

Major Depressive Disorder in China: Prevalence and Societal Factors in Different Age Groups

Yiwen Chen^{1,*,†} Ziyang Dou^{2,†} Yixuan Zhu^{3,†}

¹University of California, San Diego, California, U.S.

²University of Toronto, Toronto, Ontario, Canada

³Shanghai Guanghua Cambridge International School, Shanghai, China

*Corresponding author. Email: yic003@ucsd.edu

†These authors contributed equally.

ABSTRACT

The authors reviewed and synthesized literature that reported the prevalence, etiology, and general management of Major Depression Disorder (MDD) in China, ranging from adolescents, adults to the elderly, and explored the specific social implications under each age group. This paper reviewed published studies using search engines PUBMED, American Psychology Association, and the American Journal of Psychiatry database. The review primarily focused on primary studies and meta-analyses of the Chinese population-based in China. Under the impacts of high academic pressure, parents' control over kids has surprisingly been considered a protective factor for adolescents. Over half of the MDD adolescents have suicidal ideation, with limited evidence showing easing methods. Family and marital status, geographical locations, and gender differences are associated with the MDD prevalence rate for adults. For the elderly, several protective and risk factors associated with the development of MDD, the underlying factors relating to the societal dilemma of empty nesters, and social impacts and implications of elderly MDD were discussed. However, no proper solution to MDD has been discovered, which leads to the investigation of intervention and treatment methods that could be a direction for future studies.

Keywords: Depression, Major Depressive Disorder, Adolescents, Adults, Elderly, China.

1. INTRODUCTION

Major depressive disorder (MDD) is a globally prevalent medical illness that seriously affects mood and daily functioning in social life. According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, its most common symptoms include persistent negative emotions, loss of interest in activities once enjoyed, changes in appetite, and even suicidal thoughts [1]. The World Health Organization (WHO) reported that about 264 million people worldwide of all ages suffer from MDD, and nearly 800,000 people die by suicide each year [2]. Among people between the ages of 15 and 29, suicide is the second leading cause of death [2].

Notably, different cultural backgrounds and economic conditions may possibly influence the prevalence of MDD, which could be seen through the variation in the MDD prevalence rate in different countries [3]. A variety of past studies highlight that the

number of diagnoses of MDD in China appears to be much lower compared to Europe and North America. However, a recent meta-analysis notes that the recorded data is very likely to be underestimated due to research bias and incomplete analysis [4]. Also, most previous studies on MDD in China have generally focused on a specific age group, such as adolescents, adults, or the elderly. Still, there have been few studies that combined and compared all three age groups. Therefore, this article aims to provide a comprehensive overview of the relationship between the unique social factors in China and the prevalence of MDD in three different age groups: adolescents, adults, and the elderly.

2. LITERATURE REVIEW

2.1. Major Depressive Disorder in Chinese Adolescents

MDD is a globally prevalent psychiatric disorder causing a great social burden, known as the most

prevalent mental illness among adults and adolescents. Close to 800 000 people die due to suicide every year, and it is the second leading cause of death in 15-29-year-olds [2].

Adolescence is a critical period for psychopathology emerging and evolving into chronicity [5]. MDD is a common mental problem and peaks in onset during adolescence/young adulthood but often perpetuates into adulthood [6]. In China's education system, primary and junior secondary schools are compulsory. After graduating from junior secondary school, most students surveyed in 2006 (87.5%) entered secondary schools (Ministry of Education, 2006). These students face enormous academic pressure because they prepare for the senior secondary school entrance examination and the college entrance examination [7].

2.1.1. Prevalence

The pooled prevalence of depressive symptoms among adolescents in Chinese secondary schools was 24.3% [7]. The prevalence of depressive symptoms among secondary school students. Increased gradually and substantially as they progressed into a higher grade. However, the prevalence of depressive symptoms has been inconsistent across studies.

