



Impact of the COVID-19 Pandemic on Mental Health in People Living with HIV/AIDS: A Literature Review

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Abstract

The COVID-19 pandemic has profoundly affected global mental health, with people living with HIV/AIDS (PLHIV) particularly vulnerable due to their pre-existing challenges and heightened susceptibility to psychological impacts. This study reviews the literature to analyze the mental health implications of the pandemic on PLHIV, focusing on outcomes during and after the pandemic. A systematic review of ten studies retrieved from PubMed, CINAHL, and Google Scholar reveals that PLHIV experiences elevated risks of anxiety, depression, social isolation, and psychological trauma. These conditions are exacerbated by stigma, disrupted healthcare services, and pandemic-induced stressors such as fear of infection and economic pressures. The review also highlights the complex interplay between HIV/AIDS, mental health, and the pandemic, with evidence showing that psychosocial stress can impair immune function, cognitive abilities, and adherence to antiretroviral therapy (ART). The methodological analysis of the selected studies underscores the significance of robust psychosocial support in mitigating mental health challenges and improving disease prognosis. Comprehensive interventions, including stigma reduction strategies, enhanced access to mental health services, and public education, are critical to addressing these compounded vulnerabilities. The findings emphasize the necessity of integrating mental health care into holistic healthcare frameworks for PLHIV, especially in the post-pandemic era.

Keywords: COVID-19, HIV/AIDS, mental health, pandemic, post-pandemic.

1. Introduction

The Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, which is phylogenetically similar to SARS-CoV) (Shinta, Zaid, & Pratondo, 2022; Zaid & Pratondo, 2021; Zaid & Al Bahy, 2022; Zaid, Shinta, & Al Bahy, 2022; Zaid, Shinta, Aufa, & Pratondo, 2021), more widely known as the Coronavirus Disease 2019 (COVID-19) pandemic (Erawan, Zaid, Pratondo, & Lestari, 2021; Setiawan, Zaid, Prasetyoningsih, & Bahy, 2022; Zaid, Hernowo, & Prasetyoningsih, 2022; Zaid, Indrianto, & Adityaningrat, 2021), has significantly affected mental health worldwide (Shepherd et al., 2024), including individuals living with HIV/AIDS (PLHIV) (Pasha et al., 2024). This population faces dual challenges: heightened vulnerability to

COVID-19 infection and psychological impacts associated with the pandemic (Kalichman & El-Krab, 2022). This study aims to review existing literature on the mental health implications of the COVID-19 pandemic for PLHIV in the post-pandemic era.

The global outbreak of COVID-19 has disrupted numerous aspects of human life (Ngongolo, 2023; Panneer et al., 2022), particularly mental health (Xiong et al., 2020). PLHIV represents one of the groups most susceptible to these disruptions (Erly et al., 2024). Even before the pandemic, PLHIV encountered various mental health challenges (Remien et al., 2019; Zhang et al., 2016), such as stigma (Remien et al., 2019), discrimination (Fauk, Merry, Mwanri, Hawke, & Ward, 2022), depression (Gooden et al., 2022), anxiety (Truong et al., 2021), and psychological distress stemming from their chronic condition (Remien et al., 2019). In fact, several epidemiological studies have found that people with HIV/AIDS have a 7 to 36 times higher risk of having suicidal thoughts (Pei et al., 2021). The pandemic exacerbated these difficulties through disrupted healthcare services, social isolation, and economic pressures.

Indeed, extensive research has been conducted to explore the pandemic's impact on PLHIV's mental health. Yet, according to Davies et al. (2023), there is still little research, especially on the long-term effects of COVID-19 on mental health. This article synthesizes findings from 10 studies from PubMed, CINAHL, and Google Scholar that focus on mental health outcomes for PLHIV during and after the COVID-19 pandemic.

Thus, this study is expected to provide deeper insight into the impact of the COVID-19 pandemic on the mental health of individuals living with HIV/AIDS (PLHIV). The results of this study can be a reference for researchers, health workers, and policymakers to design more effective interventions in addressing mental health challenges in this vulnerable group. In addition, this study also contributes to filling the literature gap regarding the long-term impact of the pandemic on the mental health of PLHIV.

