


# A call for immediate action to improve the mental health of left-behind children in the post-COVID-19 era

Jinkai Li, Qiuzhen Ren, Erga Luo, Chuanlong Ma & Chengfang Liu

 Check for updates

The COVID-19 pandemic has caused profound mental health problems among left-behind children (LBC). Here we discuss the challenges that LBC are facing in the post-COVID-19 era and the potential underlying mechanisms, and provide recommendations for future policy priorities.

Left-behind children (LBC) are defined as children who remain in their home countries or communities when one or both of their parents migrate outside of their home communities for work or any other reason, typically for at least 6 months<sup>1</sup>. COVID-19 has led to a series of adverse consequences for migrant families and, particularly, for LBC. Non-exhaustive examples include escalating family debt, increased instances of physical and verbal aggression, insufficient access to food and medical facilities, heightened risks of contracting COVID-related illnesses, disruptions to school activities, and diminished communication with both parents and peers<sup>2</sup>. These challenges have considerably affected various aspects of LBC's lives, including nutrition intake, medical protection, school performance and personality development. It is worth emphasizing that LBC are more susceptible to mental health problems owing to their lack of sufficient parental companionship. Parental presence is of great importance for releasing children's negative emotions and helping to resolve emotionally triggered problems in response to external disasters<sup>3</sup>. A survey conducted in China underscored the severity of the situation, revealing that children who experienced parent-child separation during the COVID-19 pandemic were more than twice as likely to exhibit symptoms of depression and anxiety, and more than three times as likely to engage in suicidal behaviors<sup>4</sup>. In this Comment, we provide an overview of the current status of LBC and their mental performance, determine the negative effects of COVID-19 on their mental health and underlying mechanisms, justify the potential social burden, and finally propose relevant countermeasures.

## Rapidly increasing LBC and their mental health performance

As mentioned above, LBC are children who are separated from their immigrant parents for over half a year. By this working definition, the global landscape has witnessed a considerable increase in the number of LBC around the world, with a substantial concentration in middle-income and low-income countries (Fig. 1). For example, the unprecedented rural-urban migration in China, spanning

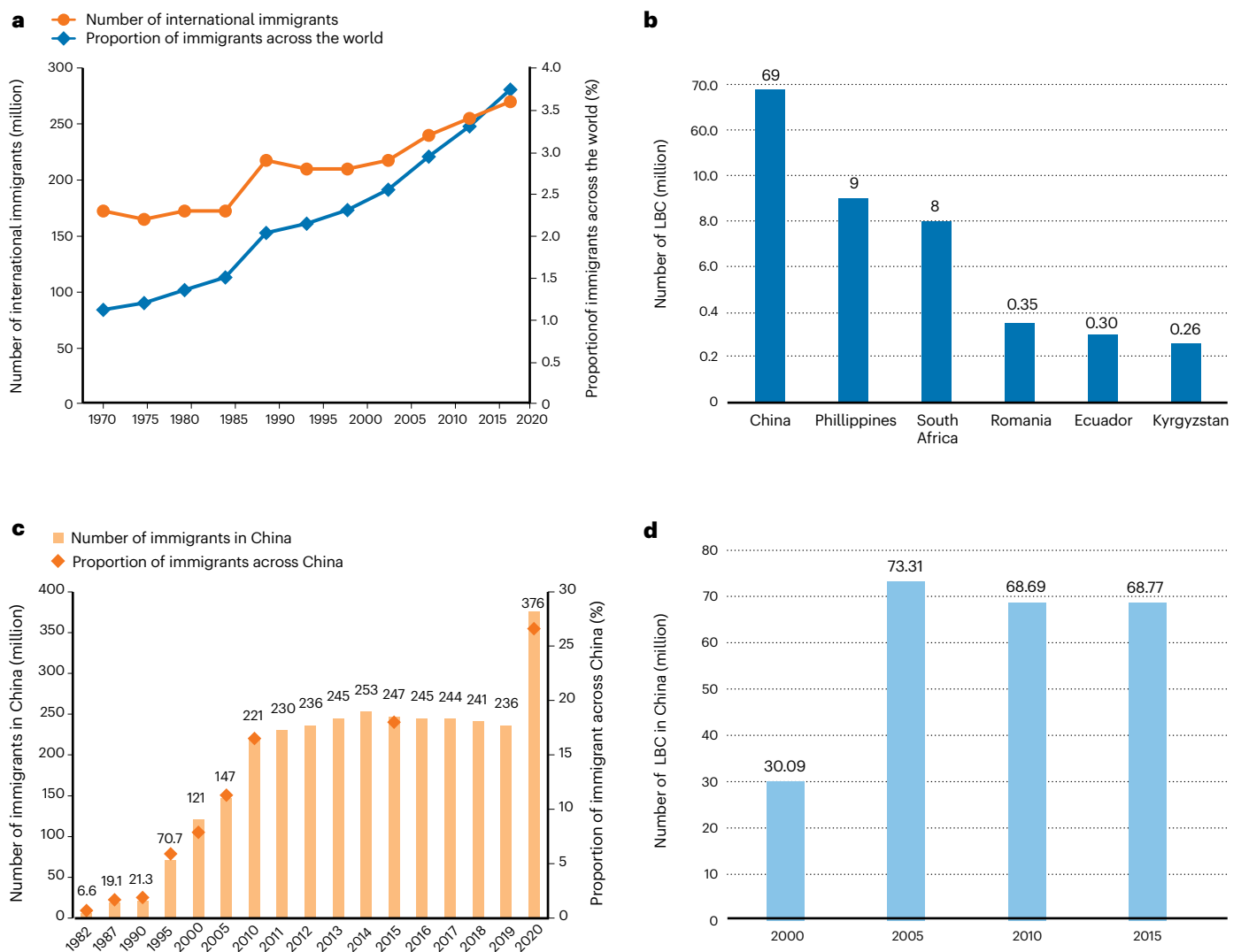
nearly 40 years, has resulted in more than 69 million LBC living in rural areas.