An epidemiological study using data from the national comorbidity survey demonstrated that the lifetime prevalence of MDD in adolescents and young adults is 15.3%, with a 30-day prevalence of 5.8% [8].

2.1.2. Social Etiology

The development of MDD among adolescents is associated with social factors. As Tang [8] stated, in the meta-analysis, as Chinese adolescents go from Junior High school to Senior High school, the prevalence of depression doubled due to the pressure from college entrance exams. Family conflicts (parents and adolescents) are also affecting young schoolers' mental states. Patients with suicide risk showed a significantly lower level of subjective social support [9].

One of the family controls results from parents' control towards teenagers. Plausibly, in Asian cultures, where relatedness is of more concern than autonomy, parents' control may be experienced by children as less of an intrusion upon their sense of self than in European – American culture [10]. For example, the notion of *guan* [11] that parents should “govern” and “train” children through close monitoring, firm directives, and high demands and the belief in “shaming” [12] as an effective socialization tool both imply a favorable view of parents' authority. Thus, parents' control may be perceived in less of a negative light in Asia. Research has generally found negative effects of control of a psychologically domineering nature and positive effects

of control of a behaviorally organizing nature on Chinese children's functioning [13].

2.1.3. Impacts—Suicidal Ideation and Attempts

Suicidal ideation (SI) is among the most serious and common symptoms of MDD, representing an extreme mental state, with reported prevalence rates ranging from 0.5% to 4.4%. 1–5MDD increases the risk of suicide, substance abuse, poor academic performance, and poor social function in adolescents. Nearly 80% of patients with MDD exhibit SI [14], with more than half of adolescent suicide victims suffering depressive symptoms at the time of death [15].

Despite the high prevalence of suicidal thoughts and behaviors among youth [16-18], there is limited knowledge about interventions that effectively reduce suicidal ideation in adolescents with MDD. Cognitive-behavioral therapy and Interpersonal psychotherapy have emerged as a well-established treatment approach for youth with MDD [19-21]. Evidence-based psychotherapies for depression are also included in treatment guidelines for suicidality. However, there is limited evidence as to whether these treatments reduce suicidal ideation [22].

In addition, suicidal ideation (SI) has been known to alter frontal lobe activity. The prefrontal cortex (PFC) is enormously important in suicide and MDD. However, little is known about the structural alterations in the brains of people with MDD and suicidal ideation.

2.2. Major Depressive Disorder in Chinese Adults

Although the results of studies on the relationship between MDD prevalence and age groups are mixed, it is relatively clear that the incidence rate is lower in adults than in adolescents [4]. The study results on the prevalence of MDD in Chinese adults vary from 0.2% to 6.9% [4]. In general, compared with adults in Europe and North America, the overall diagnosis rate of MDD in Chinese adults is lower, yet it is worth exploring this deeper. This part will focus on MDD in Chinese adults by considering the underlying societal factors.

2.2.1. Prevalence Among Adults in General

For Chinese adults, certain societal factors are associated with the prevalence of MDD, and some are likely culturally specific. According to a 2016 analysis on major depressive episodes in Chinese adults, the influence of socioeconomic, lifestyle, and health conditions on depressive disorders in China are not much different from Western countries. Factors clearly associated with the incidence rate of depression include internal family conflicts, financial difficulties, injuries, and natural disasters [23]. Studies also show that the

amount of stressful life events for Chinese adults is positively correlated with the prevalence of major depressive episodes [23]. That is to say, people with more stressful life events are more likely to develop depressive disorders. However, family and interpersonal conflicts seem to be more extensive and influential than other risk factors. Since Chinese society tends to value the dependence of family relationship more than Western countries, interpersonal conflict among family members are more likely to cause major depressive episodes than other stressful life events including major injuries [23].

