

# Study Stigma toward Depression between Chinese International Students and Chinese Local Students

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**Abstract**—Depression is one of the most diagnosed mental illnesses in the world, and China, the country with the largest population in the world, has more than 173 million people suffering from mental illnesses. A major factor when addressing mental illness is the stigma behind it – a derogatory view of mental illness, and in China stigma for depression is particularly high. This may be due to cultural ideas that affect Chinese people’s view of mental health. This study attempted to understand how stigma may be culturally driven, and thus what the effect of moving to a different country, with different notions of mental health, might have on Chinese students. Thus, this study collected data via an online survey from 133 Chinese international students and 273 Chinese local students. Participants were recruited for students via social media posts and through a Chinese questionnaire platform (WenJuanXing). Stigma was measured using the Depression Stigma Scale [DSS] and depression was measured using the Patient Health Questionnaire-9. The results show that Chinese international students had a lower level of stigma than Chinese local students. Also, within the years of study abroad increase and stigma toward depression decreases. The reason could be experiencing western culture provided different views and knowledge approaches.

**Index Terms**—Stigma, mental health, Chinese, education, cultural background

## I. INTRODUCTION

Depression is a common illness that has a significant impact on psychosocial functioning and life quality [1]. According to American Psychiatric Association [2], depression can be described as a condition that brings up a consistent feeling of sadness, and loss of interest, and affects how individuals may think or behave. Depression can lead to various physical and emotional problems, and individuals may have challenges carrying out their normal daily routines. For one to be diagnosed with depression, symptoms must be present for at least two weeks. Major symptoms of depression include depressed mood or loss of pleasure and interest in day-to-day activities. Individuals diagnosed with depression may also experience significant weight loss or gain depending on their decreased or increased appetite. Symptoms also include a reduction of physical activity given a significant loss of energy. The means of developing a diagnosis may vary. For example, it is typical for a psychologist to give a physical exam, lab test, and psychological evaluation. Tests may also include a thyroid function test or a drug and alcohol screening, while the psychological evaluation measures symptoms, thoughts,

feelings, and behavior patterns discussed with a medical or mental health expert [2].

Depression is a serious mental health disorder, and about 280 million people around the world have been diagnosed [3]. The World Health Organization [3] rated serious depression as the third leading cause of disease burden in 2008, with the disorder expected to rise to first place by 2030. Narrowing in on the country with the biggest population in the world, China, an estimated 173 million adults suffer from a mental illness, with 43 million of them classified as having a serious mental illness [4]. However, China has not focused on public mental health awareness and treatment until recent years. On June 18, 2015, China issued its National Mental Health Working Plan for the subsequent 5 years, recognizing the gravity of the Chinese population’s challenges with mental health. However, from 1990 to 2017, the rate of depression has only increased from 3,224 to 3,990 per 100,000 individuals diagnosed with depression [1].

Upon China’s increased focus on public mental health, there was a subsequent increase in research on depression in China in. One study examining the prevalence rates of depression in China’s adult population found that higher education and income levels were related to a lower risk of being diagnosed with depression [5]. While this study illuminated the fact that rates of depression in China are both high and disproportionately spread across specific regions and subpopulations (e.g., lower income), researchers also showed that to improve community understanding on depression, specific, culturally appropriate education programs are necessary. While education level and socioeconomic status are related to an increased risk for depression in China, family dysfunction has also been shown to predict higher rates of depression, particularly amongst adolescents.

An early study revealed that adolescents who reported having problem-solving, communication, or affective involvement problems within their family showed significantly higher rates of depression [6]. In China specifically, adolescents in dysfunctional households had a harder time communicating their emotions and thoughts to their parents, which may make it even more difficult for them to get adequate assistance from their family members when they need it, leading to anxiety and depression [7]. In Chinese collectivist cultures, children’s socioemotional difficulties have been mostly ignored, as Chinese parents and teachers attach great importance to their children’s academic education [8]. Socialization in Chinese traditional culture means to hide the personal emotions, because compared to the whole society, personal emotions are not important [8].

