

# ***Anxiety Disorders among Left-Behind Children in Rural China: A Comprehensive Literature Review***

**Yining Wang<sup>1,a,\*</sup>**

<sup>1</sup>*University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 27514, United States*

*a. yining22@ad.unc.edu*

*\*corresponding author*

**Abstract:** With rapid urbanization leading to mass adult migration from rural to urban areas in China, a consequential demographic group called ‘left-behind children’ has emerged. Often left in the care of relatives or on their own, these children experience extended periods of parental absence associated with various mental health implications, notably anxiety disorders. This paper explores anxiety disorders of left-behind Children including depressive symptoms, the effect of COVID-19 and bullying victimization among left-behind children in rural China through literature review. Further, it examines potential interventions from the implementation of online mental health interventions, strengthening community support systems, and policy and financial interventions. Additionally, the paper points towards the potential efficacy of community-based interventions, emphasizing the importance of a multi-pronged approach. The analysis promotes a more thorough investigation into the viability and effectiveness of these interventions, opening the door to better mental health outcomes for underprivileged kids in rural China.

**Keywords:** left-behind children, rural China, anxiety disorders, mental health

## **1. Introduction**

One of the most significant socio-demographic phenomena associated with China’s recent rapid economic expansion and urbanization is the enormous number of children who are left behind in rural areas while their parents move to cities in pursuit of employment. These ‘left-behind children’ have emerged as a subject of substantial concern in socio-psychological studies, this issue was clarified by the Zhao et al. study, which showed that these kids are more likely to have greater levels of anxiety [1], which is exacerbated by poor living conditions. These findings highlight a complex web of socio-environmental factors and mental health interactions.

Huang et al.’s [2] convincing study, which found a direct link between left-behind children’s heightened anxiety levels and their reduced health-related quality of life, supported these findings. These studies underscore the need for a more comprehensive understanding of this issue to develop effective measures for its mitigation. Therefore, this literature review seeks to bridge this knowledge gap by emphasizing the distinct relationship between left-behind children and anxiety disorders. Though some research has been conducted in this area, it remains relatively under-explored, necessitating a more profound inquiry.

This review of the literature uses a methodical approach to examine the body of knowledge on anxiety disorders in rural China's left-behind children. It specifically focuses on three prominent types of problems caused by or related to anxiety disorders and attempts to broaden the scope of understanding by investigating potential interventions tailored to this unique demographic, facilitating a more comprehensive understanding of possible problems and solutions.

The relevance of this research becomes apparent when considering the potential benefits for mental health practices, policy formation, and future research directions. Children who are left behind display a higher prevalence of emotional and behavioral issues, as shown by the study by Fan et al. [3]. Hence, addressing the psychological well-being of these children emerges as both an urgent and significant endeavor. By presenting a comprehensive analysis of anxiety disorders specific to left-behind children and potential intervention strategies, this literature review aims to provide valuable insights. The ultimate goal is to enhance mental health outcomes for this vulnerable and often overlooked demographic group, which aligns with broader objectives of social justice and inclusive development.

## **2. Anxiety Disorders**

One of the most common types of psychiatric problems globally is the collection of mental health diseases known as anxiety disorders, which are characterized by emotions of dread and fear. In the context of left-behind children in rural China—children left in the care of others due to their parents seeking employment in cities—these disorders represent a persistent and significant source of worry in non-threatening situations, often exacerbated by the prolonged absence of their primary caregivers.

These disorders manifest in left-behind children through signs such as constant worrying, restlessness, difficulty focusing, and other physical symptoms like increased heart rate or perspiration. A lack of consistent emotional support and educational stress frequently magnify their anxiety. Such children also show emotional and behavioral issues distinguishing them from their peers living with their parents.

A growing body of research in academia sheds light on the severity and prevalence of anxiety disorders in left-behind children. Anxiety disorders are a significant aspect of the difficulties identified in Wen & Lin's comparison of the developmental risks faced by left-behind children with their migrant and non-migrant parents [4]. Jia & Tian report higher loneliness and social isolation levels in left-behind children, contributing significantly to heightened anxiety. Although China was not included in the sample [5], Graham & Jordan contend that anxiety disorders are a prevalent problem in the four Southeast Asian nations where migrant parents' absence can have a significant influence on the psychological well-being of children left behind [6].

