avoidance of abnormality in order to preserve the social harmony. In other words, collective welfare is emphasized over individual interest. People in such a cultural context are prone to behave in accordance with the anticipated expectations of others and the social norms rather than with their internal wishes (Yang, 1981, as cited in: Markus & Kitayama, 1991). Such a cognitive paradigm has a profound impact on people's response to mental illness. For example, patients would rather endure their own problems than bothering others, let alone emotional spillover or open discussion of mental health problems (Ng, 1997). Any apparent signs of emotiveness or symptoms of mental disease are considered as abnormal. Those people with the label of abnormality have been gradually marginalized. As a result, mental disorders have long been regarded as a taboo.

If Confucianism provides a collective explanation of mental illness stigma, then the construal of self and others has influenced, even determined, the very nature of social cognition of mental illness on an individual scale. There is a well-recognized dichotomy of self construal: one is the independent construal that is rooted in American and European culture, which sees the individual as a self-contained entity; the other is the interdependent construal exemplified in East-Asian culture, asserting the relatedness of individuals to each other and interdependent harmony. There are two implications of the interdependent construal idea: on the one hand, interdependent construal suggests that a person's expression and emotion are significantly shaped and governed by a consideration of the reactions of others (Markus & Kitayama, 1991, pp. 224-225). It comes as no surprise that in China, people care a great deal about others' feedback on their behaviour, traits, abilities, emotions and values. They want to display their best selves and conceal anything that would damage their self-representations or their benign connections with the society. Illness is thus a sort of weakness that needs to be hidden from others' judgment, as it indicates vulnerability and non-harmony. It entails not only the feeling of loss of standing in the society, but also the failure to live up to others' expectations.

On the other hand, strong interpersonal relationships entail that these social judgements are not only directed to the patient, but also to the social units that he/she is in, especially the family. Even today kinship still occupies a significant position in Chinese culture (Lin et al., 1995, as cited in Ng, 1997). If in a family there is a person who is suffering from mental health problems, then the prejudice and discrimination against the patient will affect the entire family as a unit as well. As a result, stigma grows even more severe. Ng's research in 1997 concluded that mental illness can contaminate the family and tarnish the honour of family and ancestors. The research of Corrigan and Miller (2004) also shows that the remaining people in a family with a mentally ill member have to bear the burden of social discrimination, and are constantly seen as to blame for causing their family member's illness or abnormality.

In addition to the sociocultural and self-construal explanation, social cognitive theory is also a widely applied approach in understanding the source of mental illness stigma. In ancient China,

unlike physical illnesses, psychological disorders were more likely to be attributed to metaphysical phenomena and supernatural factors (Fabrega, 1991, cited in: Ng, 1997, p. 384). It was even believed that mental disorders are the result of possession by evil spirits (Razali et al., 1996; as cited in: Jorm, 2000, p. 397), which entailed that mental illness is not merely unpredictable, but also uncontrollable. As a result, the fears associated with psychological problem were deeply rooted in people's minds (Gaebel, Rössler, & Sartorius, 2017). The wrong attributions of mental illness generate fear, and fear intensifies the stigma. Even today some people still show a paranoid fear and disgust at the mention of mental illness.

In a word, the source of stigma in the East Asian context can be concluded as a mixture of shame that identity is called into question, fear of breaking harmony in the collectivistic culture, and inappropriate attribution of disease. However, in the Western culture, it appears to be a slightly different story.

The most striking difference can be found from the attribution of illness. Unlike in East Asia, Western culture advocates seeing every single person as an individual, self-contained, autonomous agent (Markus & Kitayama, 1991). According to the attribution theory, Westerners pay more attention to individual motives for behaviour and the sense of individual responsibility, which makes them attribute mental illness to individual faults rather than contextual influence (Zheng et al., 2016). Some studies suggest that in contrast to the shame-based stigma in the East, guilt plays a dominant role in the Western moral system (Corrigan, 2000). Historically, mental illness has been viewed as a symbol of moral flaw (Overton & Medina, 2008, p. 144). From a religious perspective, Christians have long believed that mental diseases (or madness, the term that was widely used before a systematic theory of psychology had been established) are punishments inflicted by God on sinners (Arboleda-Flórez, 2003).

Today with the fast development of modern psychology, people are much better informed about mental disease, and the idea that mental illness is caused by individual wrongdoings as divine punishment has been gradually fading away. However, the stigma in mental illness has never been completely extinguished neither in the East nor in the West, which has directly led to the treatment gap in mental health care.

Treatment gap

The "treatment gap" for mental disorders refers to the difference that exists between the number of people who need treatment and those who receive it, which is a concept strongly promoted by the WHO. For example, a treatment gap of 60% means 60% of those who require treatments are not receiving them. According to a study by WHO in 2004, the treatment gap for major depression in Italy was 15.9%, 21.1% in Netherlands, 26.6% in France, and 30% in Norway (Kohn et al., 2004). The number in China was not included in this study. Yet later in 2016, a study found out that in China, only 9.5% of the patients with major depression managed to contact with mental

health-care providers in their lifetimes (Patel et al., 2016).

On the one hand, the gap in treatment indicates the scarcity of mental health care. In ancient China, mental illness treatments were predominantly intra-familial and relied heavily on traditional health-care methods (i.e. herbal medicine), which had been proved to be useless (Ng, 1997). Not until the late 19th century had the first western style psychiatric hospitals appeared in China, yet their main function was still detention rather than treatment (Liu et al., 2011). Although the methods of treatment have been much improved in recent decades, there remains a deficit in both hospital mental health services and rehabilitation programs. For example, Xiang, Ng, Yu, and Wang (2018) found that by 2015, there were 27,733 psychiatrists and psychiatric registrars (2.02 per 100,000 population), 57,591 psychiatric nurses (4.19 per 100,000) and 2,936 mental health services with approximately 433,000 psychiatric beds (31.5 per 100,000) in China. Yet the bulk of these medical resources are located in urban areas, making mental health care service even less accessible for those living in rural China. According to the Global Health Observatory Data from WHO, the global average number of nurses working in mental health per 100,000 population had already reached 7.4 in 2014. It appears that both mental health care human resources and facilities in China are still below the global average and can hardly meet the increasing need for psychiatric care.

