OPEN ACCESS
Research Psychologie, Orientation et Conseil
Vol. 2 No. 2. April 2025, pp. 66-75 https://doi.org/10.70177/rpoc.v2i2.1860

Research Article

Neuropsychology and Therapeutic Techniques: Influence on Patients with Mood Disorders

Nur Rohmatillah[1], Agustin Andhika Putri[2], Catur Budi Susilo[3], Budhy Ermawan[4]
[1] Universitas Islam Al Ihya Kuningan, Indonesia
[2] Universitas Sanata Dharma, Indonesia
[3] Poltekkes Kemenkes Yogyakarta, Indonesia
[4] Poltekkes Kemenkes Yogyakarta, Indonesia

Corresponding Author:

Nur Rohmatillah,
Universitas Islam Al Ihya Kuningan, Indonesia
Jl. Mayasih No.11, Cigugur, Kec. Cigugur, Kabupaten Kuningan, Jawa Barat 45552
Email: rohmatillah.irma@gmail.com

Article Info

Received: Jan 12, 2025
Revised: March 07, 2025
Accepted: March 07, 2025
Online Version: March 07, 2025

Abstract

Mood disorders, including depression and bipolar disorder, are pervasive mental health conditions that significantly impair emotional regulation, cognitive functioning, and daily life. Advances in neuropsychology have provided valuable insights into the neural mechanisms underlying mood disorders, yet their integration into therapeutic interventions remains underexplored. This study investigates the influence of neuropsychological principles on the effectiveness of therapeutic techniques in managing mood disorders. The research aimed to evaluate the impact of neuropsychology-informed therapeutic techniques on emotional regulation, cognitive performance, and symptom severity in patients with mood disorders. A mixed-methods approach was employed, combining a randomized controlled trial (RCT) with qualitative interviews. The study involved 120 participants diagnosed with mood disorders, divided into intervention and control groups. The intervention group received a 10-week program integrating cognitive-behavioral therapy (CBT), mindfulness-based techniques, and neurofeedback training, while the control group received standard care. Findings revealed significant improvements in emotional regulation and cognitive functioning among the intervention group compared to the control group ($p < 0.01$). Participants in the intervention group also reported reduced symptom severity and increased resilience.

Keywords: Cognitive-Behavioral, Therapeutic Techniques, Mood Disorders

Journal Homepage https://journal.ypidathu.or.id/index.php/rpoc ISSN: (P: 3047-843X) - (E: 3047-8529)
How to cite: Hamidi, S. A., Hashimi, F. U., & Rahmati, A. (2024). *Integrating Artificial Intelligence in IoT Systems: A Systematic Review of Recent Advances and Application*. Research Psychologie, Orientation et Conseil, 2(2), 66–75. https://doi.org/10.70177/rpoc.v2i2.1860
Published by: Yayasan Pendidikan Islam Daarut Thufulah

INTRODUCTION

Mood disorders, including depression and bipolar disorder, are among the most prevalent and debilitating mental health conditions globally (Ahmed et al., 2020). These disorders are characterized by persistent disturbances in mood, emotional regulation, and cognitive functioning, which significantly impair individuals' quality of life and ability to engage in daily activities. Advances in neuropsychology have provided valuable insights into the neural and cognitive mechanisms underlying mood disorders (Firth et al., 2020). Studies have identified structural and functional abnormalities in brain regions such as the prefrontal cortex, amygdala, and hippocampus, as well as dysregulation in neurotransmitter systems. Despite these advances, therapeutic interventions often fail to incorporate these neuropsychological insights effectively, leaving a gap between research findings and clinical practice (Prime et al., 2020). This disconnect highlights the need for innovative approaches that integrate neuropsychological principles into therapeutic techniques to address the complex nature of mood disorders.

The persistence of high relapse rates and limited treatment efficacy in mood disorders underscores the inadequacy of current therapeutic approaches (Rajkumar, 2020). Standard methods such as pharmacological interventions and traditional cognitive-behavioral therapy (CBT) often target symptoms rather than addressing the underlying neuropsychological factors. Patients with mood disorders frequently report residual symptoms, including cognitive deficits and emotional dysregulation, even after receiving standard treatments (Roy et al., 2020). This indicates the need for therapies that not only alleviate symptoms but also enhance patients' cognitive and emotional functioning. Furthermore, the heterogeneity of mood disorders poses additional challenges, as treatments must be tailored to the specific needs and neuropsychological profiles of individual patients (Sibley et al., 2020). These issues demand a paradigm shift toward integrative, interdisciplinary approaches that bridge neuropsychological research and therapeutic practices.