In addition, marriage is another important life event to most Chinese adults and is closely related to the prevalence of MDD as well. In terms of the relationship between marital status and the incidence rate of MDD, there is a notable contrast between China and countries like the United States, Canada, and Japan. In the United States, Canada, and Japan, the prevalence of MDD is the highest in unmarried people. In contrast, in China, the lifetime prevalence of unmarried people is much lower than both divorced and remarried people [4]. Since culture seems to play a role in affecting the incidence rate of MDD, this difference appears to reveal the specificity of marriage in Chinese society. Perhaps in China, married people are subjected to more rigid family pressures than unmarried people, which might increase their risk of MDD. Finally, studies suggest that in China, self-assessment of life satisfaction is also associated with the risk of depression, with people who are dissatisfied with their lives at greater risk [23]. The reasons for dissatisfaction with life are likely to be related to social pressure and competition.

2.2.2. Comparison of Prevalence Between Rural and Urban Areas

Studies on the prevalence of MDD in urban and rural areas are controversial. Some scholars believe that the prevalence of MDD in rural areas is lower than that in urban areas [24], while others believe the opposite [23].

In Chinese society, the potential stigmatization of mental illness may lead MDD patients to feel ashamed of exposing their symptoms, which tend to somatize their symptoms [4]. In other words, Chinese MDD patients may be more reluctant to see their symptoms from a psychological perspective than people in many Western countries. Similarly, unlike patients in the United States, multiple studies show that the vast majority of patients with mental disorders in China would not seek help from medical professionals and take related medications [23]. This phenomenon indicates that, in Chinese society, mental illness is not as widely accepted and valued as physical illness. The fear of discrimination discourages people from taking the step to solve their problems.

Moreover, professional mental health services and psychotropic medications are even more scarce in rural

areas than urban cities [23]. MDD in rural areas might be more difficult to deal with due to limited medical resources. Thus, although some studies find lower MDD prevalence in rural areas, it may be associated with the inability of people to confront their symptoms and seek help.

Additionally, an analysis of rural Henan province finds a negative correlation between education level and the prevalence of MDD [24]. In China, people living in rural parts generally have less access to education than people living in cities, which might, in a way, increase their risk of developing MDD.

Hence, It is true that people in urban cities generally face a higher cost of living and greater competition, while regardless of whether the prevalence is higher in urban cities, people in rural areas face greater challenges in treating MDD.

2.2.3. MDD Among Han Chinese Women

Consistent with studies in other countries, in China, multiple studies show that women are more likely to develop MDD than men. Even in rural areas, the prevalence of MDD in women is almost 1.30 times higher than that in men [24].

Some studies focus on MDD among Han Chinese women specifically. In terms of nature, a 2017 data analysis suggests that the higher incidence rate in Han Chinese women is partly associated with genes. Many alleles with very small effects alone contribute to the formation of MDD [25]. Indeed, women are genetically more susceptible than men, but it is also worthwhile to see whether there are underlying societal factors of the gender differences in MDD prevalence.

Another study on Han Chinese women finds that, in addition to the educational level mentioned in the previous part, higher socio-economic position, having a career, better material wealth, and living conditions can all be protective factors against MDD [26]. However, in China, women tend to face harsher challenges than men in terms of employment. It is more difficult to obtain social resources [27], which may be one of the societal factors leading to women's higher prevalence of MDD.

Furthermore, the higher prevalence in women may be related to cultural norms, as women are more encouraged than men to express their emotions and seek professional help [4]. However, these studies only consider women and may not apply to men.

Ultimately, family relationship harmony and marital status are highly correlated with the prevalence rate of MDD in Chinese adults. In rural areas of China, it is harder for MDD patients to get effective help. For Han Chinese women, the higher prevalence rate may be associated with a relatively less social competitive

advantage than men and the fact that women are encouraged more to express their feelings in society.

