

## **Analysis of the social environment of eating disorders in science communication in China**

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### **Abstract**

*Purpose: The purpose of this study is to examine the extent to which Chinese eating disorder patients use social media as a medium to analyze the prevalence of eating disorder illness awareness, their interactive behaviors, characteristics, impact and possible problems. The overall social patterns can be summarized as help-seeking, self-referral, questioning and answering, mutual help, disease awareness enhancement, disease behavior improvement, weakening of the strained doctor-patient relationship, self-reinvention, partial recovery, sharing and spreading disease awareness.*

*METHODS: The ecology of eating disorders in three existing Chinese virtual social media platforms, in which the respondents were Chinese eating disorder science bloggers, was observed to assess the reach of their communication and the extent to which it influenced the audience's recovery from eating disorders.*

*Results: An overview of the existing situation of eating disorders on Weibo and Red Booklet platforms was conducted, and three social patterns were found: relying on virtual comfort, exploring illness problems, and seeking social support. An analysis of three changes in the socially mediated interaction behavior of eating disorders: a reduction in stigma, an increase in the rate of consultation and a lower age profile.*

*Discussion: With the rapid development of eating disorder internet science in China, the existing and possible problems in its development and the ways to improve it only have to be explored, e.g. "scientific and neutral communication of the disease", "sharing of cases and mutual support", "improvement of access to medical care". " three optimization strategies.*

### **Keywords**

*Social environment; Eating disorders; Interactive social interaction; Health communication; Therapeutic support.*

### **1. Introduction**

"Eating disorders have emerged earlier in Western societies, and in China, in the last decade or so, with the impact of Western culture in recent years, especially the media and social culture's over-promotion of female slimming, the incidence of eating disorders in young women has increased dramatically. In China, the disease is "poorly recognized, poorly diagnosed and poorly treated", and many patients and their families do not even realize that the symptoms are part of the disease. They usually present to hospitals with physical symptoms of eating disorders, and most patients arrive with severe eating disorders. At the same time, eating disorders are stigmatized as being unacceptable to many people, and some people attribute the symptoms of eating disorders to problems of 'self-control' and 'lifestyle habits' and put a lot of stress on the patient, which can lead to rejection of medical treatment.

For these reasons, many people with eating disorders do not seek formal health care and are too shy to tell others about their illness, so they turn to virtual social media platforms to talk

and seek help. Therefore, understanding the behavior and characteristics of patients' interactions, and exploring their impact and possible problems, is important for the treatment of patients with eating disorders and the development of social health trends.

## 2. Methods

### 2.1. Data extraction and participants

An overview of the ecosystem of eating disorders in the two existing Chinese virtual social media platforms Weibo and Red Booklet Platforms was observed.

The author is one of the head science bloggers of eating disorders in China, with one of the highest verticality and popularity of science content in China and a subscriber base of over 218,000, to assess the reach of their dissemination and the extent of their impact on their audience's eating disorder recovery.

The main social media platforms in China are Baidu Post, Weibo and Red Booklet Platforms, which have changed people's lifestyles under their interactivity and autonomy. This paper provides an overview of the existing situation of eating disorders on two platforms, Weibo and Red Booklet Platforms.

The data found that as of 13 November 2021, the number of posts on the topic of "eating disorders" on Red Booklet Platforms reached 10,000+, and the number of searches for "anorexia" was 7,000+. The number of searches for the word "bulimia" reached 320,000+. The topic of "eating disorders" on Weibo has 14,906,000+ readers and "bulimia" has 14,573,000 readers.

On the other hand, the author is a personal experience of an eating disorder. In 2018, she lost 28.8KG due to anorexia nervosa and was admitted to ICU for treatment.

During this recovery process, she shared the course of her eating disorder in a warm and healing style and received a lot of attention and encouragement. Now she has become one of the head science bloggers of eating disorders in China, the verticality and popularity of the science content is the highest in China, the total self-publishing platform since January 2019 for 8,000 subscribers, to November 2021 has exceeded 218,000, the topic about the author #95 post girl with eating disorder had lost 28 kg # Weibo views over 60,610,000.