Additionally, loneliness and depression are significantly correlated, and both are linked to problems with social

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processing [9]. This may be due to the association between a lack of social support and an increased likelihood of depression [10]. When parents and teachers are not sensitive to an adolescent's feelings, this can lead to a sense of helplessness, which is tied to increased loneliness. Adolescents may lose interest in social and academic activities, form negative opinions of themselves and others, and become lonely and reclusive, all of which can result in interpersonal rejection and low social status in the adolescent [8]. Based on the findings, shows that negative views of depression could lead to stigma. Stigma plays a large role in keeping individuals from expressing their feelings and seeking help. The term "stigma" can be defined as a derogatory term that suggests intolerance. As it relates to mental illness, stigma is defined by a dread of the unknown, exclusion, and a set of incorrect assumptions stemming from a lack of education and understanding regarding mental illnesses [11]. Oftentimes when individuals lack knowledge regarding mental illness, they can feel fear or aversion toward those suffering. One study collected a large and representative sample of Chinese adults ( $n = 11,748$ ) in order to understand both the overall public stigma of mental illness in China, along with mental health knowledge (MHK) across the population [12]. Researchers found that a significant number of individuals in the study believed others would have a negative attitude toward (former) mental patients. The majority of participants had no idea what may cause mental illness, how to cure it, or how to prevent it. The results showed that MHK is negatively related to stigma, such that the higher the knowledge about mental health, the less stigma they hold. The study suggested that improvement of public MHK is necessary and can help reduce the stigma toward mental illness.

The specific ways in which stigma manifests in Chinese society are influenced by Confucian cultural values, derogatory etiological views about mental diseases, and the importance of "face." In China, people care a lot about their "face", a cultural concept of honor, respect, and social status [13]. Disrespectful actions or words can lead to "face loss," whereas presents, rewards, and other acts of respect can lead to "face gain." In general, the Chinese "behave appropriately" to avoid embarrassment and to avoid losing face—not necessarily because they are ashamed of their behavior. This can affect how they seek treatment or help. Many are afraid of "losing face", as in feeling shame that their parents or friends will look down on them, which causes them to frequently hide their feelings of distress to protect their public image.

In one study, researchers looked at how cultural ideas regarding the causation of mental illness influenced college students' perceived stigma for mental illness across four different cultural groups: European Americans, Chinese Americans, Hong Kong Chinese, and Mainland Chinese [14]. Results showed that the likelihood and history of help-seeking behavior differed by group, with European and Chinese Americans being more likely to seek out help than Hong Kong and Mainland Chinese individuals. They concluded that lay views about the origins of mental illness seem to be driving these differences between groups. European and Chinese Americans were more likely to hold an environmental/hereditary lay view about the origins of

depression, meaning they believed that mental illness was caused by interactions between a person's environment and themselves. Hong Kong and Mainland Chinese individuals, on the other hand, were more likely to hold a social–personal lay view of depression, such that they believed the cause of mental illness stemmed from personal failure, as traditional Chinese culture does not encourage emotional expression, but rather values self-restraint. This leads people to feel ashamed to express their feelings to avoid "face loss."

There are a variety of factors that might affect the likelihood that one struggles with depression and goes to seek help. In China specifically, traditional Chinese beliefs about the origin of mental problems are one leading cause of both stigma and a lack of help-seeking behavior [15]. Traditional Chinese culture places high importance on self-control rather than emotional outpouring. Individuals are expected to be able to handle and repress their emotional difficulties, give them little weight, and be unconcerned about them.

Given that Chen and Mak's study [14] found differences in help-seeking behavior amongst Chinese Americans vs Hong Kong and Mainland Chinese college students, there may be culturally-driven differences that arise depending on location. The present study aimed to examine the different education backgrounds that can affect students' stigma toward depression. The study included two groups of students from China. One group consisted of Chinese individuals studying in China, while the other group consisted of Chinese individuals studying abroad in a western education country like the United States and the United Kingdom (i.e. Chinese international students). This paper focuses on the culturally-driven differences in depression, and examines how western culture may influence international students, particularly as it relates to stigma for mental illness. We hypothesized that the international students would have a lower level of stigma toward depression negatively related with the length of time studying abroad.