2.3. Depressive Disorder in Chinese Elderly People

Although there have been few studies done on the prevalence of MDD for the Chinese elderly populations and the results inconsistent, a systematic meta-analysis review gathering and examining a total of 28 published studies with over 76,000 subjects concluded that the point prevalence of MDD in the Chinese elderly is 2.7% and lifetime prevalence is 2.8% [28]. Compared to the adolescent and adult population, older adults in China show the lowest prevalence rate of depression. Different from the expectation that the aging population might have a higher risk of developing MDD due to the degeneration of health, the declining of social function, and other unfavorable conditions, the Chinese elderly are protected by the social support system that is culturally specific in China [4].

2.3.1. Social Etiology: Protective and Risk Factors in General

Living in the environment of traditional Chinese culture which values filial piety and respect toward old people and their high involvement in family and society, the elderly in China are particularly sensitive to societal dimensions as either protective or vulnerable factors [29]. The most prominent protective factor emphasized by several researchers is social support. Social support comes in two portions, one from their families and the other one from society. It is revealed that old people living with their spouses or children are less prone to developing MDD, particularly if the family tie is strong and the family resilience level, the ability to cope with stress and bounce back from burdens, is high [30]. Companionship from family members has a considerable effect on having a more positive attitude toward stressful life events. In China, the sociocultural tradition of living with and taking care of the elderly is a strong protective factor against MDD, and family plays an important role in old people's emotional security. Outside of family support, studies have shown that high levels of social engagement are associated with better well-being and lower levels of MDD [30]. Old people participating in more community activities are at lower risks of becoming depressed as leisure activities provide positive emotions and promote physical health, and interacting with peers helps to build social networks and more emotional resources [30]. Not only does the active engagement in community activities help to provide social assistance as the external aspect, but it also improves their self-esteem which is considered as the internal aspect of protecting against MDD. Internal protective factors are positive personality traits and resilient characteristics when facing traumatic events

[30]. Having a positive attitude provides emotional protection from managing physical difficulties and it is associated with better cognitive functioning [29]. Being resilient means that they can make better adaptation to changing events and they experience less depression and emotions. Factors such as higher education levels and financial capabilities are associated with higher self-esteem. Better self-perceived health directly correlates with better actual health and more positive emotions [30].

However, with the rapid industrialization in recent decades, the once highly valued traditional virtues of taking care of the old have become gradually undermined, the protective factor is eroding. Old people experience the emotions of pain and grief and the rates of MDD have been growing.

Marital status is associated with depression in elderly populations in China since family ties are an important social structure, and having adult children provide financial and social support for the elderly. Not being married or not having kids is a significant risk factor of MDD for the Chinese elderly [29]. Another research suggests that despite having offspring, being impious is also a vulnerable factor as filial impiety can cause family disputes and negative emotions [31]. A study has found that six months after the Lushan earthquake, MDD is more prevalent in the older survivors of natural disasters than in areas without impacts. The same study also identified family dysfunction as another vulnerable factor [32]. Adverse life events also contribute to the development of MDD, including financial problems, death of a loved one, unpleasant experiences, and daily hassles [33]. Health status and subjective self-rated health status are closely associated with predicting MDD in old people. Rating oneself poor in physical status despite being medically healthy reports a higher prevalence of MDD [29, 30].

2.3.2. Empty Nest

Empty nesters are elderly people who have no children or whose children are not living with them, and they either live alone or with their spouse. In addition to China going through the industrialization and urbanization process which gradually undermines the value of filial piety, the one-child policy also accelerates the aging of the population. Younger generations are shrinking and many old people might be forced to live alone in their empty nests. The estimated percentage of empty nests will be 90% of all elderly families in 2030 [34].

Through a comprehensive meta-analysis study, a total of 46 previous studies with over 36,000 subjects were investigated, and the pooled prevalence of depression in the empty nest population is 38.6% [35]. Without help from their family members, empty nesters experience poorer physical health, sleep quality, and

lower quality of life [35]. Risk factors include the loss of loved ones, financial burdens, and chronic diseases are the most prominent in developing MDD. Particularly chronic diseases can cause long-term inconvenience and distress in their daily lives impacting regular activities. Mild depression is the most common form of depression, but it is less likely to receive appropriate attention since the symptoms are not severe enough to cause social impairment [35]. Psychological screening and social interventions might be helpful for the early detection of MDD for the vulnerable empty nesters. Psychological counseling can also help them better cope with daily stress preventing the further development of MDD.