On the other hand, the treatment gap gives a hint about the public ignorance of mental illness and sufferers' unwillingness to receive support. Because of the lack of understanding of mental health problems, the corresponding pathology and therapy have long been under-researched in the Chinese context. Inadequate studies and the low level of public knowledge have not only intensified the mental disease stigma, but also prevented sufferers from receiving support (Corrigan, 2004).

Previous research has demonstrated that there are often long delays between the first onset of mental disorder symptoms and the time when individuals seek and receive treatment. According to WHO's World Mental Health Survey in 2007, delays in treatment seeking ranged from 3 to 30 years for anxiety disorders and from 1 to 14 years for mood disorders (Wang et al., 2007). The failure and delay in initial treatment contact result in necessity for more intense (and perhaps less successful) and expensive treatment options later (Kupfer et al., 1989, cited in: Bharadwaj, Pai, & Suziedelyte, 2017, p. 2). As discussed before, for many people, admitting that they are suffering from mental health problems means showing their weakness. People with mixed feelings of loss of self-identity and shame are prone to deny mental illness, let alone seek support.

Social media and social cognition

The stigmatized view regarding mental illness is a worldwide issue: it expands the treatment gap and marginalizes the sufferers. As a result, people with mental health problems have been trapped in a vicious circle. Yet is there any chance for us to turn the tables? Western scholars have already moved on to the public discourse on mental health problems and explored the potentiality

of social media as an indicator of mental health status. For example, De Choudhury and her colleagues (2013a) found that through analysing the fluctuation of social activities, medicinal concerns and expression of religious involvement on Twitter, the onset of depression in individuals can be detected. Some scholars are even trying to use social media to promote people's mental wellbeing. Naslund et al.'s study (2016) among people with serious mental illness showed that interacting with peers online increased their social connectedness and feelings of group belonging. However, similar studies in the Asian context are scarce. A systematic review of studies of mental health-related stigma and health seeking conducted by Clement et al. (2014) shows that from 1980 to 2011, among 144 eligible full-text research articles selected from 5 databases, 99 studies were conducted in the USA or Canada, and 20 in Europe, while only eight were undertaken in Asia. Thus, East Asian people's cognition of and attitudes towards mental health are under-represented in academia, not to mention that the general public failed to give enough attention to the psychological well-being.

The turning point came when in 2016, a young Chinese celebrity Kimi Qiao Renliang committed suicide due to depression, which raised the public awareness of mental health. The general public started to revisit the concept of depression – a word that had been eschewed for several decades. Depression self assessment, psychological counselling and other related topics soon became the centre of public discussion nationwide, especially on social network sites.

However, existing literature has put too much emphasis on the negative side of social media use, including cyber bullying, privacy issues and social media addiction (see, O'Keeffe & Pearson, 2011). This study seeks to remind the public of the fact that social media also plays an irreplaceable role as public sphere for increasing participatory communication. For one thing, the media is the most frequently used channel for the general public to make contact with mental illness (Arboleda-Flórez, 2003). Studying the frame of mental illness and corresponding public discussion on media platforms sheds light on the real-time and real-world social cognition of mental disease. For another, horizontal communication among the general public on social media challenges the widely endorsed stigmatized view of mental health problems. Such an open platform promotes the distribution of public knowledge and the growth of different opinions, because people with more access to information are more likely to participate in the discussion and define their positions. According to social cognitive theories, open discussions not only help to demythologize a certain issue but also play a role as predicant to re-educate the public (Morrison, Coccozza, & Vanderwyst, 1980). Hence, it is worth discussing how social media have exerted effects on the average citizen's cognition and challenged the sociocultural affect on dominant perceptions of mental illness.

The state has called for making the healthy behavioural and mental development of citizens a national priority (Huang, 2017). With this chance that mental health issues have returned to the public view, this study aims to rethink the social cognition of mental illness in China, to review

the recent researches regarding online discussion of mental diseases, especially depression, in recent years on social media exemplified by Weibo, and to further discuss social media's function in distributing public knowledge, correcting the social miscognition and educating the public.

Methods

This study consisted of two parts. In the first part, a discourse analysis of social media posts and related comments on Sina Weibo was conducted. Discourse analysis of Weibo contents demonstrated the most supported case-based cognition of depression and mental illness. The second part of this study focused on the search rate of two key words (“depression” and “Qiao Renliang”) on Baidu search engine in this incident. The purpose of this part is to see whether the tragedy drew public attention to mental health issues. In addition to the case-based discourse analysis, the demographic information concerning users of Baidu also casts light on gender and age differences in mental health attitudes.

Social media platform selection

Launched in 2009, Sina Weibo is now one of the most influential social media platforms in China. It has been generally endorsed that Sina Weibo is the Chinese microblogging equivalent of Twitter (Fuchs, 2017). Apparently, Weibo did imitate a part of the functions of Twitter in its infancy, yet in the last few years (especially from 2016 to 2017), Sina Weibo has expanded its original functions, which have made Weibo more distinct from Twitter.

For example, no more than four pictures are allowed in one tweet, while Sina Weibo permits its users to upload up to 9 pictures in one post, which provides users with more space to share their experience. Also, Sina Weibo applies a membership system: those users who pay membership fees monthly are able to post text content with more than 280 characters. These reforms enable users to get rid of the post length constraints and enrich their post content. This study found that many key opinion leaders have taken full advantage of these functions and posted in-depth analysis regarding mental health problems. Additionally, Sina Weibo has adjusted its replying function. Now users can “reply” to and “like” other people's responses under a post. Responses to the same reply are joined together. Replies can be listed either in chronological order or by “hot” degree (replies with more likes enjoy higher hot degree). Within this replying system, we can see how conversations develop and which idea is the best supported.

Discourse analysis

This study applied a discourse analysis approach to find out how depression is framed on Sina Weibo and whether mental illness is stigmatized or de-stigmatized. Previous studies have confirmed the common dimensions in discourse studies (Van Dijk, 2007; Wodak, 2008, cited in:

Wodak & Meyer, 2009: 2). Discourse analysis focuses on the properties of “naturally occurring use” by real language users. In this study, users’ status updates and comments on social media are a kind of “naturally occurring language”. Also, discourse structure should be an extension of linguistics beyond sentence grammar, like the online interaction among users. Additionally, non-verbal communication is an indispensable part of discourse. According to the preliminary research, pictures and videos are very commonly used on social media, and even exceed the use of text. Most importantly, discourse analysis should pay close attention to dynamic social-cognitive moves and the functions of contexts of language use. Studying the impact of social media on social cognition of mental illness satisfies this criterion. For the above reasons, this study applies a discourse analysis approach instead of a pure content analysis approach that mainly focuses on the frequency and appearance of certain words.