In 2020, the author filmed China's first eating disorder documentary with over 900,000 views across the internet, and set up the eating disorder charity organization ED Healer, whose members are mostly from eating disorder-related professional studies or clinical experience and have relevant employment and qualifications, and continue to popularize eating disorders with professional science videos on their media platforms.

In 2021, the authors organized China's first large-scale fine art exhibition focusing on body image anxiety and eating disorders, which received 50+ official media coverage. Finally, in collaboration with the Shanghai Mental Health Centre, the first professional online consultation hotline in China was launched at the exhibition. Thus expanding the internet communication of eating disorders to an all-time high, with 92,211,000+ views on Weibo for the topic of the exhibition founded by the author as of November 2021.

Meanwhile, analysis of official Weibo follower data shows that the age of subscribers is decreasing year by year from 2019 to 2021, and the population is widening from Tier 1 to Tier 2 and Tier 3 cities.

In the latest poll conducted in November 2021, a total of 238 people participated in a survey on "the degree of impact of self-publicized knowledge on eating disorder rehabilitation", of

which 82 said it was very helpful, 110 said it was helpful, 37 said it was not helpful, 5 said it was not helpful and 5 said it was a negative effect.

## 2.2. Data analysis

At the same time, official detection rates are increasing. Eating disorders (EDs) in China have continuously increased since 1990 (Wu et al., 2020) and recent epidemiological estimates suggest that the prevalence of disordered eating is as high as 7.04% in China's general population (Yao et al., 2020). To summarize, the self-media communication of eating disorders is increasing in search volume and reach year by year, with increased consultation rates; the socially mediated interactive behavior of eating disorders, through messages from subscribers and spontaneous blog posts, images, videos, etc. are common: content creation focused on sending virtual comfort, exploring illness issues, seeking social support, etc.; the growth in the volume of content is accompanied by a decrease in the stigma of illness, but a simultaneous emergence or exposure of under-aging.

## 2.3. Measures

### 2.3.1. Pros and Cons of Self-Media Communication

Owners of the public accounts, ranging from government agencies and medical institutions to nonprofit organizations and individuals, use these accounts to disseminate health information in Chinese, with greater impact and more efficient information dissemination than traditional websites (Cao et al., 2018; Wang et al., 2020). Therefore, public accounts like Weibo, Red Booklet Platforms are a major source of health information for the Chinese public and are one of the first resources individuals might consult when seeking treatment for eating disorder.

Given that Internet communication provides easy access to info authoritative media coverage. For the media, there is less need to exaggerate facts or provide only one-sided or subjective interpretations for the sake of attention. It is important to focus on specific groups of patients and to increase the attention and awareness of eating disorders to reduce public health illiteracy; to provide a platform for authoritative professional treatment and consultation information, to provide correct evaluation and guidance on eating disorder behavior, and to improve the quality of health information dissemination.

### 2.3.2. Improving access to healthcare

Although Internet communication is growing in China, due to the lack of professional doctors, medical institutions, professional advocacy and online professional help, the responses and experiences of patients in online communication are mostly based on their own experiences, which is unprofessional, informal and empirical information and poses certain risks.

## 3. Discussion

With the rise in material living standards and changes in the prevailing aesthetics of society, 'thinness' has become a pursuit for many people, even to the extreme, and has led to the development of eating disorders. The overall social patterns can be summarized as help-seeking, self-reporting, questioning and answering, helping each other, enhancing illness awareness, improving illness behavior, weakening the strained doctor-patient relationship, reinventing oneself, partial recovery, sharing and spreading illness awareness.

Based on data from mainstream Chinese social media platforms, it was found that social needs were mainly for virtual reassurance, exploring illness issues and seeking social support; the reach of the communication and its impact on the audience's recovery from eating disorders

were effective in reducing stigma, increasing consultation rates and showing a trend towards younger age groups.

However, with the rapid development of eating disorder internet science in China, the existing and possible problems in its development and the ways to improve it are worth exploring, such as the need for professionalism and standardization in case sharing and mutual support, the need for scientific and neutral publicity of the disease in official media, and the need to improve the access to medical care in line with the development.

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