## II. METHOD

### A. Sample design

Participants ( $n = 413$ ) were recruited for the study via social media posts and through a Chinese questionnaire platform (WenJuanXing), and participants with missing or erroneous data were excluded from analyses ( $n = 43$ ). Participants were eligible for this study if they were Chinese, 16-26 years old, and a current student (high school or university). Before taking the survey, all the participants had viewed a paragraph of consent, including the purpose of the survey and the results that will be used in the study. They also need to sign the agreement sheet about privacy when they create an account for the questionnaire platform. Thus, a final sample of 370 participants (208 Females) ages 16-25 years old ( $M = 20.94$ ,  $SD = 2.29$ ) completed the study questionnaire, and all participants were current students at the high school, college, or masters level. 133 students indicated that they have or currently are studying abroad (outside of China) and these regions included: the United States ( $n=87$ ), the United Kingdom ( $n=10$ ), Canada ( $n=21$ ), Australia ( $n=3$ ), Germany ( $n=1$ ), Thailand ( $n=1$ ), Singapore ( $n=1$ ), Korea ( $n=1$ ), France ( $n=1$ ) and 25 students indicated that they study

or have studied abroad, but did not provide information on where. Participation in the study was voluntary. In order to prevent the spread of Covid-19, this survey was collected online, and all information remained anonymous. Participants were informed of the purpose of this research prior to starting the survey and provided consent.

**B. Procedure**

There are three sections in the survey. Participants first read a short consent briefing, and then were presented with a series of questions about personal information regarding their age, gender, status in school (study abroad or not), and years of study abroad (if select yes to the previous question). They will then complete the next section which is the Depression Stigma Scale regarding their thought about depression. The last section is the Patient Health Questionnaire-9 regarding their personal thoughts to diagnose whether they test their probability of depression.

**C. Measures**

*1) Depression stigma scale*

The Depression Stigma Scale (DSS) is an 18-item questionnaire intended to measure stigma toward depression. The original DSS includes 18 items with two scales: the DSS Personal and the DSS Perceived. Each subscale contains 9 items, using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher stigma. For the purposes of the current investigation, the focus was on personal rather than perceived stigma, and to keep the survey short, only the personal stigma subscale was used. The personal stigma subscale is to measure

personal attitudes to depression. Some example items from this subscale include “depression is not a real medical illness”, and “if I had a mental health problem I would not tell anyone”, to which survey respondents indicated the extent to which they agreed/disagreed with the statement.

The original DSS was back-translated to Mandarin by the researcher.

*2) Patient health questionnaire-9*

The Patient Health Questionnaire-9 (PHQ-9) is a questionnaire used to diagnose depression which includes 9 questions rated on a 3-point scale, and is used to determine the degree of depression symptoms in the past two weeks. On the 3-point scale, 1 indicated that the participant had experienced those symptoms for a few days in the past two weeks, 2 meant more than half of the days, 3 meant almost every day; a higher score indicates a higher probability of depression.

The Chinese version of PHQ-9 was provided by MSU Olin Student Health Center.

**D. Statistical Analyses**

SPSS software version 27.0. was used for all statistical analyses. The frequency means and standard deviation values were used to describe demographic characteristics. Pearson correlational analysis was used to explore the relationship between stigma toward depression and other continuous variables. Independent sample t-tests were used to compare the categorical variables of gender and status of studying abroad (yes/no).