2. Method

This study employed a literature review approach to examine the impact of the COVID-19 pandemic on the mental health of people living with HIV/AIDS (PLHIV). Data were sourced from academic databases, including PubMed, CINAHL, and Google Scholar. Relevant keywords such as "HIV/AIDS", "mental health", "COVID-19", and "post-COVID" were used to retrieve publications that met the inclusion criteria. Selected studies were synthesized to generate findings and recommendations.

Table 1. Inclusion Criteria and Data Analysis Summary

| Category | Details |
|--------------------|---|
| Inclusion Criteria | <ul style="list-style-type: none"> - Published between 2014–2024. - Focused on mental health impacts on PLHIV. - Employed quantitative, qualitative, or systematic review methodologies. - Available in full text and relevant to the research topic. |
| Data Analysis | <ul style="list-style-type: none"> - Identified key themes related to mental health impacts of COVID-19 on PLHIV. - Evaluated methodologies used in selected studies. - Synthesized significant findings relevant to research objectives. |

The inclusion criteria ensured a focused and systematic selection of literature by restricting the scope to studies published between 2014 and 2024 that specifically addressed the mental health impacts on PLHIV. The review included quantitative, qualitative, or systematic research, emphasizing relevance and accessibility through full-text availability. The data analysis involved identifying recurring themes related to the psychological effects of COVID-19, evaluating the methods used in the studies, and synthesizing the findings to provide meaningful insights. This approach allowed for a comprehensive understanding of the interplay between HIV/AIDS, mental health, and the COVID-19 pandemic.

3. Results and Discussion

The result of the review of 10 articles revealed several key themes related to the impact of the COVID-19 pandemic on the mental health of PLHIV:

Table 2: The Finding Summary of Studies on Mental Health and HIV/AIDS During the COVID-19 Pandemic

| No. | Article Title (Author, Year) | Objective | Methodology | Findings |
|-----|---|--|---|--|
| 1 | “The Impact of COVID-19 on HIV Self-Management, Affective Symptoms, and Stress in PLHIV in the United States” (Wion & Miller, 2021) | To investigate the impact of the COVID-19 pandemic on HIV self-management, social support, social isolation, depression, anxiety, and stress in PLHIV. | Online survey conducted with 85 PLHIV recruited via social media between April 23-30, 2020. | Participants reported increased social isolation, depression, anxiety, and stress, along with decreased social support and HIV self-management during the pandemic |

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|---|--|--|--|--|
| 2 | <p>“Changes in Mental Health Among People with HIV During the COVID-19 Pandemic: Qualitative and Quantitative Perspectives” (Parisi et al., 2022)</p> | <p>To evaluate changes in mental health among PLHIV during the COVID-19 pandemic.</p> | <p>Longitudinal study using repeated surveys with 100 PLHIV throughout the pandemic.</p> | <p>compared to pre-pandemic levels. Significant increases in symptoms of depression and anxiety were observed during the pandemic compared to the pre-pandemic period.</p> |
| 3 | <p>“The Impact of the COVID-19 Pandemic on Mental Health, Associated Factors, and Coping Strategies in People Living with HIV: A Scoping Review” (Hong, Queiroz, & Hoskin, 2023)</p> | <p>To review the mental health impacts of the COVID-19 pandemic, associated factors, and coping strategies in PLHIV.</p> | <p>Scoping review of studies published between 2020-2022.</p> | <p>The pandemic negatively affected the mental health of PLHIV, with social isolation and economic uncertainty identified as major contributors; effective coping strategies included social support and access to mental health services.</p> |
| 4 | <p>“The Mental Health of People Living with HIV in China, 1998–2014: A Systematic Review” (Niu, Luo, Liu, Silenzio, & Xiao, 2016)</p> | <p>To analyze the mental health status of PLHIV in China from 1998 to 2014.</p> | <p>Secondary data analysis from national surveys on the mental health of PLHIV.</p> | <p>Mental health disorders among PLHIV remained highly prevalent during the study period, with depression and anxiety being the most common disorders.</p> |
| 5 | <p>“Stigma, HIV Risk, and Access to HIV Prevention and Treatment Services Among Men Who Have Sex with Men (MSM) in the United States: A Scoping Review” (Babel, Wang,</p> | <p>To examine the perceived impact of HIV stigma within the community of MSM.</p> | <p>Cross-sectional survey with 200 HIV-positive MSM.</p> | <p>Perceived stigma was associated with increased depression symptoms and decreased mental health-related quality of life.</p> |