Under the framework of discourse analysis, Weibo posts were selected according to the following five criteria. First, weibos¹ that were posted from September 17 to 23, 2016, the week following the tragic death of Qiao. Second, weibos that were posted by key opinion leaders or official Weibo accounts of mainstream media. According to preliminary research, key opinion leaders in this context can be defined as the active users in a particular area. As for the official Weibo accounts, previous research has shown that traditional media sources are important in starting trends on social media (Asur et al., 2011, as cited in: Yu, Asur, & Huberman, 2011). Therefore, it is worth looking into the mainstream media reaction to this occurrence. All these selected accounts should have no less than one million followers. The number of followers can, to a great extent, reflect the influence of the Weibo account. According to the *Sina Weibo User Development Report 2017*, the number of daily active users had reached 165 million, and there are 376 million monthly active users in total (Sina Weibo, 2017). Hence, accounts with more than one million followers represent a threshold of influential key opinion leaders. All these selected key opinion leaders were Sina verified accounts² in consideration of the information reliability. Third, weibos that contained two key words, “depression” and “Qiao Renliang”, given that this study aims to discover how social media frame and distribute public knowledge regarding depression under the cover of an entertainment news. Fourth, weibos that were labelled as “hot weibo”.³ Fifth, advertising and repeated posts were excluded.⁴

Next, all the selected posts were categorized into four classifications according to themes: if the post was about the death news or a declaration from the talent agency, then it fell into the category of *informative*; retrospection and reminiscent contents were listed as *memorial*; educational or introductory information regarding mental health and depression were included in the category *depression rethinking*; cyberbullying critique and netiquette discussion were put in the category *comment*.

Results

37 qualified posts were selected in total. As can be seen in Table 1, informative content takes the first place. The runner-up to the informative post is depression rethinking.

Table 1. Weibo posts classification

	Informative	Memorial	Depression Rethinking	Comment
N=37 (100%)	14 (37.8%)	7 (18.9%)	12 (32.5%)	4 (10.8%)

To further analyse the content frame and public discussion, all 12 Weibo posts in the category *depression rethinking* are listed in Table 2 in chronological order. All of these accounts are divided into three categories according to their traits. Weibo accounts that are official accounts of main stream media are labelled as “Main Stream”. Those accounts that have expert knowledge and influence in a respective field, such as sports, video games, fashion, entertainment, etc., are classified as “Key Opinion Leader” (KOL). Other accounts that neither affiliate to mainstream media nor reflect expertise in a certain field, but still have abounding followers and post original contents on a regular basis, are categorized under “We-media”. The number of followers, replies, retweets (forwards), and likes are listed as index that reflects the influence of the selected Weibo accounts and posts.

As Table 2 shows, various social media content formats were applied when rethinking depression. Articles and videos were the most commonly used forms. *Sina Entertainment* published an original article regarding expert’s interpretation of depression on September 22,⁵ which attracted great attention with 1.76 million readers. This article was based on the interview with a psychological consultant Li Xue, focusing on the burden of mental illness on the Chinese National Health Care System, discussing the pathogeny, progress and symptoms of depression, and introducing some self-help methods to readers. Different from other analytical contents that attributed depression merely to pressure and frustration, this article provided a Freudian explanation of the cause of depression, arguing that childhood repression and emotional deprivation are very likely to trigger depression in adulthood. It is also worth pointing out that this article noted the common misunderstandings and stigmatized views against depression in the society. At the end of the article, it called on family members and the entire society to provide correct guidance and proper support to depressed people.

In a word, this is an article with relatively high-quality content. Most of the replies under this post admitted that this article was a good attempt to alert people to the importance of mental health and now it is time to correct the stigmatized social cognition of depression.

Table 2. Content of depression rethinking posts

Weibo account	Trait of account	Post date	Followers (million)	Content	Format Type	Retweet	Reply	Like
Nanfang Daily	Main Stream	2016/09/17	11.17	Star actor committed suicide because of depression: How to defeat depression	Video	201	65	256
Sina iQuestion Doctor	KOL	2016/09/17	6.72	A video helps you to understand the psychological states of people with depression	Video	134	119	1,198
Top Weibo (Weibo Toutiao)	KOL	2016/09/17	3.39	After the tragic death of Qiao: Celebrities appeal to the masses for caring for people that suffer from depression	Original article	142	426	2,537
Entertainment Gossipmonger	KOL	2016/09/17	3.23	What is depression, and how to fight with it: A video	Video	526	59	1,512
Entertainment Partner	KOL	2016/09/17	3.73	TED speech: Confession of a comedian who suffers from depression	Video	710	40	563
FeiDieShuo	We-media	2016/09/17	4.38	A one-minute video helps you to better understand depression	Video	320	94	243
China News	Main Stream	2016/09/17	33.38	How close is depression to us?	PowerPoint	8,145	5,631	23,863
An Idealistic Journalist	We-media	2016/09/17	2.07	Hope Qiao's tragedy will raise more public attention of depression	Live streaming	83	1,937	777
Sanlian Life Weekly	Main Stream	2016/09/17	12.61	The death of Qiao: Depression not only happens to celebrities	Original article	530	245	1,589
Sina Entertainment	KOL	2016/09/22	22.56	Expert interpretation of depression: Insomnia is Qiao's distress signal	Original article	2,847	1,380	12,658
Entertainment Fandom	KOL	2016/09/22	5.59	Face up to depression: Was this tragedy evitable?	Article	767	282	2,582
Yangcheng Evening News	Main Stream	2016/09/23	10.62	A sorrow and painful spiritual flu: Why is depression so horrible?	Original article	395	73	156

“If the public can realize the severity of depression, give more attention and understanding to patients and encourage them to receive the treatment positively with this opportunity offered because mental health problems have returned to the public view, then why not? I have been troubled by insomnia for years.”⁶ @1764412995⁷

“Wish it can be known and understood that people are afraid to admit having depression for two reasons: first, there is discrimination against depressed patients in the society. More importantly, when a person is suffering from inner torment, he doesn’t want others to know. Because he might feel loss of self-control if others knew that he has intractable sufferings. He would rather conceal it. That is probably one of the reasons why many patients won’t let their families know about their illness until they have intention to commit suicide.” @1642098364

This article was reposted by another KOL account *Entertainment Fandom* on the same day, which has also drawn great attention. Nevertheless, replies under this post mainly focused on cyberbullies that targeted at public figures who had been involved in this tragedy.