Although parental migration can provide financial support to improve LBC's nutritional and material conditions by remittance, the lack of parental companionship can adversely affect children's mental health, contributing to developmental, adaptive and disordered mental health problems<sup>1</sup>. For example, immigrant parents may face challenges in providing sufficient family care and parental love owing to institutional, financial or other reasons, and this can lead to a higher probability of LBC having weak self-control, poor social interactions, low self-esteem and isolation<sup>5</sup>. Moreover, when LBC encounter changes in their family environment associated with parental migration and experience alienation from classmates at schools, their current primary caregivers may not be able to compensate for the emotional needs unmet by their parents. This situation increases the likelihood of LBC experiencing anxiety, depression and loneliness, as well as exhibiting traits such as selfishness, indifference and irritability<sup>6</sup>.

## The profound effects of COVID-19 on the mental health of LBC

The COVID-19 pandemic has significantly exacerbated the common mental health issues of LBC. Recent studies have shown that both the COVID-19 pandemic itself and corresponding containment measures, such as periods of 'lockdown' and social distancing, were harming LBC's mental health during the COVID-19 period, especially in middle-income and low-income countries<sup>7</sup>. Apart from the enormous pressure posed by the pandemic, LBC also experience the absence of parental companionship and weakened family conditions, which are crucial factors for children's psychological wellbeing and recovery from trauma<sup>8</sup>. Consequently, the deep effects of COVID-19 on the mental health of LBC are not only damaging but also enduring. There are several reasons for the challenges of LBC's mental health raised both during and after the COVID-19 pandemic.

**LBC were exposed to several adversities during COVID-19.** First and foremost, the risk of LBC, along with their primary caregivers (mostly grandparents), being contracted with COVID-19, significantly heightened both the physical and mental health challenges for LBC. In the USA, approximately 140,000 children experienced the loss of caregivers between April 2020 and June 2021<sup>9</sup>. Moreover, owing to the COVID-19 control measures, parents have to be stranded at their workplaces and were unable to provide timely psychological support and guidance. In Thailand, only a small proportion of immigrant parents (4% of immigrant fathers and 8% of immigrant mothers) were able to return home, while most had to work overtime at their workplaces<sup>2</sup>.