These studies illuminate the importance of continued research into anxiety disorders among Chinese left-behind children in rural areas. With the potential to impact the mental health of many young individuals, our exploration into this topic is not just warranted but also vitally necessary. This literature review aims to deepen the understanding of this issue and contribute to developing effective interventions to improve the mental health outcomes for this vulnerable population.

## **3. Potential Problems Related with Anxiety Disorders**

### **3.1. Depression**

To begin with, left-behind children in rural China who experience depressive symptoms have a lot of cause for concern. In a study by Tan et al. done in junior and senior secondary schools, it was discovered that 54.74% of left-behind pupils had depressive symptoms [7], with grade 12 students having the highest frequency (73.08%). Numerous factors, such as grades, family income, and the degree of parent-child and teacher-student connections, were linked in the study to these symptoms.

According to the research, depressed symptoms are a prevalent health issue among children and adolescents who are left behind, especially those who are in the upper grades [7].

In a different study, Zhou et al. investigated the effect of parental relocation on the prevalence of depressive symptoms among left-behind children in China using a nationally representative panel data set. The CES-D depression scale indicated that parental migration significantly elevated depression levels in children aged 10 and 11 by 2 points [8]. Intriguingly, the study also showed that in evaluating the status of children with depressive symptoms in rural China, the negative impact of reduced parental care outweighed the beneficial impact of higher wealth. This implies that the potential financial advantages of the parents' migration are not as significant as the absence of parental care brought on by migration [8].

These results highlight the serious issues with mental health that rural Chinese children who are left behind must deal with. They draw attention to the fact that depressed symptoms are very common in these kids and that a variety of complicated circumstances, such as parental emigration, a decline in parental involvement, and socioeconomic factors, contribute to these symptoms. The findings also emphasize the need for targeted interventions to support the psychological well-being of these children, particularly those in higher grades and those affected by parental migration.

### **3.2. The COVID-19 Pandemic**

Children in rural China who have fallen behind academically, psychologically, and physically have suffered greatly as a result of the COVID-19 pandemic. Before the COVID-19 outbreak, 10- to 15-year-old children and adolescents who had been abandoned by their migrant parents were the subject of a study by Gao et al. According to the report, the pandemic caused significant medical and psychological problems for these kids. The epidemic, according to the researchers, has reduced the children's opportunities for peer contact and increased inappropriate grandmother care, which has resulted in serious psychiatric disorders in the youngsters who have been left behind.

The study examined children left with caregivers, often grandparents, during the COVID-19 outbreak as their parents moved to cities. Over 61 million children, nearly 20% of China's child population, are left behind. China's "hukou" policy requires migrant parents to pay a high fee if their child seeks education outside their birth district, prompting many to leave their children with relatives for free education.

According to the study's findings, families and kids who already struggle with psychosocial issues—including kids who are left behind and have previously been harmed by their parents' internal migration to China—are more likely to suffer from the effects of COVID-19. The study also discovered that children who were left behind and who had strong COVID-19 worries displayed severe symptoms of anxiety and insomnia [9].

Thus, the COVID-19 pandemic has made concerns about the psychological, academic, and physical well-being of left-behind children in rural China worse. The results highlight the necessity for treatments to deal with these problems among this population's vulnerable.

### **3.3. Bullying Victimization**

According to a study by Yang et al. [10], bullying victimization is a serious anxiety issue for left-behind youngsters in rural China. 8.5% of the 810 primary school participants in the survey reported having been bullied, and 44.3% of them were classified as left-behind children (LBC), who are those whose parents had moved away for employment in urban areas. The Multidimensional Students' Life Satisfaction Scale (MSLSS) was used to measure life satisfaction across five categories, including family, school, friends, environment, and self-satisfaction. The researchers also utilized the Chinese version of the revised Olweus Bully and Victim Questionnaire to measure bullying victimization.

Mann-Whitney U tests, Chi-square tests, multivariate linear regression analysis, and logistic regression analyses were used to assess the data.