“Less cyberbullying, more kindness. please pay more attention to your close friends, never gossip about others defects and misfortunes.”⁸ @2176932207

Different responses to the same article can, to some extent, be ascribed to the different follower compositions of the two accounts: although both *Sina Entertainment* and *Entertainment Fandom* are key opinion leaders of entertainment news and popular culture, the latter is more fandom-oriented. Therefore, the followers of *Entertainment Fandom* might put more emphasis on celebrities rather than the illness.

Sanlian Life Weekly (hereafter, *Sanlian*) is a periodical that focuses on social news reviewing and literary criticism. *Sanlian* posted an article with the title *Depression not only happens to celebrities* on the same day.⁹ This article pointed out the social cognition distortions of depression, arguing that more and more entertainment media have joined the ‘feeding frenzy’ of dramatizing the depression of celebrities because it has satisfied many people’s desire to pry into the privacy of public figures. At the end of this article, the author expressed the expectation that all the depressed persons should be treated equally.

Responses to this article were quite polarized: proponents agreed that the misperception and ignorance of mental illness are deeply rooted in the society; some respondents who suffered, or were suffering from depression, found resonance in being mistreated and expressed their struggle:

“Depression *per se* is not horrible; however, it is the social misperception and discrimination against depression that has made things worse. Many a time I wonder where is the humanistic concern in the society. Sometimes human beings are even more dreadful than diseases. The future of this society is grim.” @paul1987

“Actually depression is very normal. At the very beginning, it is merely an inner inhibition, it is as normal as a cold. If there were a way to express emotion with professional guidance, it is less likely to become a malady. Hope the cognition of depression would be corrected someday. Everyone needs a psychologist.” @cykbibi

Opponents argued that this article was too superficial and lacking in theoretical support:

“It is ridiculous that even *Sanlian* used such nonsense to follow trending topics. We should better leave this topic to pundits. Such excessive media coverage of depression would give children a psychological implication to attribute every little setback and frustration to depression. What’s more, if they cannot get expected feedback and attention from people around, they may even develop major depression. Either under-informed or over-informed is harmful.”¹⁰ @2790212757

In addition to articles, video is also a widely used format. On September 17, *Nanfang Daily*, the official Weibo account of one of the mainstream newspapers, and other two key opinion leaders – *Sina iQuestion Doctor* and *Entertainment Gossipmonger*, posted the same animated video made by WHO in 2012 regarding depression and some methods that can help people to overcome it.¹¹ All these three posts received quite a lot of attention. In this video, depression was likened to an inextricable black dog which follows the patients wherever they go. It richly described how depression interferes with people’s daily life from a patient’s perspective. Furthermore, it encouraged patients to find suitable treatment and called on the public to stop stigmatizing depression.

Under these three posts, all the depression-related replies can be categorized into four broad types: fandom memorial; resonance seeking; syndrome, cause and possible social care of illness discussion; and cyberbullying critiques. Some typical examples are selected from these replies:

“He took his life to end bouts of depression. I feel for him. The feeling of depression is difficult for normal people to imagine. When you are tossing about all night, unable to fall asleep, you have to swallow the sleeping pills, but in daytime, these pills make you vomit and ruin your appetite; when you constantly suffer from headache and stomachache; when you are the only person in your own world; when you are secretly weeping; when the whole world you can see fades to grey; when you hurt yourself to ease the psychological pain...”¹²

@1342719023 from *Nanfang Daily*

“Depressive mood is a kind of mental status, like anxiety and excitement. Depressive mood can be self-regulated, but depression is a mental disease. It’s an illness! Patients can hardly control their thoughts of suicide. Medical treatment is necessary. Everyone gets sick.”¹³

@2811631401 from *Sina iQuestion Doctor*

From these replies, it is easy to find out that some of the users are using social media as an access to information about their health concerns, such as stress reduction and signs of depression. Other people are trying to develop a supportive network of people with similar conditions through sharing their own experience on social network site, which is an important step in rectifying the social miscognition of chronic mental disease.

Although the weibo posted on September 17 by *China News Service*, the second largest state-owned news agency in China which serves mainly overseas Chinese, was the most retweeted one and received the highest number of likes and responses among all the 37 selected posts, its performance in correcting social cognition of depression and distributing public knowledge was barely satisfactory. This post briefly discussed the symptoms of depression and referred to public figures who also suffered from depression in concluding the cause of illness. For example, in this post, depression was attributed to personality traits including perfectionism, since a well-known singer who died of depression was a so-called “perfectionist” who strived for flawlessness and was highly preoccupied with the evaluations of others. Such a conclusion merely came from a stereotyped single case and with no academic research support. Apparently, these plain descriptions were more entertainment-driven rather than serious medical discussion. Correspondingly most of the replies under this post were fandom discussion and gossip about the mentioned public figures. Only a small proportion of responses expressed feelings of depression:

“I have suffered from depression, too. In the worst days I almost jumped off a building. There is always a depressed part in my heart. But mercifully I have come through. Life is not easy, especially when you cannot change the reality even if you have tried your best. Hope people who have same experience can come through as well. Stay alive!”¹⁴

@3307085994

When delving into other trending weibo, there is an intriguing finding that the official Weibo account of *People’s Daily*, the mouthpiece of the government and the Chinese Communist party, also posted depression rethinking content with the opportunity offered because mental health problems have returned to the public view, although this post didn’t mention anything regarding the death of the celebrity. As shown in Table 3, on September 17, *People’s Daily* posted the same

black-dog-metaphor video produced by WHO regarding depression patients' feeling soon after the talent agency making the official statement of the cause of Qiao's death. On the next day *People's Daily* again posted educational slides with regard to depression, including the causes of depression, self-rating depression scale, common social misunderstandings of mental health problems, self-rescue practice, and available social support for people suffering from depression.