**Fig. 1** The number of immigrants and LBC globally and in China. Data in **a** and **c** are from the *World Migration Report 2022* (ref.<sup>14</sup>) and the *China Population and Employment Statistics Yearbook*. Data in **b** and **d** are from previous studies<sup>15</sup> and the *Population Status of Children in China in 2015: Facts and Figures*<sup>16</sup>.

Second, the global economic downturn triggered by the COVID-19 pandemic markedly reduced the wages and expected income of immigrant parents. As a result, LBC received less remittances and material support from their immigrant parents. Simultaneously, the pressure caused by debt and uncertainty about the future faced by immigrant families further exacerbated the negative and insecure mindsets of LBC.

Third, the closure of public places and the suspension of normal school activities, one of the widespread control measures during COVID-19, restricted primary social interactions and outside activities with peers for LBC<sup>10</sup>. These restrictions worsened the feelings of isolation and anxiety among LBC. Despite the eventual lifting of lockdown measures, LBC are likely to have manifestations of social anxiety and depression, social tension and social avoidance<sup>2</sup>. These circumstances compound the disadvantages faced by LBC and considerably increase their vulnerability to mental health issues,

including behavioral disorders, isolation, social anxiety and pandemic-related trauma.

**After COVID-19, LBC are facing serious challenges in psychological recovery.** The parent-child attachment is essential to help LBC recover from COVID-related trauma and grief<sup>11</sup>. The literature has shown that parents have a vital role in aiding their children's post-disaster adjustment by listening to their fears and concerns, sharing perspectives and social values, helping them to evaluate and make sense of what happened, and providing them with targeted guidance on how to cope<sup>7</sup>. Nevertheless, the physical distance between immigrant parents and their children may lead to an oversight of potential mental health risks, increasing the likelihood of LBC experiencing socio-emotional maladaptation to the COVID-19 experience. Such oversights impede post-trauma recovery and hinder the formation of positive long-term social values of LBC.

Furthermore, even after the reopening of societies and economies, the immigrant parents and substitute caregivers of LBC may face pressure to repay debts incurred from rising food and medical expenditures caused by COVID-19. In Thailand, for example, nearly 88% of households increased their food and medical expenditures in response to COVID-19 and took on substantial debt burden<sup>2</sup>. Under such financial strains, immigrant parents and caregivers may not have the capacity to provide support such as companionship, communication and material input to facilitate the recovery of LBC from COVID-related mental problems.

In addition, many LBC live in less-developed regions with limited access to healthcare facilities and medical professionals. These constraints impede the timely and effective access of LBC to medical services for post-COVID trauma treatment. Hence, the disadvantages associated with immigrant parents and weak family conditions commonly lead to prolonged and challenging recoveries of LBC from COVID-19-related trauma.

## Far-reaching social consequences of neglecting the mental health of LBC

Childhood experiences during public emergencies, such as pandemics, natural disasters and wars, exert a lasting effect on individual wellbeing and longitudinal outcomes<sup>12</sup>. As discussed above, the COVID-19 pandemic and its associated containment measures have substantially impeded the psychological wellbeing and personality-building processes for LBC, such as socialization, emotional regulation and the formation of life values and beliefs. Furthermore, weakened parental support and inaccessible medical services during and after COVID-19 inevitably hinder the social-emotional development and even the long-term personal achievements of LBC.

These adverse effects have prolonged and far-reaching consequences for social advancement, as there is a substantial number of LBC who may have mental health issues. Early childhood mental distress can increase the likelihood of engagement in delinquent behaviors, such as provocations, fights and even crimes. Such behavior, in turn, places a heavy burden on social safety and public governance. Therefore, there is an urgent need for immediate action to mitigate the deleterious effects of COVID-19 on the mental health of LBC.