2.3.3. *Negative Impacts and Implications*

MDD is usually diagnosed with the comorbidity of other affective disorders and physical illnesses. Suffering from depression can cause other physical and psychological problems, and the presence of chronic diseases is also closely associated with the development of MDD. Older Chinese patients report that they experience sleep difficulties, lower values of life, lack of energy, and the inability of thinking [29, 37]. Their quality of life significantly lowered after being diagnosed with MDD. Thus, comprehensive social support is critical in helping to improve their mental status, and the belief of being worthy is a significant factor in controlling and preventing further development of MDD [37].

The Chinese elderly populations show a consistent report of a lower prevalence rate of MDD compared to those in Western countries. The traditional cultural measures mentioned above might be protective factors. However, the suicidal rate among the Chinese elderly is four to five times higher than the general population which is contradictory to the MDD prevalence rate [36]. The underlying reason that may account for this dilemma is the social stigmatization of mental disorders under the influence of traditional Chinese culture. The elderly might feel ashamed and refuse to admit or seek help from professionals. They might accept depression as their part of life. Chinese culture also prefers to express emotional distress through bodily pains [29]. Thus, leading to different interpretations and identification of the disease, the reported MDD prevalence rate might contain discrepancies and be higher than the actual statistics. Raising mental health awareness and educating the public about psychological basics are ways to draw attention and help the elderly with MDD in China.

3. LIMITATIONS AND FUTURE DIRECTIONS

This study explains the relationship between MDD and some social phenomena in Chinese people of all ages. However, it lacks feasible solutions because the causes behind societal problems are complex and difficult to

solve. Future relevant research can focus more on exploring specific solutions to the problems discussed in this article. Also, the analysis in this paper is mostly based on the data of correlational research and lacks empirical support. Thus, future research may design specific experiments on one of the phenomena discussed in this paper to check whether the analysis in this paper can be supported. Lastly, due to the limited data availability, this article does not cover MDD in Chinese children. Since children are also prone to MDD, future researchers may want to focus on mental disorders in Chinese children.

4. CONCLUSION

In conclusion, this paper discusses Chinese patients with MDD of all ages mainly from social aspects. Adolescence is a critical period for psychopathology emerging and evolving into chronicity. Family conflicts (parents and adolescents) are also affecting young schoolers' mental states. However, the incidence rate is lower in adults than in adolescents. Factors affecting the level of depression of adults include internal family conflicts, financial difficulties, injuries, natural disasters, and marriage. Chinese MDD patients may be more reluctant to see their symptoms from a psychological perspective than people in many Western countries. Lacking social support has been found to predict depression in the Chinese elderly. Empty-nest elderly also should not be neglected, who is more likely to suffer from depression than elderly who a partner for children accompanies.

Although correlations between different social phenomena have been studied over the years, a proper solution for dealing with this mental disease has not been discovered. Studies show that the development of MDD is related to family conflicts, social-economic backgrounds, and residential households for all ages. Future research should focus on designing a specific experiment with one social issue to suggest intervention and treatments for patients with MDD. Also, studies for children with MDD should be investigated.

