

Anxiety, Depression and Sleep Quality Among Young Adults in Urban Areas

Pooja Mishra

PG Student, Department of Psychology, Jesus and Mary College

Abstract

Mental health issues are emerging as a growing public health issue for young adults, especially in urban areas where academic stress, career insecurity, computer/device usage, social isolation, and environmental factors impact mental health. The interrelationship of anxiety, depression and sleep quality in youth in urban environments is explored. The paper is based on a review of the latest scholarly literature and secondary data that have been verified with sources from the global and Government level such as the World Health Organization, estimates on Global Burden of Disease, National Mental Health Survey of India, NCRB, CDC/NCHS and NHS England. All reviewed evidence supports a strong association between anxiety and depression and poor sleep quality, and sleep disturbance can be a symptom as well as a risk factor for psychological distress. Competitive lifestyles, late night use of digital media, commuting stress, noise and pollution, and high living costs, and less social support are particularly harmful to urban young adults. The evidence regarding mental morbidity shows higher prevalence in urban-metro areas and sleep quality is under studied in the national mental health research evidence in India. The paper emphasizes the importance of sleep not just as an outcome of anxiety and depression, but as a key behavioural and socio-demographic marker of young people's mental health. It calls for comprehensive screening, early counselling, education on sleep hygiene, responsible digital media use and youth mental health-friendly interventions in urban institutions and in the workplace. Incorporating anxiety, depression and sleep quality into a single analytical framework for the context of urban young adults, the paper adds to the existing literature.

Keywords: Anxiety, Depression, Sleep Quality, Young Adults, Urban Mental Health, Psychological Distress, Sleep Hygiene, Digital Media Use, India, Public health.

Introduction

Mental health issues among young adults have become one of the most pressing public health challenges of the 21st century, especially in fast-changing urban societies where education, labour market insecurities, hyperconnectivity, social comparison, new family dynamics, and irregular life patterns are increasingly influencing young adults' daily lives. A sensitive period in the development of the young adult is characterized by identity formation, school and work transition, financial independence or early work responsibilities, changes in relationships/relationships and increased autonomy in health behaviours. These changes can make them more likely to develop common mental health disorders, like anxiety and depression, and affect sleep duration, timing and quality. According to the World Health Organization (WHO) (2022), mental health is the ability to adapt to everyday life challenges, enjoy life and appreciate it, learn and work effectively and fulfil a role in society. This definition

is very important in the context of young adults because psychological distress experienced during this period may have consequences on school performance, employment, social functioning, risk-taking behaviour and long-term health outcomes. Mental disorders are no longer considered solely a clinical phenomena, but a multidimensional outcome of biological susceptibility and psychosocial stressors and environment, globally. The global burden of mental health is high and anxiety and depression have dramatically increased during and after the COVID-19 period, with nearly one billion people worldwide living with a mental disorder in 2019 (WHO, 2022).

Recent burden-of-disease data confirms the impact on anxiety, depression and sleep quality is relevant in the global context. According to the Global Burden of Disease study 2021, in 2021, there were an estimated 278.98 million prevalent cases of mental disorders among adolescents and young adults aged 10–24 years, and anxiety disorders and depressive disorders were listed as one of the leading contributors to years lived with disability in this age group (Wang et al., 2025). The same study identified substantial rises in the prevalence, incidence and disability from mental disorders between 2019 and 2021, particularly from depression and anxiety. Modelling efforts in the early stages of the pandemic also suggested that significant global increases in MDD and anxiety disorder were likely to occur in 2020, particularly in younger ages and among females, compared to older ages and males, respectively (COVID-19 Mental Disorders Collaborators, 2021). The pandemic caused an increase in psychological distress for youth, however, it also highlighted existing structural inequities in youth mental health services such as limited counselling access, stigma, late help-seeking, and inadequate preventive screening.

In the Indian context, the region and the country are of special interest in the study of the mental health–sleep relationship in urban young adults. India has a large population of young people that is rapidly transforming itself socially, education-wise, technologically and occupationally. The burden of mental morbidity and the treatment gap in the country have been highlighted by the National Mental Health Survey of India, revealing that mental health issues are not peripheral but part of broader social and health systems issues (Gautham et al., 2020). Competitive higher education, migration for study and work, high living costs, less family support, long commuting time, air/noise pollution, crowding, screen-based work and irregular sleep routines, these are the factors that increase the risk conditions in urban India. But living in the city isn't necessarily a bad thing for mental health. A worldwide meta-analysis revealed that the urbanicity effect is more consistent in developed countries, where urban areas had higher rates of depression than rural areas; the urbanicity effect was less consistent in developing countries, and may be growing over time (Xu et al., 2023). This means that the mental health of the city is not a single homogeneous phenomenon but has to be studied under the influence of local socio-economic, cultural and lifestyle conditions.