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|----|--|--|---|--|
| | Alessi, Raymond, & Wei, 2021) | | | |
| 6 | “The Impact of COVID-19 Pandemic on Mental Health in Gay, Bisexual, and Other Men Who Have Sex with Men in China: Difference by HIV Status” (Hong, Yu, Xue, Zhang, & Mi, 2022) | To assess the mental health impact of the COVID-19 pandemic on gay and bisexual MSM. | Online survey conducted with 300 gay and bisexual men during the pandemic. | Participants reported increased symptoms of depression and anxiety during the pandemic, with risk factors including social isolation and economic uncertainty. |
| 7 | “Mental Health and HIV/AIDS: The Need for an Integrated Response” (Remien et al., 2019) | To highlight the importance of an integrated response to mental health and HIV/AIDS. | Literature review and policy analysis on integrating mental health and HIV care services. | Emphasized the urgent need to integrate mental health services into HIV care to improve health outcomes and quality of life for PLHIV. |
| 8 | “Medication Adherence to Antiretroviral Therapy Among Newly Treated People Living with HIV (Yu et al., 2018) | To examine medication adherence to antiretroviral therapy among newly treated PLHIV. | Prospective cohort study with 150 newly treated PLHIV. | Low adherence levels were associated with symptoms of depression and lack of social support. |
| 9 | Mental Health and Antiretroviral Therapy Adherence Among PLHIV During the COVID-19 Pandemic” (Pujati, 2023) | To investigate the relationship between depression and anxiety levels with adherence to antiretroviral therapy (ART) in PLHIV. | Cross-sectional study involving 31 respondents. | A significant relationship was found between depression levels and adherence to medication among HIV/AIDS patients. |
| 10 | “Social and Behavioral Impacts of COVID-19 on People Living with HIV: Review of the First Year of | To evaluate the mental health impact of housing instability on HIV-positive | Case studies, mixed-methods approach. | Housing instability was identified as a major barrier to healthcare services and a significant contributor to |

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| Research” (Kalichman & El- Krab, 2022) | individuals during and after COVID-19. | mental issues PLHIV. | health among |
|--|--|----------------------------|-----------------|

Based on the analysis of these 10 articles, five key mental health topics affecting People Living with HIV/AIDS (PLHIV) during and after the COVID-19 pandemic were identified:

1. Depression and Anxiety: Articles by Wion & Miller (2021) and Parisi et al. (2022) reported an increased prevalence of depression and anxiety among PLHIV during the pandemic. This is also in accordance with what was expressed by Lo et al. (2023). Contributing factors included social isolation and economic uncertainty.
2. Adherence to ART: Studies by Pujiati (2023) and Yu et al. (2018) revealed that mental health disorders, such as depression, negatively impacted PLHIV's adherence to antiretroviral therapy.
3. Stigma and Discrimination: Research by Babel et al. (2021) highlighted the detrimental effects of stigma on the mental health of PLHIV, which were exacerbated during the pandemic.
4. Disruption of Healthcare Services: Studies by Hong et al. (2023) and Kalichman & El-Krab (2022) demonstrated that limited access to mental health services during the pandemic worsened the mental health conditions of PLHIV.
5. Coping Strategies: Articles by Remien et al. (2019) and Niu et al. (2016) emphasized the importance of social support and community-based interventions in mitigating the negative impact on mental health.

This review highlights the significant impact of the COVID-19 pandemic on the mental health of People Living with HIV/AIDS (PLHIV). Depression and anxiety emerged as the most frequently reported mental health disorders, with social isolation, stigma, and disruptions in healthcare services identified as primary contributing factors. These findings align with previous studies indicating that PLHIV is particularly vulnerable to mental health challenges, especially during crises such as pandemics.

A notable concern during the pandemic was the decline in adherence to antiretroviral therapy (ART). Mental health issues, such as depression, were shown to diminish PLHIV's motivation to maintain regular treatment. Additionally, perceived stigma exacerbated social isolation and hindered individuals from seeking professional support.