REFERENCES

- [1] American Psychiatric Association, Help with depression, Proceedings of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), 2021, Retrieved from <https://www.psychiatry.org/patients-families/depression>.
- [2] World Health Organization, Depression, 2020, <https://www.who.int/news-room/fact-sheets/detail/depression>.
- [3] R.C. Kessler, E.J. Bromet, The Epidemiology of Depression Across Cultures, Proceedings of the Annual Review of Public Health, Annual Reviews,

- 2013, pp. 119-138. DOI: <https://doi.org/10.1146/annurev-publhealth-031912-114409>.
- [4] Y.J. Zhao, Y. Jin, W.W. Rao, Q.E. Zhang, L. Zhang, T. Jackson, Z.H. Su, M. Xiang, Z. Yuan, Y.T. Xiang, Prevalence of major depressive disorder among adults in China: a systematic review and meta-analysis, in: L. Zou (Eds.), *Frontiers in Psychiatry*, 2021, pp: 1-15. DOI: <https://doi.org/10.3389/fpsy.2021.659470>.
- [5] Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, 62(6), 593-602. DOI: <http://dx.doi.org/10.1001/archpsyc.62.6.593>.
- [6] Birmaher, B., Ryan, N. D., Williamson, D. E., Brent, D. A., Kaufman, J., Dahl, R. E., ... & Nelson, B. (1996). Childhood and adolescent depression: a review of the past 10 years. Part I. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35(11), 1427-1439. DOI: <http://dx.doi.org/10.1097/00004583-199611000-00011>.
- [7] Tang, X., Tang, S., Ren, Z., & Wong, D. F. K. (2019). Prevalence of depressive symptoms among adolescents in secondary school in mainland China: A systematic review and meta-analysis. *Journal of Affective Disorders*, 245, 498-507. DOI: <http://dx.doi.org/10.1016/j.jad.2018.11.043>.
- [8] Kessler, R. C., & Walters, E. E. (1998). Epidemiology of DSM-III-R major depression and minor depression among adolescents and young adults in the national comorbidity survey. *Depression and anxiety*, 7(1), 3-14. DOI: [http://dx.doi.org/10.1002/\(SICI\)1520-6394\(1998\)7:1%3C3::AID-DA2%3E3.0.CO;2-F](http://dx.doi.org/10.1002/(SICI)1520-6394(1998)7:1%3C3::AID-DA2%3E3.0.CO;2-F).
- [9] Gu, L., Xie, J., Long, J., Chen, Q., Chen, Q., Pan, R., ... & Su, L. (2013). Epidemiology of major depressive disorder in mainland china: a systematic review. *PloS one*, 8(6), e65356.
- [10] W. I., Ng, C. H., ... & Xiang, Y. T. (2018). Prevalence of major depressive disorder in children and adolescents in China: a systematic review and meta-analysis. *Journal of affective disorders*, 241, 592-598.
- [11] Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child development*, 65(4), 1111-1119. DOI: <http://dx.doi.org/10.2307/1131308>.
- [12] Fung, J. J., & Lau, A. S. (2009). Punitive discipline and child behavior problems in Chinese-American immigrant families: The moderating effects of indigenous child-rearing ideologies. *International Journal of Behavioral Development*, 33(6), 520-530. DOI: <http://dx.doi.org/10.1177/0165025409343749>.
- [13] Wang, Q., Pomerantz, E. M., & Chen, H. (2007). The role of parents' control in early adolescents' psychological functioning: A longitudinal investigation in the United States and China. *Child development*, 78(5), 1592-1610. DOI: <http://dx.doi.org/10.1111/j.1467-8624.2007.01085.x>.
- [14] Wang, S., Zhang, K., Xu, Y., Sun, N., Shen, Y., & Xu, Q. (2009). An association study of the serotonin transporter and receptor genes with the suicidal ideation of major depression in a Chinese Han population. *Psychiatry research*, 170(2-3), 204-207. DOI: <http://dx.doi.org/10.1016/j.psychres.2008.12.006>.
- [15] Hawton, K., & Saunders, K. E. (2009). Psychiatric service development and suicide. *The Lancet*. [http://dx.doi.org/10.1016/S0140-6736\(08\)61871-1](http://dx.doi.org/10.1016/S0140-6736(08)61871-1).
- [16] Lindsey, M. A., Sheftall, A. H., Xiao, Y., & Joe, S. (2019). Trends of suicidal behaviors among high school students in the United States: 1991–2017. *Pediatrics*, 144(5). DOI: <http://dx.doi.org/10.1542/peds.2019-1187>.
- [17] Crosby, A., Gfroerer, J., Han, B., Ortega, L., & Parks, S. E. (2011). Suicidal thoughts and behaviors among adults aged > 18 Years--United States, 2008-2009, MMWR. Retrieved from: <https://stacks.cdc.gov/view/cdc/6021>.
- [18] Ivey-Stephenson, A. Z., Demissie, Z., Crosby, A. E., Stone, D. M., Gaylor, E., Wilkins, N., ... & Brown, M. (2020). Suicidal ideation and behaviors among high school students—Youth Risk Behavior Survey, United States, 2019. *MMWR supplements*, 69(1), 47. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7440198/>.
- [19] Eckshtain, D., Kuppens, S., Ugueto, A., Ng, M. Y., Vaughn-Coaxum, R., Corteselli, K., & Weisz, J. R. (2020). Meta-analysis: 13-year follow-up of psychotherapy effects on youth depression. *Journal of the American Academy of Child & Adolescent Psychiatry*, 59(1), 45-63. DOI: <http://dx.doi.org/10.1016/j.jaac.2019.04.002>.
- [20] Weersing, V. R., Jeffreys, M., Do, M. C. T., Schwartz, K. T., & Bolano, C. (2017). Evidence base update of psychosocial treatments for child and adolescent depression. *Journal of Clinical Child &*