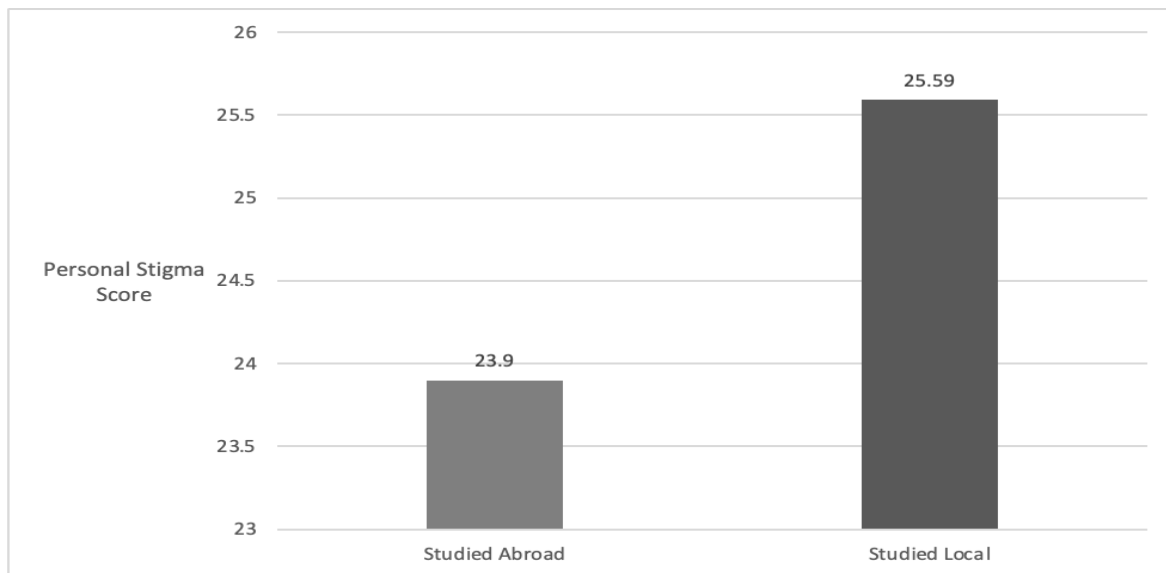


Fig. 1. Comparison of Stigma score between local and international student.

**III. RESULTS**

*A. Stigma for Depression in Students Studying Abroad versus Locally*

An independent sample t-test was used to analyze the stigma toward depression between Chinese International students and Chinese Local students. Students who studied abroad showed a significantly lower level of stigma for

depression (M=23.9) compared to local students in China (M=25.59) ( $t(368) = -3.671, p < 0.001$ ) (Fig. 1).

Additionally, follow-up analyses showed that the length of time studying abroad outside of China was negatively correlated with stigma for depression ( $r(131) = -.234, p = .007$ ), such that as years studying abroad increased, the stigma for depression decreased (Fig. 2).