According to the study, bullying victims has a detrimental effect on one's overall level of happiness. Bullied kids who were left behind saw a bigger drop in friend satisfaction than their classmates who weren't left behind. The study found that bullying victimization and feeling left behind had interaction effects on friend satisfaction ( $p_{\text{interaction}} = 0.048$ ). On the topic of school happiness, a comparable interaction effect between victimization by bullying and being left behind was discovered ( $p_{\text{interaction}} = 0.004$ ). These results suggest that the child's position as being "left behind" has a considerable impact on the impact of bullying victimization on life satisfaction [10], notably in the categories of friend and school satisfaction [11].

Again, bullying victimization is one of the most important factors causing anxiety difficulties in rural China's left-behind youngsters. Being left behind by peers worsens bullying's detrimental effects on life satisfaction, particularly in the areas of friendship and academic fulfillment. These results highlight the need for bullying interventions that target its consequences on this vulnerable population.

## 4. Potential Interventions and Solutions

### 4.1. Online Mental Health Interventions

First of all, there is a great opportunity for online mental health interventions to address anxiety problems in rural China's left-behind children. In those with generalized anxiety disorder, the study by Hirsch et al. [11] showed that internet-delivered interpretation training could successfully lower concern and anxiety. More sentences completed in the Scrambled Sentence Test that were consistent with a positive interpretation were an indicator of a higher propensity to perceive ambiguous information favourably. In particular, during the COVID-19 epidemic, this strategy could be modified to assist left-behind children in rural China in managing their anxiety and depression symptoms. By creating culturally sensitive content that considers the specific experiences and struggles of these children, such as prolonged separation from parents and feelings of abandonment, online interpretation training could equip them with tools to reframe negative thoughts. Coupled with the isolation and stress of the COVID-19 pandemic, integrating accessible online platforms with relatable scenarios for these children could serve as a pivotal intervention, assisting them in building resilience and fostering a positive outlook amidst adversity.

A meta-review by Hollis et al. that assessed the efficacy of digital health interventions (DHIs) for mental health issues in children and young people lends credence to this strategy [12]. The analysis discovered some evidence in favor of DHIs' clinical efficacy in treating depression and anxiety in adolescents and young adults, particularly when it comes to computerized cognitive-behavioral treatment (CBT). The review did, however, also draw attention to some important methodological flaws, such as inconsistent uptake and engagement with DHIs, the absence of a common taxonomy or typology for DHIs, and short-term follow-up. Despite these drawbacks, the analysis came to the conclusion that DHIs offer a significant opportunity to increase the accessibility, efficiency, clinical effectiveness, and personalization of mental health therapies. This is especially true considering how commonplace digital engagement is among young people.

In the context of left-behind children in rural China, these findings suggest that online mental health interventions could be a viable solution to address their mental health needs, especially with the explosive growth of online platform development due to the COVID-19 pandemic. However, successfully implementing these interventions would require addressing the identified limitations, such as improving engagement with DHIs and ensuring long-term follow-up. Additionally, it would

be necessary to adapt these interventions to rural China's specific cultural and socioeconomic context to ensure their relevance and effectiveness [13].

#### **4.2. Community Support Systems**

The second important factor in addressing the mental health requirements of left-behind children in rural China is improving community support structures. Children with mental, behavioral, and developmental problems (MBDDs) aged 2 to 8 years old were studied by Robinson et al. [13] to compare health care, family, and community characteristics between rural and urban locations of the United States. The study discovered that children were more likely to lack amenities and reside in subpar neighborhoods in all rural areas. However, children in remote places were less likely to have a parent who was in fair or poor mental health, lived in a community without social assistance, or lacked a medical home.

These results show that improving community support networks may help children in rural areas have better outcomes in terms of their mental health. This could involve enhancing social support networks within neighborhoods, improving access to health resources, and providing support for parents experiencing mental health issues. The study also highlights the importance of addressing financial difficulties and improving living conditions, which are common challenges in rural areas.