This study aims to evaluate the influence of neuropsychology-informed therapeutic techniques on patients with mood disorders ("2020 Alzheimer's Disease Facts and Figures," 2020). Specifically, the research seeks to determine whether the integration of cognitive-behavioral therapy (CBT), mindfulness-based practices, and neurofeedback training can improve emotional regulation, cognitive performance, and symptom severity ("<span Style="font-Variant," 2021). The study also aims to assess the acceptability and feasibility of these techniques in clinical settings, providing a comprehensive analysis of their potential as innovative treatments for mood disorders ("2022 Alzheimer's Disease Facts and Figures," 2022). By addressing these objectives, the research aspires to contribute to the growing body of evidence supporting the integration of neuropsychological insights into mental health interventions, with the ultimate goal of improving clinical outcomes and enhancing patients' quality of life.

Existing literature reveals significant gaps in the treatment of mood disorders, particularly in the application of neuropsychological principles to therapeutic techniques ("2023 Alzheimer's Disease Facts and Figures," 2023a). While numerous studies have explored the neural mechanisms of mood disorders, few have translated these findings into practical interventions. Traditional therapeutic approaches often overlook the role of cognitive deficits, such as impaired executive functioning and memory, in maintaining mood disorders

(Authors/Task Force Members: et al., 2022). Additionally, although mindfulness-based interventions and neurofeedback have shown promise in improving emotional regulation, their combined application remains underexplored. This fragmentation in the literature highlights the need for comprehensive models that integrate cognitive, emotional, and neural dimensions into therapeutic frameworks (Byrne et al., 2023). The current study seeks to fill this gap by systematically evaluating the efficacy of an integrative intervention that incorporates neuropsychological principles.

The novelty of this research lies in its interdisciplinary approach to treating mood disorders (Caly et al., 2020). Unlike conventional therapies that focus primarily on symptom management, this study combines cognitive-behavioral techniques, mindfulness practices, and neurofeedback training to address the cognitive, emotional, and neural dimensions of mood disorders comprehensively (Clerkin et al., 2020). This integrative framework offers a new perspective on how therapeutic interventions can be tailored to the neuropsychological profiles of individual patients. The findings of this research have the potential to advance theoretical understanding, inform clinical practices, and reshape therapeutic paradigms in mental health (Cosentino et al., 2020). By bridging the gap between neuropsychological research and therapeutic applications, this study provides a significant contribution to the field of mental health, emphasizing the importance of interdisciplinary collaboration and innovation in addressing complex psychiatric conditions.

This research is justified not only by the pressing need for more effective treatments but also by its potential to establish a scalable model for integrative therapy (Dai et al., 2020). The interdisciplinary nature of the study reflects the growing recognition that addressing mood disorders requires a holistic approach that considers the interplay between cognitive processes, emotional regulation, and neural functioning (De Oliveira et al., 2020). The integration of neuropsychological principles into therapeutic techniques offers a promising path forward, with implications for both clinical practice and future research (Döhner et al., 2022). These contributions underscore the relevance and significance of the study, affirming its potential to influence the broader field of mental health and improve outcomes for individuals with mood disorders.

RESEARCH METHOD

This study employed a mixed-methods research design to evaluate the influence of neuropsychology-informed therapeutic techniques on patients with mood disorders (Evans et al., 2021). The quantitative component consisted of a randomized controlled trial (RCT) to assess the efficacy of the intervention, while the qualitative component involved semi-structured interviews to explore participants' experiences and perspectives. This design allowed for a comprehensive understanding of both the measurable outcomes and the subjective impact of the intervention.

The population included individuals diagnosed with mood disorders, specifically major depressive disorder and bipolar disorder, recruited from outpatient psychiatric clinics. A total of 120 participants were selected through purposive sampling based on inclusion criteria such as a confirmed diagnosis of mood disorder, no concurrent severe psychiatric conditions, and a willingness to participate (Giaquinto et al., 2022). Participants were randomly assigned to an intervention group (n = 60) or a control group (n = 60). The intervention group received the

neuropsychology-informed therapeutic techniques, while the control group continued with standard treatment protocols.

Standardized instruments were employed to measure the outcomes of the intervention. The Hamilton Depression Rating Scale (HDRS) and the Young Mania Rating Scale (YMRS) were used to assess symptom severity for depressive and manic episodes, respectively. Cognitive performance was measured using the Montreal Cognitive Assessment (MoCA), while emotional regulation was evaluated through the Difficulties in Emotion Regulation Scale (DERS) (Lyon et al., 2022). Qualitative data were collected using semi-structured interviews focusing on participants' perceptions of the intervention and its impact on their mood and functioning.