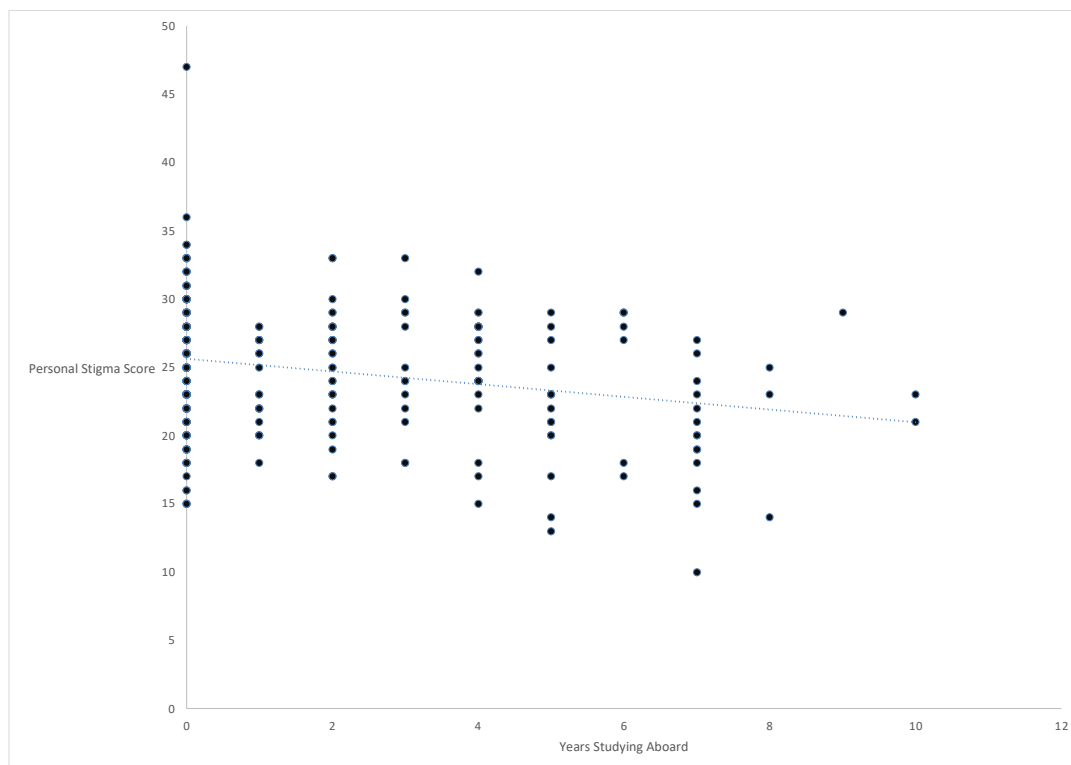


Fig. 2. Decrease in personal stigma score with increase years of study abroad.

### B. Stigma for Depression Based on Age and Gender

Age ( $r(368) = .64$ ,  $p = .217$ ) was not significantly related to stigma for depression, and additionally, there were no differences in stigma for depression across gender ( $t(368) = .984$ ,  $p = .326$ ) were not significantly related to stigma towards depression. A student's grade level also did not have a significant correlation with stigma, ( $r(368) = -.073$ ,  $p = .163$ ).

## IV. DISCUSSION

In the current study, local Chinese students showed a higher self-reported stigma for depression compared to that of Chinese international students. Additionally, time spent studying abroad was negatively correlated with stigma for depression, such that the more time Chinese international students spent studying abroad, the lower their stigma for depression scores were. Gender and age were not significantly related to stigma for depression in the current sample.

Studying abroad means being exposed to a new prevalent culture, often very different from one's own. While cultural values and practices often remain important and woven into one's self-concept regardless of where one is currently located, being in a new country with a different culture can also have effects on the individual. There may be several reasons why the stigma of depression was different amongst Chinese local and international students in the current study. One potential explanation can come from the idea of how knowledge is understood and prioritized in western vs eastern culture. One study wanted to find out how western cultural environments affect Chinese students' learning approach [16]. The study asked a group of Chinese students to study in an international school with western teaching methods in China. In western culture, knowledge is seen as a tool for students to

get what they need. It should be more flexible which should not be limited to a specific way, and students can use the knowledge in their daily life. In China, knowledge is seen as a foundation. Chinese students are asked to memorize hundreds of works of ancient poetry and important snippets. Students who study under western culture could use what they learn to explore more. For example, Chinese students will use what they learn to get a higher grade in the exam, but they would not use it during daily life, no one will talk about ancient poetry or snippets during daily conversation. However, students in China are often afraid to answer questions from the teacher, as the line between correct and incorrect responses is starker. It is stressful to ask for advice when the situation is unclear. Although this study was done in China, the western education did affect Chinese students. In the beginning of the study when the teacher asked questions to students, they found out that most of the students did not want to share their thoughts, because they were afraid of being wrong. After they changed the way of asking the question, instead of asking the student's thoughts, the teacher asked about what all the people think or what Chinese people think. The students were more willing to answer the questions [16].