In order to secure their comprehensive care and safety in the face of the difficulties experienced by left-behind children in rural China, the government developed national guidelines in 2016. Additionally, educational and counseling initiatives have been implemented to support their academic and emotional needs.

#### **4.3. Policy and Financial Interventions**

Last but not least, improvements in policy and funding can considerably improve the mental health problems among rural Chinese children who are left behind. A family economic strengthening intervention had a good effect on caregivers' mental health for children with AIDS, according to a study carried out in Uganda, a nation that has been severely afflicted by HIV/AIDS [14]. The Suubi-Maka initiative, which encouraged families to save money for schooling and family-level income-generating projects, comprised matched savings accounts and financial planning and management training. Specifically in the symptom domains of obsession-compulsion, interpersonal sensitivity, anger, and psychoticism, caregivers in the treatment condition reported positive changes in their mental health functioning, according to the data.

The findings of this study suggest that similar policy and financial interventions could be beneficial in the context of left-behind children in rural China. By providing financial resources and training, these interventions could alleviate families' economic stress, thereby improving the mental health of caregivers and, indirectly, the children under their care.

The Chinese government has recognized the challenges faced by left-behind children and has implemented several policies to support their families. One significant measure is the Child Guardian System, which mandates parents working away from home to appoint a guardian for their children, ensuring consistent care in their absence. Additionally, there's a focus on strengthening legal protections, holding parents accountable for neglect, and promoting family education to provide left-behind children with emotional support. Lastly, to tackle the root cause, the government promotes local employment opportunities, allowing parents to work closer to home and be present in their children's lives.

In conclusion, legislative and financial interventions that concentrate on family economic improvement may offer a workable remedy for the mental health problems faced by left-behind

children in rural China. To modify and test such interventions in the Chinese setting, more study is required [14].

## 5. Conclusion

The complicated topic of anxiety disorders in left-behind children in rural China has been explored in this literature review, which has focused on three major issues: depressive symptoms, the COVID-19 pandemic's effects, and bullying victimization. The research has also looked at possible solutions, such as improving community support networks, enacting financial and policy changes, and providing online mental health therapies.

In light of the COVID-19 pandemic, the studies analyzed suggest that online mental health interventions, including interpretation training offered online, can significantly lessen symptoms of anxiety and depression. To boost engagement with digital health interventions and adapt these interventions to the unique cultural and socioeconomic environment of rural China, additional research is necessary.

Addressing the mental health needs of kids who are left behind can also be greatly aided by strengthening community support systems like local schools and clinics. However, in order to effectively implement these interventions, it would be necessary to take into account the unique cultural and socioeconomic circumstances of rural China. To assess the efficacy of community-based interventions in this setting, additional study is required.

Interventions in policy and finance, such as offering financial support and training to families, can lessen the financial strain that families experience and enhance the emotional well-being of caregivers and children. To adapt and test such approaches in the Chinese context, more study is necessary.

This review has some limitations, despite the fact that it offers insightful information about the issues and potential treatments for anxiety disorders among rural Chinese children who are left behind. The study is not thorough enough, and several topics haven't been covered, like how other mental health conditions may affect people, how other societal and environmental factors may play a role, and how long-term interventions' impacts may last. In order to further our understanding of this complicated problem and create more effective therapies, future research should focus on filling in these gaps and conducting more thorough, rigorous investigations.