Anxiety is defined conceptually as a state of sustained or heightened anticipatory apprehension, worry, physiological arousal and perceived threat that may interfere with functioning. Depression is typically defined as having a low mood, loss of interest, fatigue, cognitive problems, hopelessness and decreased functioning. Quality of sleep is more than just amount of sleep; it is related to sleep latency, continuity, depth, efficiency, disturbances, daytime

dysfunction and subjective restoration. These 3 constructs are reinforcing and go hand-in-hand. Ruminating and hyperarousal associated with anxiety may delay sleep onset, abnormal sleep continuity and sleep structure associated with depression, and sleep impairments may exacerbate emotional dysfunction, negative thinking and stress reactivity. A meta-analysis of RCTs showed that improving sleep quality led to significant improvements in overall mental health, depression and anxiety, supporting the notion that sleep is not simply a sign of psychological distress but rather a modifiable risk factor for mental health (Scott et al., 2021).

This interrelationship is further supported by recent studies. In a North Indian young adult sample, Chauhan et al. (2024) were able to show that sleep quality was more strongly associated with depression, anxiety and stress than eveningness; and that the relationship between chronotype and mental health was fully mediated by sleep quality. This is particularly significant as younger adults are likely to be more exposed to late night study, digital media use, shift work and social media use, as well as irregular eating and activity habits in an urban setting. The same applies to the association between sleep chronotype and mental health indicators among youth: although some evidence shows that eveningness is linked to worse mental health outcomes, this association could be explained by sleep quality and lifestyle factors (Cheung et al., 2023). Prospective studies also show a correlation between interactive electronic device use and sleep and mental health issues among young people, suggesting that digital behaviour should be taken into account in current studies on mental health (Dibben et al., 2023). Brokensmith et al. (2011), and more recently Sharps, et al. (2012), have reported on students' anxiety, depression or poor sleep; medical trainees; and young working adults. Much of the literature available is, however, still fragmented. Studies of mental health do not adequately measure sleep quality, and others focus on sleep patterns without also incorporating anxiety and depression in the analyses. Some Indian studies are institution specific, discipline specific or clinical in nature and are not generalisable to larger urban youth populations. The field is overwhelmingly dominated by the cross-sectional designs and they can provide estimates of association but seldom can explain temporal direction, mediation pathways and contextual determinants. Furthermore, the city is often overlooked as an active factor that relates to noise, pollution, commuting, safety issues, living environment, academic stress, exposure to digital and social isolation. Although there is increasing evidence, there is a clear need for further research that addresses the integrated, context-sensitive analysis of anxiety, depression and sleep quality among young adults in an urban setting.

The present study problem is that young adults in urban contexts can suffer with anxiety, depression and poor sleep quality all at once, which is not adequately recognised, normalised as 'normal stress', or treated individually. If sleep is poor, it can be a precursor to and a conduit for psychological distress to become chronic. Unrecognized anxiety, depression and sleep problems can lead to lowered academic output, poor job performance, interpersonal problems, drug and alcohol abuse, burnout and psychiatric liability. The rationale for the study is that it is necessary to provide empirical evidence that reflects the actual burden of psychological distress and sleep issues in young urban populations, particularly in the absence of mental health services and lack of adequate preventive screening.

Literature Review

The relationship between anxiety, depression and sleep quality among young adults has become a significant concern in contemporary mental health research, particularly in urban settings where lifestyle pressures, academic competition, digital exposure, social isolation and irregular daily routines are increasingly common. Existing literature suggests that anxiety, depression and poor sleep quality should not be understood as separate conditions, but as interrelated psychological and behavioural outcomes shaped by biological, social and environmental factors. Earlier studies often treated sleep disturbance as a secondary symptom of mental illness, but recent research increasingly recognises poor sleep quality as both a contributing factor and a consequence of anxiety and depression. This shift supports a biopsychosocial understanding of young adult mental health, where emotional regulation, circadian rhythm, stress exposure and lifestyle behaviour interact continuously. The World Health Organization's mental health framework also supports this broader interpretation by emphasising that mental health is influenced by social, economic and environmental conditions rather than individual pathology alone (World Health Organization, 2022).