This presents one potential explanation for the current findings, that Chinese international students' stigma might have been reduced when they became influenced by western culture and that they are able to use their knowledge as a tool to explore more knowledge, while local Chinese students might have a more fixed mindset. Compared to international students, most of them will only apply what they have learned in school instead of discovering new things on their own because they do not often practice the skill of applying and practicing what they know. If the school did not provide them with any mental health education, they wouldn't learn by themselves. This ties back to Chen and Mak's study [14] about different lay views of mental illness. As Chen and

Mak's study [14] found, in western culture, people hold an environmental/hereditary lay view that mental illness is caused by interactions between a person's environment and themselves, which causes them to be more open to mental health problems. Traditional Chinese students hold a social-personal lay view in which they believe that mental illness is caused by personal failure, and that they should not share their feelings with other people. This causes them to be afraid of expressing their thoughts in the classroom which shows that they are also afraid of expressing their feelings because they are not sure whether the feeling is correct or not.

Overall, we found that in the case of Chinese students studying abroad, individuals seem to adapt to an environmental/hereditary lay view of depression prevalent in Western culture, such that they held less stigma for depression than Chinese local students. This effect was not only related to whether they studied abroad or not, but how long they spent abroad. While this study is correlational in nature and cannot make the claim that studying abroad causes a reduction in stigma (we did not measure stigma levels before participants studied abroad), it is still worth noting these significant differences between the two groups. Future studies can track individuals over a longer period of time (measuring stigma before/during/after studying abroad) to understand causation. However, this study does suggest that adapting to a different lay view of mental health, one that is more environmental and hereditary in nature might ultimately work to reduce the stigma of depression. Thus, Chinese mental health agencies can try to popularize more psychological knowledge and understanding of the causes of depression. Given the rise in depression in China over the last decade, an intervention is necessary.

Additionally, because the group involved in this study were only 16 to 25-year-old students, older individuals, their ability to accept psychological knowledge may decline, as studies have shown that the willingness to learn a new skill decreases with age (Janacsek et al., 2012). Implicit skill learning is the foundation for acquiring not only motor but also cognitive and social skills throughout one's life. This means although time is an important effect that helps reduce stigma, if the age range for this study were to be focused on elderly people, there may not be the same effect.

## V. RESEARCH IMPLICATIONS

There is an urgent need for depression prevention and treatment in China, especially in economically underdeveloped regions. One important and high-level means of addressing this issue is by reducing public stigma of mental health, particularly amongst youth who are more impressionable to change. Given that stigma is strongly associated with help-seeking behavior, such that in cultures and places where stigma is high, help-seeking is low, interventions that target stigma reduction can be instrumental in allowing more individuals to feel comfortable seeking help and ultimately healing from mental health related issues.

Depression is particularly important to address in college students who are under constant strain from interpersonal communication, difficult learning assignments, and acclimating to a new environment and way of life, all of which can contribute to intense psychological tensions and

despair [17]. While measuring depression was not the main focus of the study, we found that many students indicated that they currently have or experienced depression in the past. However, positive mental health education theory has become an important track in mental health education in China [19]. This study aimed to examine the effectiveness of mental health courses by selecting two freshman classes in a high school in China, one class as the experimental group and the other as the control. Pre-tests, post-tests, and follow-up post-tests were given to students in both groups at the same time [19]. Students in the experimental group participated in the teaching experiment for one and a half months, while those in the control group did not receive the positive mental health education courses. The experiment was not disclosed to the students during the teaching process, which was conducted in a natural setting. The result shows that the courses did affect student's mental health positively. However, although China has taken mental health education seriously, these lessons take time before they can be effectively implemented in every school. We believe that schools should provide more mental health courses to all age ranges. This can include providing courses about mental health knowledge to students as well as to parents. In China, the school will ask parents to come to school during the semester to report students' performance at school. This can be a good chance to introduce knowledge to the parents and help them take mental illness more seriously, which could open up a line of communication with students earlier. The present study proves that education plays a big role in stigma toward mental illness. Cultural backgrounds play a big role in building people's view, we can focus on education which provides people with more knowledge about mental illness.

## CONFLICT OF INTEREST

The author declares no conflict of interest.