## References

- [1] Zhao, X., Chen, J., Chen, M.-C., Lv, X.-L., Jiang, Y.-H., & Sun, Y.-H. (2014). *Left-behind children in rural China experience higher levels of anxiety and poorer living conditions*. *Acta Paediatrica*, 103(6), 665–670. <https://doi.org/10.1111/apa.12602>
- [2] Huang, Y., Zhong, X.-N., Li, Q.-Y., Xu, D., Zhang, X.-L., Feng, C., Yang, G.-X., Bo, Y.-Y., & Deng, B. (2015). *Health-related quality of life of the rural-China left-behind children or adolescents and influential factors: A cross-sectional study*. *Health and Quality of Life Outcomes*, 13(1). <https://doi.org/10.1186/s12955-015-0220-x>
- [3] Fan, F., Su, L., Gill, M. K., & Birmaher, B. (2009). *Emotional and behavioral problems of Chinese left-behind children: A preliminary study*. *Social Psychiatry and Psychiatric Epidemiology*, 45(6), 655–664. <https://doi.org/10.1007/s00127-009-0107-4>
- [4] Wen, M., & Lin, D. (2011). *Child development in rural China: Children left behind by their migrant parents and children of nonmigrant families*. *Child Development*, 83(1), 120–136. <https://doi.org/10.1111/j.1467-8624.2011.01698.x>
- [5] Jia, Z., & Tian, W. (2010). *Loneliness of left-behind children: A cross-sectional survey in a sample of rural China*. *Child: Care, Health and Development*, 36(6), 812–817. <https://doi.org/10.1111/j.1365-2214.2010.01110.x>
- [6] Graham, E., & Jordan, L. P. (2011). *Migrant parents and the psychological well-being of left-behind children in Southeast Asia*. *Journal of Marriage and Family*, 73(4), 763–787. <https://doi.org/10.1111/j.1741-3737.2011.00844.x>
- [7] Tan, M., Chen, M., Li, J., He, X., Jiang, Z., Tan, H., & Huang, X. (2018). *Depressive symptoms and associated factors among left-behind children in China: A cross-sectional study*. *BMC Public Health*, 18(1). <https://doi.org/10.1186/s12889-018-5963-y>

- [8] Zhou, M., Sun, X., Huang, L., Zhang, G., Kenny, K., Xue, H., Auden, E., & Rozelle, S. (2018). Parental migration and left-behind children's depressive symptoms: Estimation based on a nationally-representative panel dataset. *International Journal of Environmental Research and Public Health*, 15(6), 1069. <https://doi.org/10.3390/ijerph15061069>
- [9] Gao, C., Tadesse, E., & Khalid, S. (2022). Word of mouth from left-behind children in rural China: Exploring their psychological, academic and physical well-being during COVID-19. *Child Indicators Research*, 15(5), 1719–1740. <https://doi.org/10.1007/s12187-022-09923-7>
- [10] Yang, Y., Zheng, C., Xie, M., Yuan, S., Zeng, Y., Zhou, M., Huang, S., Zhu, Y., Ye, X., Zou, Z., Wang, Y., & Baker, J. S. (2021). Bullying victimization and life satisfaction among rural left-behind children in China: A cross-sectional study. *Frontiers in Pediatrics*, 9. <https://doi.org/10.3389/fped.2021.671543>
- [11] Hirsch, C. R., Krahé, C., Whyte, J., Krzyzanowski, H., Meeten, F., Norton, S., & Mathews, A. (2021). Internet-delivered interpretation training reduces worry and anxiety in individuals with generalized anxiety disorder: A randomized controlled experiment. *Journal of Consulting and Clinical Psychology*, 89(7), 575–589. <https://doi.org/10.1037/ccp0000660>
- [12] Hollis, C., Falconer, C. J., Martin, J. L., Whittington, C., Stockton, S., Glazebrook, C., & Davies, E. B. (2016). Annual research review: Digital Health Interventions for Children and young people with mental health problems - A systematic and meta-review. *Journal of Child Psychology and Psychiatry*, 58(4), 474–503. <https://doi.org/10.1111/jcpp.12663>
- [13] Robinson, L. R., Holbrook, J. R., Bitsko, R. H., Hartwig, S. A., Kaminski, J. W., Ghandour, R. M., Peacock, G., Heggs, A., & Boyle, C. A. (2017). Differences in health care, family, and community factors associated with mental, behavioral, and developmental disorders among children aged 2–8 years in rural and urban areas — United States, 2011–2012. *MMWR. Surveillance Summaries*, 66(8), 1–11. <https://doi.org/10.15585/mmwr.ss6608a1>
- [14] Wang, J. S.-H., Ssewamala, F. M., & Han, C.-K. (2014). Family economic strengthening and mental health functioning of caregivers for AIDS-affected children in rural Uganda. *Vulnerable Children and Youth Studies*, 9(3), 258–269. <https://doi.org/10.1080/17450128.2014.920119>