Conceptually, anxiety is associated with excessive worry, hyperarousal, fear anticipation and physiological activation, whereas depression is marked by low mood, fatigue, hopelessness, loss of interest and impaired functioning. Sleep quality is a multidimensional construct involving sleep duration, sleep latency, sleep efficiency, disturbances, continuity, restfulness and daytime dysfunction. Standardised tools such as the Pittsburgh Sleep Quality Index, Depression Anxiety Stress Scales, Patient Health Questionnaire, Generalised Anxiety Disorder Scale and Insomnia Severity Index have strengthened empirical research by enabling comparative analysis across populations. However, the literature is limited by its strong dependence on self-reported measures, which may be affected by recall bias, social desirability and cultural differences in reporting psychological symptoms. Objective sleep measures such as actigraphy and polysomnography remain less frequently used, reducing the precision of findings on sleep duration, fragmentation and circadian disruption.

Theoretical literature explains the anxiety–depression–sleep relationship through several complementary models. The hyperarousal model suggests that anxiety increases cognitive and physiological activation, delaying sleep onset and reducing sleep depth. Cognitive theories of depression argue that rumination and negative automatic thoughts disturb sleep continuity and contribute to early morning awakening. Circadian rhythm theory highlights the role of delayed sleep timing, evening chronotype and social jet lag, especially among young adults whose biological rhythms often conflict with academic and occupational schedules. Stress-diathesis models further suggest that chronic stress interacts with individual vulnerability, while poor sleep weakens emotional regulation and executive functioning. These models collectively indicate that sleep disturbance may be both a symptom and a mechanism through which psychological distress becomes persistent.

International studies strongly support the bidirectional relationship between sleep and mental health. Alvaro et al. (2013) demonstrated that sleep disturbance predicts later anxiety and depression, while anxiety and depression also predict subsequent sleep problems. Scott et al.

(2021), through a meta-analysis of randomised controlled trials, found that improving sleep quality produced significant improvements in depression, anxiety, rumination and stress, thereby strengthening the argument that sleep is a modifiable determinant of mental health. The COVID-19 period further intensified academic interest in this field, as global evidence showed substantial increases in anxiety and depressive disorders among younger age groups. Pandemic-related isolation, increased screen exposure, disrupted routines and reduced physical activity accelerated existing behavioural risks among young adults.

Analysis and Discussion

The analysis of anxiety, depression and sleep quality among young adults in urban areas must be situated within a wider public health context in which mental disorders are increasing among younger populations, while sleep disruption is becoming a major behavioural pathway through which psychological distress is expressed and sustained. Globally, anxiety and depression represent two of the most common mental health conditions. The World Health Organization estimated that anxiety disorders affected 359 million people in 2021, making them the most common mental disorders worldwide, while depression affected an estimated 332 million people globally and remains strongly associated with impaired functioning and suicide risk. These global figures are important because they show that anxiety and depression are not isolated clinical issues but population-level burdens affecting education, productivity, relationships and health systems.

A recent Global Burden of Disease-based analysis further confirms the relevance of the problem among adolescents and young adults. In 2021, mental disorders among people aged 10–24 years accounted for about 278.98 million prevalent cases globally, with anxiety disorders and depressive disorders ranking among the leading contributors to years lived with disability in this age group. This indicates that young adults are not merely a future at-risk group but a present high-burden population requiring early screening, prevention and context-specific intervention.