Table 3. Posts of *People's Daily* regarding depression

Post date	Content	Format type	Retweet	Reply	Like
2016/09/17	How to behave with a depressed person	Video	7,378	1,158	6,027
2016/09/18	Be careful! Don't let depression defeat you	PowerPoint	22,901	5,897	14,248

It is worth noting that instead of lengthy and tedious explanations, this post used a PowerPoint-liked approach, combining text and pictures together in 9 slides, as presented in Figure 1. Previous research has shown that people do not read very much on the web, and users have time to read at most 28% of the words during an average visit (Nielsen, 2008). Hence, such a compromise has been better diffused than those text-only contents.

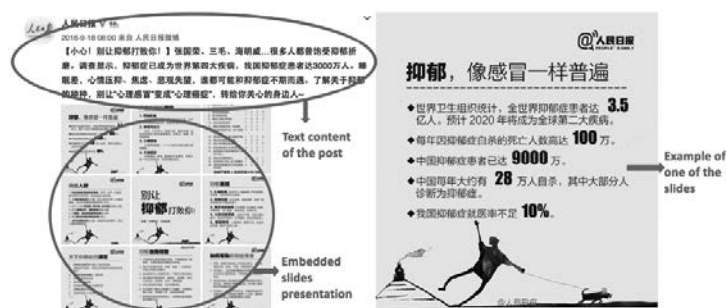


Figure 1. Example of PowerPoint-liked format embedded in Weibo posts

As can be seen from Table 3, these two posts have received significant attention. Some of the replies represented the actuality of mental illness stigma in China:

“The death of Qiao has made depression return to public view, allowing people to re-understand and pay close attention to depression. Yet all spotlights will fade away someday. After one month – even half a month, something new will replace it, for sure. Marginal individuals still hover on the edge. Nothing changed.” @5843531187

“It’s weird in this country: many people regard homosexuality and net-addiction as illnesses, but turn a blind eye to depression, even negatively discuss it. Nobody cares whether you are

suffering from mental disease. There is even not a scientific social cognition of mental illness. We are facing a horrible situation.”¹⁵ @csrjdl

Discussion

Different from the widely adopted stereotype that entertainment information is “amusing ourselves to death”, this case study supports the idea that even so-called entertainment news can give rise to public attention to mental health problems. And gratifyingly, all these selected 37 weibo posts in our study chose a neutral, even positive position in framing depression. Discourse analysis shows that, in addition to informative posts, some key opinion leaders and main stream media also made some efforts to correct the social miscognitions and de-stigmatize mental illness from the following four perspectives.

First and foremost, this internet sensation has raised great public awareness of mental illness exemplified by depression. As a result, these social media posts and online discussions translate the large amount of attention capital owned by celebrities to a broader public attention toward public health issues, which lays the foundation for correcting stigmatized views of mental illness. Discourse analysis shows that many highly followed Weibo accounts and mainstream media have paid great attention to this tragedy.

Moreover, the overall online searching rate of the two key words in this case (“depression” and “Qiao”) also reflects the tremendous influence of the internet. Figure 2 shows how many times these two key words had been searched in two weeks from September 13 to 26, 2016.¹⁶ According

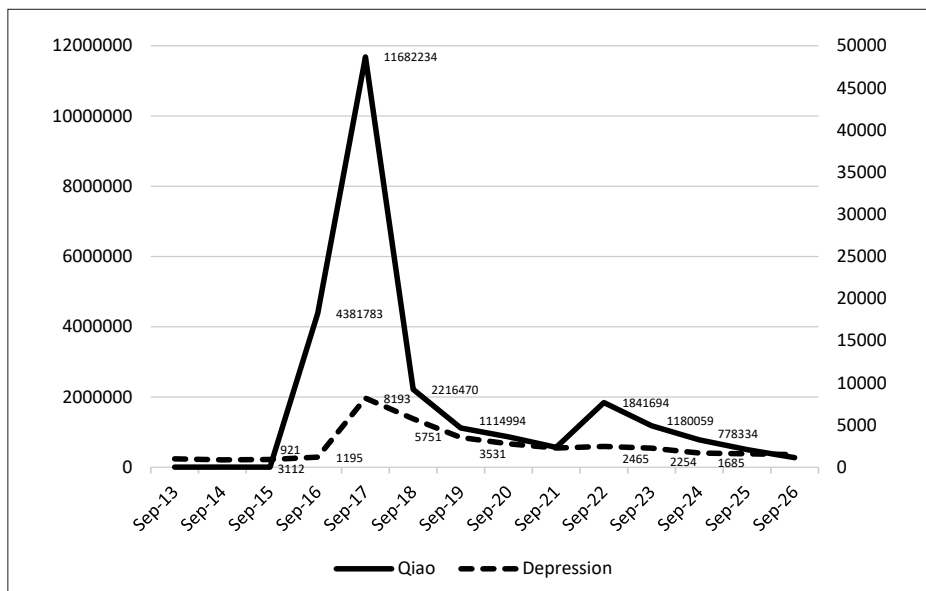


Figure 2. Key words searching frequency from 2016/09/13-2016/09/26 (from Baidu Index)

to Baidu Index monthly report,¹⁷ on September 16, 2016, the total searching frequency of “Qiao Renliang” raised significantly from 3,112 to over 11 million times. In the meanwhile, the searching frequency of “depression” also increased from 921 to 8,193. Although the searching frequency of “Qiao” was many times greater than the number of “depression”, we can still see the similar changes in searching trends of the two key words.

There is no doubt that celebrities can attract more attention than average persons. We are surrounded by overload information in the digital age. Human’s attention, as a scarce resource, is a limited capital (Crawford, 2015). Neo-liberalism suggests that the more discussion, followers, check-ins and likes one attracts, the higher one’s cultural online capital and social online capital (Marwick, 2013). Social capital is “a capital of social connections, honourability and respectability”, whereas cultural capital is more reputation-derived (Bourdieu, 1986, cited in: Fuchs, 2017, p. 36). Because of the attention capital that celebrities have, the general public are prone to keep a watchful eye on everything that happens around them. It is certain that every day there are thousands of people suffering from mental health problems, but none of them has received so much attention as public figures do. The attention capital underlies the distribution of public knowledge and the rectification of social cognition. Although in this case, the highly concentrated attention on depression is merely the augmented product of entertainment news, it has still provided a chance for the public to revisit the eschewed issue of mental health.