Addressing these challenges necessitates the integration of mental health services into HIV/AIDS care. Technology-based approaches, such as online counseling, offer viable solutions to overcome access limitations during pandemics. Reducing stigma and empowering communities are also crucial for fostering the mental well-being of PLHIV in the post-pandemic era.

In light of these findings, comprehensive efforts are required to address mental health issues among PLHIV in the post-COVID-19 era. The pandemic has been associated with a range of psychological problems, including anxiety, depression, and trauma, which have further exacerbated the mental health conditions of this population (Ross et al., 2020; Dharmawan & Argaheni, 2021). Evidence-based interventions integrated with holistic healthcare services, such as counseling and psychosocial support, are essential for promoting mental well-being, improving treatment adherence, and enhancing disease prognosis.

5. Conclusion

The review of ten studies highlights the profound impact of the COVID-19 pandemic on the mental health of people living with HIV/AIDS (PLHIV). Depression and anxiety emerged as the most prevalent mental health disorders, driven by factors such as social isolation, economic uncertainty, and stigma. These challenges were further compounded by disruptions in healthcare services, which limited access to essential mental health care and hindered adherence to antiretroviral therapy (ART). The findings underscore the urgent need for holistic mental health interventions to address these compounded vulnerabilities, as mental health plays a critical role in maintaining ART adherence and overall well-being among PLHIV.

To mitigate these issues, integrating mental health services into HIV care is paramount. This can be achieved through innovative, technology-driven solutions such as online counseling and telehealth platforms, particularly during crises like pandemics. Efforts to reduce stigma and discrimination through public awareness campaigns and community-based interventions are also essential. Policymakers and healthcare providers should prioritize accessible and culturally sensitive mental health programs to enhance treatment outcomes and foster resilience among PLHIV. Collaborative strategies involving multidisciplinary care teams will further strengthen the healthcare framework, ensuring a comprehensive approach to improving the mental health of this population.

References

- Babel, R. A., Wang, P., Alessi, E. J., Raymond, H. F., & Wei, C. (2021). Stigma, HIV Risk, and Access to HIV Prevention and Treatment Services Among Men Who have Sex with Men (MSM) in the United States: A Scoping Review. *AIDS and Behavior*, 25(11), 3574–3604. <https://doi.org/10.1007/s10461-021-03262-4>
- Davies, T., Daniels, I., Roelofse, M., Dean, C., Parker, J., Hanlon, C., ... Sorsdahl, K. (2023). Impacts of Covid-19 on mental health service provision in the Western Cape, South Africa: The MASC study. *PLOS ONE*, 18(8), e0290712. <https://doi.org/10.1371/journal.pone.0290712>
- Erawan, M. A. S. P., Zaid, Z., Pratondo, K., & Lestari, A. Y. (2021). Predicting Covid-19