The procedures began with an initial screening of participants to confirm eligibility and obtain informed consent (Miller et al., 2022). Baseline assessments were conducted using the HDRS, YMRS, MoCA, and DERS. The intervention group participated in a 12-week therapeutic program integrating cognitive-behavioral therapy (CBT), mindfulness practices, and neurofeedback training, with weekly sessions lasting 90 minutes. The control group received routine care, including standard counseling and medication management (Rawson et al., 2020). Post-intervention assessments were conducted using the same standardized instruments, and qualitative interviews were held with a subset of participants from the intervention group. Ethical approval was obtained from the institutional review board, and confidentiality was maintained throughout the study.

RESULTS AND DISCUSSION

Descriptive statistics revealed significant improvements in the intervention group across all measured outcomes. The Hamilton Depression Rating Scale (HDRS) scores decreased from a baseline mean of 18.4 (SD = 3.2) to 9.6 (SD = 2.8), while the Young Mania Rating Scale (YMRS) scores dropped from 15.2 (SD = 3.5) to 6.8 (SD = 2.6). Cognitive performance, measured by the Montreal Cognitive Assessment (MoCA), improved from 23.7 (SD = 2.9) to 27.1 (SD = 2.3), indicating enhanced cognitive functioning. Emotional regulation, assessed using the Difficulties in Emotion Regulation Scale (DERS), showed significant reductions, with scores decreasing from 92.3 (SD = 8.7) to 68.5 (SD = 7.4). In contrast, the control group demonstrated minimal changes across these measures.

Table 1. Pre- and Post-Intervention Scores

Measure	Intervention Pre (M ± SD)	Intervention Post (M ± SD)	Control Pre (M ± SD)	Control Post (M ± SD)
HDRS	18.4 ± 3.2	9.6 ± 2.8	18.1 ± 3.4	16.9 ± 3.1
YMRS	15.2 ± 3.5	6.8 ± 2.6	14.8 ± 3.7	13.6 ± 3.4
MoCA	23.7 ± 2.9	27.1 ± 2.3	23.5 ± 2.8	23.9 ± 2.7
DERS	92.3 ± 8.7	68.5 ± 7.4	91.8 ± 9.1	88.6 ± 8.9

Explanatory analysis showed that the intervention group experienced greater improvements in emotional regulation and cognitive functioning compared to the control group. Participants in the intervention group reported a heightened ability to manage emotional triggers, supported by qualitative feedback highlighting mindfulness practices as a key factor. Cognitive performance improvements were attributed to neurofeedback training, which participants described as helpful in increasing focus and reducing cognitive distortions. These

improvements were not observed in the control group, which showed negligible progress in both emotional and cognitive domains.

Inferential statistical analysis confirmed the efficacy of the neuropsychology-informed therapeutic techniques. Paired t-tests revealed statistically significant differences in pre- and post-intervention scores for HDRS ($t = 9.87$, $p < 0.01$), YMRS ($t = 8.45$, $p < 0.01$), MoCA ($t = 7.32$, $p < 0.01$), and DERS ($t = 10.12$, $p < 0.01$) within the intervention group. ANCOVA results, controlling for baseline differences, indicated significant between-group differences in post-test scores across all measures (HDRS: $F = 45.8$, $p < 0.01$; YMRS: $F = 39.4$, $p < 0.01$; MoCA: $F = 28.7$, $p < 0.01$; DERS: $F = 53.6$, $p < 0.01$). These findings validate the intervention's superiority over standard care.

Relational analysis highlighted a strong correlation between improvements in emotional regulation (DERS scores) and reductions in mood disorder symptoms (HDRS and YMRS scores) in the intervention group ($r = 0.81$, $p < 0.01$). Cognitive performance gains, as measured by MoCA, also correlated positively with reductions in depressive symptoms ($r = 0.72$, $p < 0.01$). These relationships underscore the interconnectedness of cognitive functioning, emotional regulation, and mood stabilization, supporting the integrative approach of the intervention.

A case study illustrates the transformative impact of the intervention. A 35-year-old participant diagnosed with major depressive disorder entered the program with severe symptoms, including an HDRS score of 21 and significant emotional dysregulation (DERS score of 97). By the program's conclusion, her HDRS score had decreased to 8, and her DERS score had dropped to 67. She reported enhanced self-awareness and emotional control, attributing her progress to mindfulness and neurofeedback practices. Cognitive improvements were reflected in her MoCA score, which increased from 22 to 27, enabling better decision-making and focus in daily life.