## Promising directions for improving LBC's mental health

Effective support and treatment from the community or family will help LBC to recover from psychological trauma associated with COVID-19<sup>13</sup>. In the spirit of the WHO-UNICEF-Lancet Commission, we suggest several approaches to improve the mental health of LBC in the post-COVID era. First, equitable and complete mental service facilities should be provided. The key to the services should include the detection of LBC's potential mental diseases and effective treatment measures. This requires the inclusion of individuals with various expertise, such as health workers, therapists and clinicians. Second, a globally longitudinal cohort dataset for child growth should be established. The access to comprehensive and accurate longitudinal records on LBC's physical and mental status in the post-COVID-19 era can help to

conduct multidisciplinary research that spans psychiatry, pediatrics, psychology, economics, sociology, and public health. Third, accessibility to digital mental health services for LBC should be provided. It is important to integrate the resources of schools, communities and governments to promote digital mental health interventions for LBC to recover from COVID-19 trauma.

## Prospects

To leave no one behind, the core of the 2030 Agenda for Sustainable Development, should not only be a slogan but also needs to be achieved through practical actions. Prioritizing the needs of this vulnerable group helps to boost the mental-health resilience of LBC and to fully realize their development potentials in the post-COVID-19 era.

Jinkai Li<sup>1</sup>, Qiuzhen Ren<sup>1</sup>✉, Erga Luo<sup>2</sup>✉, Chuanlong Ma<sup>3</sup> & Chengfang Liu<sup>4</sup>

<sup>1</sup>Department of Economics, Faculty of Economics and Business Administration, Ghent University, Ghent, Belgium. <sup>2</sup>China Academy for Rural Development (CARD), School of Public Affairs, Zhejiang University, Hangzhou, China. <sup>3</sup>Catalytic and Plasma Process Engineering, Department of Chemical Engineering, Faculty of Engineering, McGill University, Montreal, Quebec, Canada. <sup>4</sup>China Center for Agricultural Policy, School of Advanced Agricultural Sciences, Peking University, Beijing, China.

✉ e-mail: [qiuzhen.ren@ugent.be](mailto:qiuzhen.ren@ugent.be); [leg@zju.edu.cn](mailto:leg@zju.edu.cn)

Published online: 3 May 2024

## References

1. Fellmeth, G. et al. *Lancet* **392**, 2567–2582 (2018).
2. Mahidol University & UNICEF. <https://go.nature.com/3xPTANo> (2020).
3. Liu, J. J., Bao, Y., Huang, X., Shi, J. & Lu, L. *Lancet Child Adolesc. Health* **4**, 347–349 (2020).
4. Wu, P. et al. *Child Adolesc. Psychiatry Ment. Health* **17**, 113 (2023).
5. Graham, E. & Jordan, L. P. *J. Marriage Fam.* **73**, 763–787 (2011).
6. Gao, C., Tadesse, E. & Khalid, S. *Child Indic. Res.* **15**, 1719–1740 (2022).
7. Li, K. et al. *Int. J. Soc. Psychiatry* **69**, 916–927 (2023).
8. Pfefferbaum, B. *J. Am. Acad. Child Adolesc. Psychiatry* **61**, 957 (2022).
9. Hillis, S. D. et al. *Pediatrics* **148**, e2021053760 (2021).
10. Van Lancker, W. & Parolin, Z. *Lancet Public Health* **5**, e243–e244 (2020).
11. Britto, P. R. et al. *Lancet* **389**, 91–102 (2017).
12. Danese, A., Smith, P., Chitsabesan, P. & Dubicka, B. *Br. J. Psychiatry* **216**, 159–162 (2020).
13. Walsh, F. *Fam. Process* **46**, 207–227 (2007).
14. McAuliffe, M. & Triandafyllidou, A. (eds) *World Migration Report 2022* (IOM, 2021).
15. UNICEF. <https://go.nature.com/4aluxuo> (2022).
16. National Bureau of Statistics of China, UNICEF China, UNFPA China. *Population Status of Children in China in 2015: Facts and Figures* (2017).

## Acknowledgements

We acknowledge funding support from the National Natural Science Foundation of China (grants 71925009 and 71861147003) to C.L., and the China Scholarship Council (grants 202003250063 and 202007650029) to J.L. and Q.R. These sponsors of fundings have not taken part into the work of the manuscript.

## Competing interests

The authors declare no competing interests.

## Additional information

**Peer review information** *Nature Mental Health* thanks the anonymous reviewer(s) for their contribution to the peer review of this work.