Table 1: Key secondary data relevant to anxiety, depression and sleep quality among young adults

Data source / report	Key verified data	Analytical relevance to the present study
WHO anxiety disorders fact sheet, 2025	359 million people globally had anxiety disorders in 2021; approximately 4.4% of the global population currently experience an anxiety disorder	Establishes anxiety as the most common mental disorder and supports the global relevance of the study
WHO depression fact sheet, 2025	332 million people globally had depression in 2021; depression is linked with suicide risk	Establishes depression as a major public health burden and justifies studying depressive symptoms among young adults

Global Burden of Disease 2021 analysis	278.98 million prevalent cases of mental disorders among people aged 10–24 years in 2021	Confirms that adolescents and young adults carry a substantial share of global mental health burden
National Mental Health Survey of India, 2015–16	Current mental morbidity: 10.56%; lifetime mental morbidity: 13.67%; 18–29 age group current morbidity: 7.39%; urban metro current morbidity: 14.71%	Shows that urban residence is associated with higher mental morbidity in India and supports the urban focus of the study
National Mental Health Survey of India, 2015–16	Treatment gap for overall mental morbidity: 84.5%; nearly 150 million Indians estimated to need mental health care	Demonstrates the mismatch between mental health burden and access to care in India
NCRB ADSI 2023 / OGD India	Official NCRB ADSI 2023 dataset released through Government of India Open Data Portal; student suicides reported at 13,892 in 2023, compared with 13,044 in 2022	Indicates severe distress among student/youth populations and the need for institutional mental health support
CDC/NCHS United States sleep data, 2024	30.5% of adults slept less than 7 hours; 18.3% of adults aged 18–34 had trouble falling asleep most days or every day	Provides recent government sleep data showing that sleep difficulty is especially visible in young adulthood
NHS England Adult Psychiatric Morbidity Survey, 2023/24	Official survey covers treated and untreated mental health conditions in adults aged 16+; treatment among those with common mental health symptoms rose to 47.7% in 2023/24	Demonstrates the value of national surveillance systems and highlights the lack of comparable recent Indian surveillance on young-adult sleep and mental health

Source: Compiled by the author from WHO (2025), Global Burden of Disease Study 2021/Wang et al. (2025), National Mental Health Survey of India 2015–16, NCRB ADSI 2023, CDC/NCHS (2026), and NHS England Digital (2025).

In the Indian context, the National Mental Health Survey remains the most authoritative government-supported epidemiological source for population-level mental morbidity. It reported weighted lifetime prevalence of any mental morbidity at 13.67% and current prevalence at 10.56%. Importantly, the 18–29 age group recorded current mental morbidity of 7.39%, while urban metro residents recorded substantially higher current mental morbidity of 14.71%. This urban-metro figure is particularly significant for the present study because it suggests that urban living conditions may intensify psychological vulnerability through mechanisms such as academic competition, occupational pressure, social isolation, high living costs, commuting stress, noise exposure and weakened community support.

The treatment gap identified by the National Mental Health Survey is equally important for interpreting anxiety and depression among young adults. The survey reported an overall mental health treatment gap of 84.5% and estimated that nearly 150 million Indians suffer from one or another form of mental morbidity. This means that a large proportion of individuals with anxiety, depression or related distress remain outside formal care. For young adults, especially students and early-career workers, this gap may be widened by stigma, lack of mental health literacy, financial dependence, fear of disclosure and normalisation of distress as “academic pressure” or “career stress”.

The National Health Mission’s National Mental Health Programme further confirms that mental health is a recognised public health priority in India. The programme aims to ensure availability and accessibility of minimum mental healthcare, integrate mental health knowledge into general healthcare, promote community participation and strengthen early detection and treatment through the District Mental Health Programme. However, the persistence of a high treatment gap indicates that policy existence alone is insufficient unless supported by early screening, referral pathways, counselling services and youth-friendly mental health infrastructure.

The NCRB suicide data must be interpreted cautiously because suicide is not equivalent to anxiety or depression prevalence; however, it provides a serious indirect indicator of psychological distress among young and student populations. The official Government of India Open Data Portal released the NCRB Accidental Deaths and Suicides in India 2023 dataset in 2025, and reported summaries of NCRB data show that student suicides increased from 13,044 in 2022 to 13,892 in 2023. This rise is analytically relevant because many urban young adults are students, coaching aspirants, college learners or early-career professionals exposed to performance pressure and uncertainty. The data do not prove direct causality between anxiety, depression and suicide, but they strengthen the argument that youth mental health requires preventive, institutional and community-level attention.

Sleep quality is a central variable in this discussion because it operates both as a symptom and a risk factor. Poor sleep may arise from anxiety-related worry, depressive rumination, excessive screen use, irregular routines, night-time study or work, and environmental disturbances common in urban settings. At the same time, inadequate or poor-quality sleep can worsen emotional regulation, attention, memory, impulse control and stress tolerance, thereby increasing vulnerability to anxiety and depression. Recent government data from the United States show that in 2024, 30.5% of adults slept less than seven hours in a 24-hour period, while 18.3% of adults aged 18–34 had trouble falling asleep most days or every day. Although this is not Indian data, it provides a useful international benchmark showing that sleep difficulty is particularly relevant in young adulthood.