Second, online discussion creates a channel for mental disease sufferers to seek resonance and support. As can be seen from replies under these depression-rethinking weibo posts, many people expressed their depressive feelings and sufferings. In the offline society where stereotypes and discrimination against mental illness are prevalent, the fear of experiencing negative consequences such as social rejection leads individuals to conceal certain behaviours or characteristics (Bharadwaj, Pai, & Suziedelyte, 2017). Yet on an anonymous online platform like Sina Weibo, disclosure concerns are more likely to be mitigated and people no longer need to hide their illness or care too much about others’ judgements.

Finding resonance is an effective approach for people to be understood. A large number of studies in mental health-related stigma have suggested that being understood means acknowledging the uniqueness and equality of people with mental illness (see, for example, Ng, 1997; Overton & Medina, 2008). It is “a force which can provide the ill person with the necessary endurance and courage to face the inevitable problems in his/her life” (Travelbee, 1969, cited in: Gaillard et al., 2009: 192). When commenting on the depression-related posts, expressing their experience and real feelings, or getting responses from other people with similar conditions, those who are, or had been, afflicted with mental illness find a shared experience between themselves and unknown others across the country. Such experience can, to some extent, protect them from vulnerability by validating their individuality and getting rid of the feeling of isolation.

Such activities are always referred to as peer-to-peer support. The study by Naslund,

Aschbrenner, Marsch, and Bartels (2016) suggests that interacting with peers online provides ill persons with great social connectedness, feelings of group belonging and strategies for coping with disease. Peer-to-peer support empowers people to challenge the stigma and face up to the illness. Online peer networks would be a promising approach for mental health care promotion in the future.

Third, from the discourse analysis, we can see that some of the key opinion leaders were making some efforts in distributing introductory knowledge of etiology, syndrome and therapy of depression, which can be regarded as a bottom-up attempt at enlightening and re-educating the citizens. Ignorance generates fear, and fear gives rise to stigmatization. The solution of breaking this vicious circle is to cultivate well-informed citizens.

Jorm et al. (1997) introduced the concept of “mental health literacy”, defined it as people’s knowledge and beliefs concerning mental disorders. It has been widely accepted that mental health literacy plays an important role in aiding the recognition, management and prevention of psychological diseases. Nowadays we have moved toward a decentralized model of mental health literacy. Decentralization means, on the one hand, people are applying a multi-approach to gain information. Being stuck in the doctor’s lounge and passively receiving the clinical experience and insights has become a thing of past. Research shows that in America, around 60 to 80 percent of citizens have used the Internet to find health information from as long ago as 2008. The Internet has rivalled doctors as the leading source of health information (Sarasohn-Kahn, 2008). On the other hand, bottom-up self-help skills are becoming increasingly important today given that only a small number of people with mental health problems are receiving professional support (Jorm, 2000). This case shows the possibility of using social media as a mediator to increase the public understanding and acceptance of mental health promotion when the top-down science-to-service agenda is absent or doesn’t work effectively.

Last but not least, the online responses of both key opinion leaders and average people to this incident shed light on individuals breaking out of the the bondage of self-repression and endurance, which has long been advocated by traditional Chinese culture. Online social networks have expanded the possibility of communication, helped people to get rid of the constraints of in-person, localized contacts. Thanks to the anonymous SNS system, people can finally express the real self behind the mask. As discussed before, one of the reasons social judgement always generates pressure on an individual is because he/she feels it very hard to violate the expectations from others and from the society. Yet in a cyber world, every person can reinvent him/herself in a way which is independent of any particular social norms.

If the online discussion in this case study merely represents the attitudes of a very specific group of people on a certain platform, then, as we move to the second phase of this study, the search rate of two key words from Baidu Index would show us a more comprehensive picture about how the general public’s attitude was affected by this sensation. In addition to the overall

key word search trends, Baidu Index also provided us with detailed demographics of people who searched these two key words online, including distribution of users by age, gender and region. As can be seen in Figure 3, among all of those users who searched on “depression” within the week that the tragedy happened, 57% were female. The gender ratio was almost the same in searching the other key word. This contrasts with the data of the Statistical Report on Internet Development in China that up to December 2016, the overall male-to-female ratio was 52:48 among Chinese Internet users (2017). Hence, it is safe to conclude that females paid more attention on both depression and the public figure than males in this case.

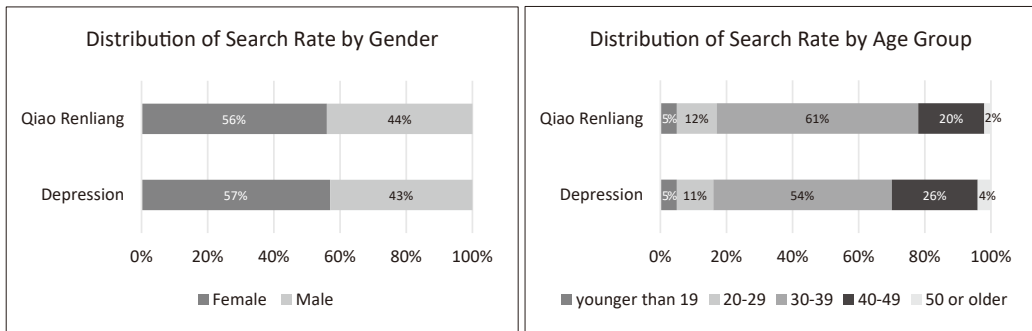


Figure 3. Demographic Distribution of Key Words Search Rate (Baidu Index)

To some extent, the gender discrepancy of information searching habits in this case cross-confirmed the view that females exhibit more favourable intentions to get to know about mental health. A study by Mackenzie, Gekoski, and Knox’s (2006) also suggests that women hold especially positive help-seeking attitudes regarding psychological problems. Some scholars agree that it is because females are more sensitive than males to recognize and label emotional distress (Kessler et al., 1981; cited in: Mackenzie et al., 2006, p. 579). Yet there is still no final explanation of this phenomenon. The gender difference of mental health focus and the motivation behind require further study.

In terms of age difference of mental health awareness, people aged from 30 to 49 highly focused on both depression and this news, while neither young adults nor the elderly paid close attention to the sensation, as shown in Figure 3. One of the possible explanations is that the older population is under-represented in the online society. Future studies combining both online and offline discussions and involving more representative participants can help to figure out the interaction between age, cognition of mental illness, and help-seeking attitude.

Given the time constraints this study merely discussed the attitude and cognition of depression in a certain case. In a future study it is worth discussing how the online cognition interacts with help-seeking attitudes.