## REFERENCES

- [1] X. Ren, S. Yu, W. Dong, P. Yin, X. Xu, and M. Zhou, "Burden of depression in China, 1990–2017: Findings from the global burden of disease study 2017," *J. Affect. Disord.*, vol. 268, pp. 95-101, 2020.
- [2] American Psychiatric Association, *Diagnostic and statistical manual of mental disorders*, Washington DC: American Psychiatric Association, 2013.
- [3] World Health Organization. (2021). [Online]. Available: <https://www.who.int/news-room/fact-sheets/detail/depression>
- [4] T. Lancet, "Mental health in China: What will be achieved by 2020," *Lancet*, vol. 385, no. 9987, p. e2548, 2015.
- [5] X. Qin, S. Wang, and C. R. Hsieh, "The prevalence of depression and depressive symptoms among adults in China: Estimation based on a national household survey," *China Econ. Rev.*, vol. 51, pp. 271–282, 2018.
- [6] N. B. Epstein, L. M. Baldwin, and D. S. Bishop, "The mcmaster family assessment device," *J. Marital Fam. Ther.*, vol. 9, no. 2, pp. 171–180, 1983.
- [7] Y. Wang, L. Tian, L. Guo, and E. S. Huebner, "Family dysfunction and Adolescents' anxiety and depression: A multiple mediation model," *J. Appl. Dev. Psychol.*, vol. 66, p. e101090, 2020.
- [8] X. Chen, and B. S. Li, "Depressed mood in Chinese children: Development significance for social and school adjustment," *Int. J. Behav. Dev.*, vol. 24, no. 4, pp. 472–479, 2000.
- [9] S. Cheeta, J. Beevers, S. Chambers, A. Szameitat, and C. Chandler, "Seeing sadness: Comorbid effects of loneliness and depression on emotional face processing," *Brain Behav.*, vol. 11, no. 7, p. e02189, 2021.
- [10] S. Grav, O. Hellzèn, U. Romild, and E. Stordal, "Association between social support and depression in the general population: the HUNT

- study, a cross-sectional survey,” *J. Clin. Nurs.*, vol. 21, no. 1–2, pp. 111–120, 2012.
- [11] J. C. Santos, S. Barros, and I. M. M. Santos, “Stigma,” *Glob. Qual. Nurs. Res.*, vol. 3, p. e233339361667044, 2016.
- [12] H. Yin, K. J. Wardenaar, G. Xu, H. Tian, and R. A. Schoevers, “Mental health stigma and mental health knowledge in Chinese population: a cross-sectional study,” *BMC Psychiatry*, vol. 20, no. 1, pp. e323, 2020.
- [13] L. H. Yang and A. Kleinman, “‘Face’ and the embodiment of stigma in China: The cases of schizophrenia and AIDS,” *Soc. Sci. Med.*, vol. 67, no. 3, pp. 398–408, 2008.
- [14] S. X. Chen, and W. W. S. Mak, “Seeking professional help: Etiology beliefs about mental illness across cultures,” *J. Couns. Psychol.*, vol. 55, no. 4, pp. 442–450, 2008.
- [15] T. J. Tracey, F. T. Leong, and C. Glidden, “Help seeking and problem perception among Asian Americans,” *J. Couns. Psychol.*, vol. 33, no. 3, pp. 331–336, 1986.
- [16] R. Mast, “How culture affects how Chinese students approach learning in western education environments,” *Int. Sch. J.*, vol. 36, no. 1, pp. 40–47, 2016.
- [17] N. Falsafi, “A randomized controlled trial of mindfulness versus yoga,” *J. Am. Psychiatr. Nurses Assoc.*, vol. 22, no. 6, pp. 483–497, 2016.
- [18] K. Janacsek, J. Fiser, and D. Nemeth, “The best time to acquire new skills: Age-related differences in implicit sequence learning across the human lifespan,” *Developmental Science*, vol. 15, no. 4, pp. 496–505, 2012.
- [19] Y. Ma, “An empirical study on the effectiveness of positive mental health education curriculum in senior high school,” M.S. thesis, Dept. Psychol., Huazhong Normal Uni., Wuhan, 2015.

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