A key analytical limitation in the Indian evidence base is the absence of a recent, nationally representative government dataset that directly links sleep quality, anxiety and depression among young adults. The National Mental Health Survey provides strong data on mental morbidity, but it does not provide a detailed sleep-quality module comparable to instruments such as the Pittsburgh Sleep Quality Index. NCRB provides suicide-related administrative data,

but it cannot capture subclinical anxiety, depressive symptoms or sleep problems. Therefore, the present study can contribute by generating primary empirical evidence on the interrelationship between anxiety, depression and sleep quality in a young urban population.

The available data suggest three major patterns. First, anxiety and depression are globally widespread and highly relevant among young adults. Second, Indian evidence indicates that mental morbidity is higher in urban-metro settings than in rural and urban non-metro areas. Third, sleep difficulty is increasingly recognised in government health statistics internationally, but remains under-measured in Indian youth mental health surveillance. This combination creates a clear research gap: while mental morbidity and suicide data show the seriousness of youth psychological distress, there is insufficient Indian evidence explaining how poor sleep quality interacts with anxiety and depression among young adults in urban areas.

Conclusion

The study shows that anxiety, depression and sleep quality are closely interconnected public health concerns among young adults in urban areas. Academic pressure, career uncertainty, digital exposure, social adjustment, irregular routines and urban stressors such as commuting, noise, pollution and high living costs increase psychological vulnerability. Poor sleep may worsen emotional instability, concentration problems and stress tolerance, while anxiety and depression can further disturb sleep through worry, rumination and hyperarousal. Therefore, sleep quality should not be treated merely as a secondary symptom, but as a key indicator of young adults' mental well-being. The study highlights the need for early identification, preventive mental health strategies and lifestyle-based interventions to protect young adults in urban settings.

Suggestions

Regular screening for anxiety, depression and sleep quality should be introduced in colleges, universities, coaching centres and workplaces. Institutions should provide accessible counselling services, confidential support systems and referral links with mental health professionals. Sleep hygiene education should be promoted by encouraging regular sleep schedules, reduced late-night screen use, stress management, limited caffeine intake and relaxation practices. Awareness programmes on responsible digital media use are also necessary. Urban public health planning should include youth mental health as a priority, with community campaigns to reduce stigma and improve help-seeking behaviour. Future studies should use larger and more diverse samples, including students, employed youth, unemployed young adults and migrants, along with longitudinal designs and objective sleep measures.

References

Alvaro, P. K., Roberts, R. M., & Harris, J. K. (2013). A systematic review assessing bidirectionality between sleep disturbances, anxiety, and depression. *Sleep*, 36(7), 1059–1068. <https://doi.org/10.5665/sleep.2810>

Brautsch, L. A. S., Lund, L., Andersen, M. M., Jennum, P. J., Folker, A. P., & Andersen, S. (2023). Digital media use and sleep in late adolescence and young adulthood: A

systematic review. *Sleep Medicine Reviews*, 68, 101742.

<https://doi.org/10.1016/j.smr.2022.101742>

Chauhan, S., Pandey, R., Vakani, K., Norbury, R., Ettinger, U., & Kumari, V. (2024). Sleep quality mediates the association between chronotype and mental health in young Indian adults. *npj Mental Health Research*, 3, Article 31.

<https://doi.org/10.1038/s44184-024-00076-9>

Cheung, F. T. W., Li, X., Hui, T. K., Chan, N. Y., Chan, J. W. Y., Wing, Y. K., & Li, S. X. (2023). Circadian preference and mental health outcomes in youth: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 72, 101851.

<https://doi.org/10.1016/j.smr.2023.101851>

COVID-19 Mental Disorders Collaborators. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet*, 398(10312), 1700–1712.

[https://doi.org/10.1016/S0140-6736\(21\)02143-7](https://doi.org/10.1016/S0140-6736(21)02143-7)

Dibben, G. O., Martin, A., Shore, C. B., Johnstone, A., McMellon, C., Palmer, V., Pugmire, J., Riddell, J., Skivington, K., Wells, V., McDaid, L., & Simpson, S. A. (2023).