- Adolescent Psychology, 46(1), 11-43. DOI: <http://dx.doi.org/10.1080/15374416.2016.1220310>.
- [21] McGuire, A., Steele, R. G., & Singh, M. N. (2021). Systematic review on the application of trauma-focused cognitive behavioral therapy (TF-CBT) for preschool-aged children. *Clinical Child and Family Psychology Review*, 1-18. DOI: <http://dx.doi.org/10.1007/s10567-020-00334-0>.
- [22] Weitz, E., Hollon, S. D., Kerkhof, A., & Cuijpers, P. (2014). Do depression treatments reduce suicidal ideation? The effects of CBT, IPT, pharmacotherapy, and placebo on suicidality. *Journal of affective disorders*, 167, 98-103. DOI: <http://dx.doi.org/10.1016/j.jad.2014.05.036>.
- [23] Y. Chen, D. Bennett, R. Clarke, Y. Guo, C. Yu, Z. Bian, L. Ma, Y. Huang, Q. Sun, N. Zhang, X. Zheng, J. Chen, R. Peto, K.S. Kendler, L. Li, Z. Chen, Patterns and correlates of major depression in Chinese adults: A cross-sectional study of 0.5 million men and women, *Proceedings of the Psychological Medicine*, Cambridge University Press, 2016, pp. 958-970. DOI: <https://doi.org/10.1017/S0033291716002889>.
- [24] Z. Luo, Y. Li, Y. Hou, X. Liu, J. Jiang, Y. Wang, X. Liu, D. Qiao, X. Dong, R. Li, F. Wang, C. Wang, Gender-specific prevalence and associated factors of major depressive disorder and generalized anxiety disorder in a Chinese rural population: the Henan rural cohort study, *Proceedings of the BMC Public Health*, BMC, Shanxi, 2019, pp. 1-12. DOI: <https://doi.org/10.1186/s12889-019-8086-1>.
- [25] R.E. Peterson, N. Cai, T.B. Bigdeli, Y. Li, M. Reimers, A. Nikulova, B.T. Webb, S.A. Bacanu, B. R. Riley, J. Flint, K.S. Kendler, The genetic architecture of major depressive disorder in Han Chinese women, *Proceedings of the JAMA Psychiatry*, JAMA Network, American Medical Association, 2017, pp. 162-168. DOI: <https://doi.org/10.1001/jamapsychiatry.2016.3578>.
- [26] J. Shi, Y. Zhang, F. Liu, Y.J. Li, J. Wang, J. Flint, J. Gao, Y.H. Li, M. Tao, K. Zhang, X. Wang, C. Gao, L. Yang, et al., Associations of educational attainment, occupation, social class and major depressive disorder among Han Chinese women, in: J.B. Potash (Eds.), *PLOS ONE*, 2014, pp. 1-7. DOI: <https://doi.org/10.1371/journal.pone.0086674>.
- [27] R. Walker, J. Millar, Left behind? The status of women in contemporary China, *Proceedings of the Social Inclusion*, Cogitatio, 2020, pp. 1-9. DOI: <https://doi.org/10.17645/si.v8i2.3038>.