- Vaccination Intention: The Role of Health Belief Model of Muslim Societies in Yogyakarta. *Al-Sihah: The Public Health Science Journal*, 13(1), 36–50. <https://doi.org/10.24252/AL-SIHAH.V13I1.20647>
- Erly, S., Menza, T. W., Granillo, L., Navejas, M., Udeagu, C.-C. N., Brady, K. A., ... Buskin, S. (2024). Impact of COVID-19 on People Living With HIV: Data From Five Medical Monitoring Project Sites, 2020–2022. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 96(2), 106–113. <https://doi.org/10.1097/QAI.00000000000003403>
- Fauk, N. K., Merry, M. S., Mwanri, L., Hawke, K., & Ward, P. R. (2022). Mental Health Challenges and the Associated Factors in Women Living with HIV Who Have Children Living with HIV in Indonesia: A Qualitative Study. *International Journal of Environmental Research and Public Health*, 19(11), 6879. <https://doi.org/10.3390/ijerph19116879>
- Gooden, T. E., Gardner, M., Wang, J., Chandan, J. S., Beane, A., Haniffa, R., ... Nirantharakumar, K. (2022). The risk of mental illness in people living with HIV in the UK: a propensity score-matched cohort study. *The Lancet HIV*, 9(3), e172–e181. [https://doi.org/10.1016/S2352-3018\(21\)00319-2](https://doi.org/10.1016/S2352-3018(21)00319-2)
- Hong, C., Queiroz, A., & Hoskin, J. (2023). The impact of the COVID-19 pandemic on mental health, associated factors and coping strategies in people living with HIV: a scoping review. *Journal of the International AIDS Society*, 26(3). <https://doi.org/10.1002/jia2.26060>
- Hong, C., Yu, F., Xue, H., Zhang, D., & Mi, G. (2022). The impact of COVID-19 pandemic on mental health in gay, bisexual, and other men who have sex with men in China: Difference by HIV status. *Journal of Psychiatric Research*, 154, 198–202. <https://doi.org/10.1016/j.jpsychires.2022.07.028>
- Kalichman, S. C., & El-Krab, R. (2022). Social and Behavioral Impacts of COVID-19 on People Living with HIV: Review of the First Year of Research. *Current HIV/AIDS Reports*, 19(1), 54–75. <https://doi.org/10.1007/s11904-021-00593-8>
- Lo, S. W. K., Muschialli, L., Fernandez, T., Smith, C., Peppia, D., & Burns, F. (2023). Investigation into the psychological impact of the COVID-19 pandemic for people living with HIV. *International Journal of STD & AIDS*, 34(11), 777–784. <https://doi.org/10.1177/09564624231179275>
- Ngongolo, K. (2023). Impacts, mitigation strategies of Covid-19 on human well-being in Africa: A brief review. *Social Sciences & Humanities Open*, 8(1), 100709. <https://doi.org/10.1016/j.ssaho.2023.100709>
- Niu, L., Luo, D., Liu, Y., Silenzio, V. M. B., & Xiao, S. (2016). The Mental Health of People Living with HIV in China, 1998–2014: A Systematic Review. *PLOS ONE*, 11(4), e0153489. <https://doi.org/10.1371/journal.pone.0153489>
- Panneer, S., Kantamaneni, K., Palaniswamy, U., Bhat, L., Pushparaj, R. R. B., Nayar, K. R., ... Rice, L. (2022). Health, Economic and Social Development Challenges of the COVID-19 Pandemic: Strategies for Multiple and Interconnected Issues. *Healthcare*, 10(5), 770. <https://doi.org/10.3390/healthcare10050770>

- Parisi, C. E., Varma, D. S., Wang, Y., Vaddiparti, K., Ibañez, G. E., Cruz, L., & Cook, R. L. (2022). Changes in Mental Health Among People with HIV During the COVID-19 Pandemic: Qualitative and Quantitative Perspectives. *AIDS and Behavior*, 26(6), 1980–1991. <https://doi.org/10.1007/s10461-021-03547-8>
- Pasha, A., Qiao, S., Zhang, J., Cai, R., He, B., Yang, X., ... Li, X. (2024). The impact of the COVID-19 pandemic on mental health care utilization among people living with HIV: A real-world data study. *MedRxiv*. <https://doi.org/10.1101/2024.09.26.24314443>
- Pei, J.-H., Pei, Y., Ma, T., Du, Y., Wang, X.-L., Zhong, J., ... Dou, X.-M. (2021). Prevalence of suicidal ideation, suicide attempt, and suicide plan among HIV/AIDS: A systematic review and meta-analysis. *Journal of Affective Disorders*, 292, 295–304. <https://doi.org/10.1016/j.jad.2021.05.064>
- Pujiati, E. (2023). KESEHATAN MENTAL DAN KEPATUHAN TERAPI ANTIRETROVIRAL (ARV) PADA ODHA SELAMA PANDEMI COVID -19. *JKM (Jurnal Kesehatan Masyarakat) Cendekia Utama*, 11(3), 377–390. <https://doi.org/10.31596/JKM.V11I3.1720>
- Remien, R. H., Stirratt, M. J., Nguyen, N., Robbins, R. N., Pala, A. N., & Mellins, C. A. (2019). Mental health and HIV/AIDS. *AIDS*, 33(9), 1411–1420. <https://doi.org/10.1097/QAD.0000000000002227>
- Setiawan, Y., Zaid, Z., Prasetyoningsih, N., & Bahy, M. P. Al. (2022). A Libertarian Legitimacy for Mandatory Covid-19 Vaccination. *Jurnal Media Hukum*, 29(2), 94–106. <https://doi.org/10.18196/JMH.V29I2.14313>
- Shepherd, T., Robinson, M. E., Ramaema, M., Rakuoane, M., Moletsane, N., Mpholo, R., ... Leigh, G. (2024). Impact of the COVID-19 pandemic on young people living with HIV in Lesotho: a qualitative study. *BMJ Public Health*, 2(1), e000414. <https://doi.org/10.1136/BMJPH-2023-000414>
- Shinta, A., Zaid, Z., & Pratondo, K. (2022). Peran Persepsi Kemudahan Dan Kegunaan Dalam Mempengaruhi Penerimaan Telehealth Oleh Pasien Covid-19. *Jurnal Endurance: Kajian Ilmiah Problema Kesehatan*, 7(1), 209–220. <https://doi.org/10.22216/ENDURANCE.V7I1.844>
- Truong, M., Rane, M. S., Govere, S., Galagan, S. R., Moosa, M.-Y., Stoep, A. Vander, ... Drain, P. K. (2021). Depression and anxiety as barriers to art initiation, retention in care, and treatment outcomes in KwaZulu-Natal, South Africa. *EClinicalMedicine*, 31, 100621. <https://doi.org/10.1016/j.eclinm.2020.100621>
- Wion, R. K., & Miller, W. R. (2021). The Impact of COVID-19 on HIV Self-Management, Affective Symptoms, and Stress in People Living with HIV in the United States. *AIDS and Behavior*, 25(9), 3034–3044. <https://doi.org/10.1007/s10461-021-03335-4>
- Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M. W., Gill, H., Phan, L., ... McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of Affective Disorders*, 277, 55–64. <https://doi.org/10.1016/j.jad.2020.08.001>