Conclusions

The result of this case study seems positive: mental illness exemplified by depression was not stigmatized in these social media contents. Rather, these depression-rethinking Weibo posts did have an impact on raising public attention to mental illness and distributing introductory knowledge with regard to mental health. Social media plays the role as a haven for people to express, to understand, and to find support.

However, at the current stage, social media discussion is still not enough to build a solid information base for mental health promotion. On the one hand, discourse analysis show that even those trending contents posted by key opinion leaders and mainstream media were lacking in originality and not so up-to-date. For instance, as discussed before, the animated video made by WHO was repeatedly posted by several accounts. That is to say, the public knowledge distribution on social media has fallen into the trap of reinventing the wheel. Information campaigns with more professional support targeting at general population are indispensable to improve the mental health literacy. One of the attempts is to increase the proportion of expert input on media content (Jorm, 2000).

On the other hand, the uneven penetration rate of social media and Internet in different regions in China is a bottleneck that stops social media from fully exercising its function. As stated in *Statistical Report on Internet Development in China* (CNNIC, 2017), the national average internet penetration rate was only 53.2% by December 2016. In Beijing and Shanghai, the penetration rate has exceeded 70%, while Yunnan Province was the one with the lowest penetration: only 39.9%. Compared with southern coastal cities, the penetration rate was relatively low in north-eastern and western China. That is to say, uneven development of technology still exists and can hardly be eradicated in a short period of time. Therefore, it cannot be denied that social media posts regarding mental health problems or individual comments and expression on health-related issues represent merely a grassroots self-rescue approach for a small proportion of the population. What we need to consider in the future is how to translate such online attention and knowledge capital into the physical offline help. Prevention of mental illness nationwide and full-scale mental health promotion still requires a top-down approach with the help of the government, such as developing the treatment facilities, improving the national welfare systems and educating the citizens.

This study merely selected depression as a common example of mental illness to discuss the online discussion and social cognition of all mental health problems. Nevertheless, since depression is one of the most recognized and accepted mental illnesses (Arboleda-Flórez, 2003), the representation of social cognition could be different when studying other mental diseases that have more deeply stigmatized view, such as schizophrenia. Also, although the result of this case is quite encouraging in both information and support sides, we cannot deny that negative frames of mental

illnesses still exist, and the image of mental health presented on social media is not always positive. Future study can further discuss the social cognition of various mental illness on different media platforms.

Mental health is a concept that indicates much more than the absence of mental illness. Scholars believe that achieving subjective well-being is also an indispensable part in the jigsaw puzzle. In the future, the social cognition and general public's attitudes of subjective well-being is worth further research.

Although the treatment of mental illness has been improving, the change of perceptions of mental illness still requires a longer time. Social media is not a nostrum, of course. Only with the help of the government, the public organizations and professional treatment facilities can we finally achieve a healthy society.

References

- Arboleda-Flórez, J. (2003). Considerations on the stigma of mental illness. *The Canadian Journal of Psychiatry*, 48(10), 645-650.
- Bharadwaj, P., Pai, M. M., & Suziedelyte, A. (2017). Mental health stigma. *Economics Letters*, 159, 57-60.
- Clement, S., et al. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological medicine*, 45(1), 11-27.
- CNNIC. (2017). Statistical Report on Internet Development in China. Retrieved from <https://cnnic.com.cn/IDR/ReportDownloads/201706/P020170608523740585924.pdf>
- Corrigan, P. W. (2000). Mental health stigma as social attribution: Implications for research methods and attitude change. *Clinical Psychology: Science and Practice*, 7(1), 48-67.
- Corrigan, P. (2004). How stigma interferes with mental health care. *American psychologist*, 59(7), 614.
- Corrigan, P. W., & Miller, F. E. (2004). Shame, blame, and contamination: A review of the impact of mental illness stigma on family members. *Journal of Mental Health*, 13(6), 537-548.
- Crawford, M. B. (2015). *The world beyond your head: On becoming an individual in an age of distraction*. Farrar, Straus and Giroux.
- Crocker, J., & Lutsky, N. (1986). Stigma and the dynamics of social cognition. *The dilemma of difference* (pp. 95-121). Boston: Springer.
- De Choudhury, M., Counts, S., & Horvitz, E. (2013a). Social media as a measurement tool of depression in populations. In *Proceedings of the 5th Annual ACM Web Science Conference*, 47-56.
- De Choudhury, M. (2013b). Role of social media in tackling challenges in mental health. In *Proceedings of the 2nd international workshop on Socially-aware multimedia*, 49-52. ACM.
- De Choudhury, M. et al. (2016). Discovering shifts to suicidal ideation from mental health content in social media. In: *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 2098-2110. ACM.
- Fuchs, C. (2017). *Social media: A critical introduction*. Sage.
- Gaebel, W., Rössler, W., & Sartorius, N. (Eds.). (2017). *The Stigma of Mental Illness-End of the Story?* Springer.