- [28] F. Wang, Q. E. Zhang, L. Zhang, C. H. Ng, Prevalence of major depressive disorder in older adults in China: A systematic review and meta-analysis, in: *Journal of Affective Disorder*, 2018, pp. 297-304. DOI: 10.1016/j.jad.2018.07.061.
- [29] L. L. Lim, W. Chang, X. Yu, H. Chiu, M. Y. Chong, E. H. Kua, Depression in Chinese elderly populations, in: *Asia-Pacific Psychiatry*, 2011, pp. 46-53, DOI: 10.1111/j.1758-5872.2011.00119.x.
- [30] Y. T. Li, T. H. Tung, Effects of protective factors on the depressive status of elderly people in Taiwan, *proceedings of Medicine January 2020 Volume 99 Issue 1* p e18461, DOI: 10.1097/MD.00000000000018461.
- [31] N. Li, L. Pang, G. Chen, X. Song, J. Zhang, X. Zheng, Risk factors for depression in older adults in Beijing, in: *Canadian Journal of Psychiatry*, 2011, pp. 466-473. DOI: 10.1177/070674371105600804.
- [32] L. Li, J. D. Reinhardt, A. Pennycott, Y. Li, Q. Chen, Prevalence of and risk factors for depression among older persons 6 months after the Lushan earthquake in China: A cross-sectional survey, in: *Frontiers in Psychiatry*, 11, 2020, DOI: 10.3389/fpsy.2020.00853.
- [33] Y. Li, C. Chen, H. Tu, W. Cao, S. Fan, Y. Ma, Y. Xu, Q. Hua, Prevalence and risk factors for depression in older people in xi'an China: A community-based study, in: *International Journal of Geriatric Psychiatry*, 2011, pp. 31-39, DOI: 10.1002/gps.2685.
- [34] Y. Yao, G. Ding, L. Wang, Y. Jin, J. Lin, Y. Zhai, T. Zhang, F. He, W. Fan, Risk factors for depression in empty nesters: A cross-sectional study in a coastal city of Zhejiang Province and China, in: *International Journal of Environmental Research and Public Health*, 2019, 16(21): 4106, DOI: 10.3390/ijerph16214106.
- [35] H. Zhang, Y. Jiang, W. Rao, Q. Zhang, M. Qin, C. H. Ng, G. S. Ungvari, Y. Xiang, Prevalence of depression among empty-nest elderly in China: A meta-analysis of observational studies, in: *Frontiers in Psychiatry*, 11, 2020, DOI: 10.3389/fpsy.2020.00608.
- [36] X. Dong, E. Chang, P. Zeng, M. Simon, Suicide in the global Chinese aging population: a review of risk and protective factors, consequences, and interventions, in: *Aging Disorders* 2015;6(2), 2015, pp.121-130, DOI: 10.14336/AD.2014.0223.
- [37] S. W. Chan, H.F. Chiu, W. T. Chien, D. R. Thompson, L. Lam, Quality of life in Chinese elderly people with depression, in *International Journal of geriatric psychiatry*, 2006, pp.312-318, DOI: 10.1001/gps.1461.