- Yu, Y., Luo, D., Chen, X., Huang, Z., Wang, M., & Xiao, S. (2018). Medication adherence to antiretroviral therapy among newly treated people living with HIV. *BMC Public Health*, 18(1), 825. <https://doi.org/10.1186/s12889-018-5731-z>
- Zaid, & Pratondo, K. (2021). Public perception on covid-19 vaccination intention. *International Journal of Public Health Science*, 10(4), 906–913. <https://doi.org/10.11591/IJPHS.V10I4.20914>
- Zaid, Z., & Al Bahy, M. P. (2022). Examining Factors Influencing Halal Covid-19 Vaccination Intention Among The Muslim Communities. *Psikis: Jurnal Psikologi Islami*, 8(1), 40–53. <https://doi.org/10.19109/PSIKIS.V8I1.11913>
- Zaid, Z., Hernowo, W. S., & Prasetyoningsih, N. (2022). Mandatory COVID-19 vaccination in human rights and utilitarianism perspectives. *International Journal of Public Health Science (IJPHS)*, 11(3), 967. <https://doi.org/10.11591/ijphs.v11i3.21412>
- Zaid, Z., Indrianto, A. P., & Adityaningrat, H. F. (2021). We Need Protection: Reviewing Corporate Responsibilities And Strategies In Protecting Employees During The Covid-19 Pandemic. *Journal Health & Science : Gorontalo Journal Health and Science Community*, 5(2), 278–287. <https://doi.org/10.35971/GOJHES.V5I2.11656>
- Zaid, Z., Shinta, A., & Al Bahy, M. P. (2022). Exploring the Role of Theory of Planned Behavior on Covid-19 Vaccination Intention. *Journal of Educational, Health and Community Psychology*, 11(3), 608–624. <https://doi.org/10.12928/jehcp.v11i3.23829>
- Zaid, Z., Shinta, A., Aufa, M. F., & Pratondo, K. (2021). Norma Sosial dan Pengaruh Sosial terhadap Minat Vaksin Covid-19. *JURNAL KESEHATAN PERINTIS*, 8(2), 91–99. <https://doi.org/10.33653/JKP.V8I2.682>
- Zhang, C., Li, X., Liu, Y., Qiao, S., Zhang, L., Zhou, Y., ... Tang, Z. (2016). Emotional, physical and financial burdens of stigma against people living with HIV/AIDS in China. *AIDS Care*, 28(sup1), 124–131. <https://doi.org/10.1080/09540121.2016.1146206>