- Gaillard, L. M., Shattell, M. M., & Thomas, S. P. (2009). Mental health patients' experiences of being misunderstood. *Journal of the American Psychiatric Nurses Association, 15*(3), 191-199.
- Gu, L. et al. (2013). Epidemiology of major depressive disorder in mainland china: a systematic review. *PloS one, 8*(6), e65356.
- Huang, H. Y. (2017). Untamed Jianghu or Emerging Profession: Diagnosing the Psycho-Boom amid China's Mental Health Legislation. *Culture, Medicine, and Psychiatry, 1*-30.
- Jorm, A. F., Korten, A. E., Jacomb, P. A., et al. (1997). Mental health literacy: A survey of the public's ability to recognize mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia, 166*. 182-186.
- Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental disorders. *The British Journal of Psychiatry, 177*(5), 396-401.
- Kohn, R., Saxena, S., Levav, I., & Saraceno, B. (2004). The treatment gap in mental health care. *Bulletin of the World Health Organization, 82*, 858-866. Retrieved from <https://www.who.int/bulletin/volumes/82/11/en/858.pdf>
- Liu, J., et al. (2011). Mental health system in China: history, recent service reform and future challenges. *World Psychiatry, 10*(3), 210-216.
- Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender, and the underutilization of mental health services: the influence of help-seeking attitudes. *Aging and Mental Health, 10*(6), 574-582.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological review, 98*(2), 224.
- Marwick, A. E. (2013). *Status update: Celebrity, publicity, and branding in the social media age*. Yale University Press.
- Morrison, J. K., Coccozza, J. J., & Vanderwyst, D. (1980). An attempt to change the negative, stigmatizing image of mental patients through brief reeducation. *Psychological Reports, 47*(1), 334.
- Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health care: peer-to-peer support and social media. *Epidemiology and Psychiatric Sciences, 25*(2), 113-122.
- Ng, C. H. (1997). The stigma of mental illness in Asian cultures. *Australian and New Zealand Journal of Psychiatry, 31*(3), 382-390.
- Nielsen, J. (2008, May 6). *How little do users read*. Retrieved from <https://www.nngroup.com/articles/how-little-do-users-read/>
- O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics, 127*(4), 800-804.
- Overton, S. L., & Medina, S. L. (2008). The stigma of mental illness. *Journal of Counseling & Development, 86*(2), 143-151.
- Patel, V., Xiao, S., Chen, H., Hanna, F., Jotheeswaran, A. T., Luo, D., ... & Druss, B. G. (2016). The magnitude of and health system responses to the mental health treatment gap in adults in India and China. *The Lancet, 388*(10063), 3074-3084.
- Power, A. K. (2010). Transforming the nation's health: Next steps in mental health promotion. *American journal of public health, 100*(12), 2343-2346.
- Sarasohn-Kahn, J. (2008). The wisdom of patients: Health care meets online social media. *California Healthcare Foundation*.
- Sina Weibo. (2017). *Weibo User Development Report 2017*. Retrieved from Sina Weibo website: <http://data>.

weibo.com/report/reportDetail?id=404

- Wang, P. S. et al. (2007). Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World psychiatry*, 6(3), 177.
- WHO. (2012). *Depression: A Global Crisis*. Retrieved from WHO website: https://www.who.int/mental_health/management/depression/wfmh_paper_depression_wmhd_2012.pdf
- WHO. (2015). *Global Health Observatory Data: Human Resources Data by Country*. Retrieved from WHO website: <http://apps.who.int/gho/data/node.main.MHHR?lang=en>
- Wodak, R. & Meyer, M. (Eds.). (2009). *Methods for critical discourse analysis*. Sage.
- Xiang, Y. T., Ng, C. H., Yu, X., & Wang, G. (2018). Rethinking progress and challenges of mental health care in China. *World Psychiatry*, 17(2), 231-232.
- Yu, L., Asur, S., & Huberman, B. A. (2011). What trends in Chinese social media? *arXiv preprint arXiv:1107.3522*.
- Zheng, L. X., Keegan, J. P., Rosenthal, D., Talley, W., & Hunter, C. A. (2016). Examining the attributions of discrimination toward people with mental illness among Chinese college students. *The Australian Journal of Rehabilitation Counselling*, 22(1), 40-50.

Endnotes

- 1 In order to distinguish Sina Weibo as a social media platform and posts on this platform, this study draws on the experience of Twitter and retains the words' original Chinese meaning. Thus, "Weibo" refers to the social media platform, while "weibo" means a particular post.
- 2 Sina Weibo has developed a self-contained verification system. There are two types of verification: personal account verification and institutional account verification. A personal account may be endorsed if it is determined to be an influential and authentic account in a certain field or an account that continuously produces high-quality self-media content: typically, accounts maintained by users in fashion, music, amusement, sports, media, acting, and other key interest areas. An institutional account may be endorsed if it is the official account of a certain enterprise, government body, media company, college, public service organization or non-government organization.
- 3 *HotWeibo* indicates the top 300 influential (that is, those that have been most forwarded, received most comments and most likes) weibo on this platform every hour (Sina Weibo, 2017).
- 4 Fuchs (2017: 270) has concluded that Sina Weibo is not a communication company, but predominantly a large advertising agency, and targeted advertising is its main revenue source. Advertisements have penetrated into every hot topic and hashtag on Sina Weibo, hence it is necessary to filter out such irrelevant information in this research.
- 5 Sina Entertainment. (2016, September 22). Expert interpretation of depression: Insomnia is Qiao's distress signal [Web log post]. Retrieved from <https://www.weibo.com/ttarticle/p/show?id=2309404022566246301404&infeed=1> [Accessed 29 December 2017]
- 6 All these comments have been translated from Chinese to English. The original version can be retrieved from https://weibo.com/1642591402/E9t3aksgf?filter=hot&root_comment_id=0 [Accessed 29 December 2017]
- 7 For privacy reasons, this study only uses users' Weibo account IDs when quoting their comments.

- 8 Retrieved from https://weibo.com/1893711543/E9rT2Bgkv?filter=hot&root_comment_id=0 [Accessed 29 December 2017]
- 9 Sanlian Life Weekly. (2016, September 17). The death of Qiao: Depression not only happens to celebrities [Web log post]. Retrieved from <https://www.weibo.com/ttarticle/p/show?id=2309404020817481599615> [Accessed 29 December 2017]
- 10 Retrieved from https://weibo.com/1191965271/E8JyAhrs9?filter=hot&root_comment_id=0 [Accessed 29 December 2017]
- 11 WHO. (2012, October 2). I had a black dog, his name was depression [Video file]. Retrieved from <https://youtu.be/XiCrniLQGYc> [Accessed 9 January 2019]
- 12 Retrieved from https://weibo.com/1682207150/E8F1T0XOj?filter=hot&root_comment_id=0 [Accessed 29 December 2017]
- 13 Retrieved from https://weibo.com/5076516542/E8FycqPHr?filter=hot&root_comment_id=0 [Accessed 29 December 2017]
- 14 Retrieved from https://weibo.com/1784473157/E8HAaxQSj?filter=hot&root_comment_id=0 [Accessed 29 December 2017]
- 15 Retrieved from https://weibo.com/2803301701/E8Hkdz9g7?filter=hot&root_comment_id=0 [Accessed 1 January 2018]
- 16 Retrieved from <https://zhishu.baidu.com/?tpl=trend&word=%C7%C7%C8%CE%C1%BA%2C%D2%D6%D3%F4> [Accessed 27 December 2017]
- 17 Baidu Index is a data sharing platform built on Baidu users' online behaviour data. How a key word is searched in a certain period of time is available from this platform, including regional distribution, gender ratio, age structure, searching trend on different device, searching trend of related key words, and media coverage index, etc