Adolescents' interactive electronic device use, sleep and mental health: A systematic review of prospective studies. *Journal of Sleep Research*, 32(5), e13899.

<https://doi.org/10.1111/jsr.13899>

Gautham, M. S., Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Kokane, A., Chavan, B. S., Dalal, P. K., Ram, D., Pathak, K., Singh, R. K. L., Singh, L. K., Sharma, P., Saha, P. K., Ramasubramanian, C., Mehta, R. Y., Shibukumar, T. M., & NMHS Collaborators Group. (2020). The National Mental Health Survey of India (2016): Prevalence, socio-demographic correlates and treatment gap of mental morbidity. *International Journal of Social Psychiatry*, 66(4), 361–372.

<https://doi.org/10.1177/0020764020907941>

Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Pathak, K., Singh, L. K., Mehta, R. Y., Ram, D., Shibukumar, T. M., Kokane, A., Chavan, B. S., Sharma, P., Ramasubramanian, C., Dalal, P. K., Saha, P. K., & NMHS Collaborators Group.

(2016). *National Mental Health Survey of India, 2015–16: Prevalence, patterns and outcomes*. National Institute of Mental Health and Neuro Sciences.

Li, L., Wu, C., Gan, Y., Qu, X., & Lu, Z. (2016). Insomnia and the risk of depression: A meta-analysis of prospective cohort studies. *BMC Psychiatry*, 16, Article 375.

<https://doi.org/10.1186/s12888-016-1075-3>

Li, Y., Li, G., Liu, L., & Wu, H. (2020). Correlations between mobile phone addiction and anxiety, depression, impulsivity, and poor sleep quality among college students: A systematic review and meta-analysis. *Journal of Behavioral Addictions*, 9(3), 551–571.

<https://doi.org/10.1556/2006.2020.00057>

Molodynski, A., Lewis, T., Kadhum, M., Farrell, S. M., Lemtiri Chelieh, M., Falcão De Almeida, T., Masri, R., Kar, A., Volpe, U., Moir, F., Torales, J., Castaldelli-Maia, J. M., Chau, S. W. H., Wilkes, C., Bhugra, D., & Vitiello, B. (2023). The worldwide

prevalence of self-reported psychological and behavioural symptoms in medical students: An umbrella review and meta-analysis of meta-analyses. *Journal of Psychosomatic Research*, 173, 111479.

<https://doi.org/10.1016/j.jpsychores.2023.111479>

National Crime Records Bureau. (2025). *Accidental deaths and suicides in India 2023*. Ministry of Home Affairs, Government of India.

National Health Mission. (2026). *National Mental Health Programme*. Ministry of Health and Family Welfare, Government of India.

Ng, A. E., Black, L. I., & Adjaye-Gbewonyo, D. (2026). *Short sleep duration and sleep difficulties among adults: United States, 2024*. National Center for Health Statistics, Centers for Disease Control and Prevention.

NHS England. (2025). *Adult Psychiatric Morbidity Survey: Survey of Mental Health and Wellbeing, England, 2023/4*. NHS England Digital.

Scott, A. J., Webb, T. L., Martyn-St James, M., Rowse, G., & Weich, S. (2021). Improving sleep quality leads to better mental health: A meta-analysis of randomised controlled trials. *Sleep Medicine Reviews*, 60, 101556.

<https://doi.org/10.1016/j.smr.2021.101556>

Wang, Z., Dou, Y., Yang, X., Guo, X., Ma, X., Zhou, B., & Zhang, W. (2025). Global, regional, and national burden of mental disorders among adolescents and young adults, 1990–2021: A systematic analysis for the Global Burden of Disease Study 2021.

Translational Psychiatry, 15, Article 397. <https://doi.org/10.1038/s41398-025-03623-w>

World Health Organization. (2022). *World mental health report: Transforming mental health for all*. World Health Organization.

World Health Organization. (2025). *Anxiety disorders*. World Health Organization.

World Health Organization. (2025). *Depressive disorder (depression)*. World Health Organization.

Xu, C., Miao, L., Turner, D., & DeRubeis, R. (2023). Urbanicity and depression: A global meta-analysis. *Journal of Affective Disorders*, 340, 299–311.

<https://doi.org/10.1016/j.jad.2023.08.030>