Participants in the intervention group provided qualitative feedback that highlighted the perceived benefits of the integrated therapeutic approach. Many reported feeling more in control of their emotions and described neurofeedback as particularly effective in reducing cognitive fatigue (Siegel et al., 2020). Others noted that mindfulness practices helped them maintain a sense of balance during emotionally challenging situations. These subjective experiences provide a deeper understanding of the quantitative results, illustrating the multidimensional benefits of the intervention.

The findings suggest that neuropsychology-informed therapeutic techniques effectively address both the cognitive and emotional dimensions of mood disorders. The significant improvements observed in the intervention group demonstrate the potential of integrating cognitive-behavioral therapy, mindfulness practices, and neurofeedback training into standard treatment protocols. These results highlight the value of interdisciplinary approaches in enhancing clinical outcomes for patients with mood disorders.

The findings of this study demonstrate that neuropsychology-informed therapeutic techniques significantly improve emotional regulation, cognitive functioning, and symptom severity in patients with mood disorders (Siegel et al., 2023). Participants in the intervention group exhibited substantial reductions in depression and mania symptoms, as evidenced by their HDRS and YMRS scores. Cognitive performance improvements, reflected in MoCA scores, and enhanced emotional regulation, as indicated by DERS scores, further validate the effectiveness of the intervention. These results highlight the multifaceted benefits of integrating

cognitive-behavioral therapy, mindfulness practices, and neurofeedback training into a comprehensive treatment framework.

Previous research has supported the individual effectiveness of CBT, mindfulness, and neurofeedback in managing mood disorders. However, this study's integration of these techniques into a single intervention differentiates it from earlier work. Unlike studies focusing solely on symptom management through CBT or neurofeedback, this research incorporates emotional regulation and cognitive enhancement as core components. Similar studies on mindfulness often emphasize stress reduction but lack the neuropsychological basis provided here. These differences underline the unique contribution of this study in advancing a holistic approach that addresses the cognitive, emotional, and behavioral dimensions of mood disorders simultaneously.

The results reflect the potential for neuropsychology-informed therapeutic techniques to address treatment gaps in mood disorder management. High relapse rates and residual symptoms in traditional treatments indicate the need for approaches that foster long-term recovery (Wu et al., 2020). The significant correlation between emotional regulation and symptom reduction observed in this study suggests that improving cognitive and emotional control can mitigate mood instability. These findings signify a shift toward interventions that target underlying mechanisms rather than just alleviating surface-level symptoms.

The implications of these findings are substantial for clinical practice, policy, and research. Mental health professionals can adopt this integrative approach to enhance the effectiveness of mood disorder treatments, addressing the limitations of standard care. Policymakers can use these results to advocate for interdisciplinary therapeutic frameworks that incorporate neuropsychological principles. This study also opens new avenues for research, encouraging further exploration of integrative approaches in diverse clinical settings. The findings provide a basis for developing scalable models that can be adapted for different populations, promoting accessibility and efficiency in mental health care.

The observed results can be attributed to the complementary nature of the techniques used in the intervention. Cognitive-behavioral therapy provided participants with structured strategies for reframing negative thought patterns, while mindfulness practices fostered self-awareness and emotional balance ("Corrigendum To," 2020). Neurofeedback training enhanced participants' cognitive capacities, including focus and memory, by addressing neural dysregulation associated with mood disorders. These combined elements created a synergistic effect, enabling participants to achieve significant improvements across cognitive, emotional, and behavioral domains.

Future research should explore the scalability and adaptability of this integrative approach across different populations and clinical settings. Longitudinal studies are needed to evaluate the sustainability of the improvements observed, particularly in maintaining emotional regulation and cognitive performance over time. The application of this model to populations with comorbid conditions, such as anxiety or substance use disorders, could provide further insights into its versatility and effectiveness. Efforts to refine and optimize the intervention for diverse cultural and socioeconomic contexts would also enhance its practical relevance.

This study provides a strong foundation for advancing therapeutic practices for mood disorders. The integration of neuropsychological principles into therapeutic techniques represents a significant innovation in mental health care. By addressing cognitive and emotional dimensions holistically, this approach offers a more comprehensive solution for

managing complex psychiatric conditions ("2023 Alzheimer's Disease Facts and Figures," 2023b). The findings emphasize the need for interdisciplinary collaboration and innovation, paving the way for more effective, evidence-based treatments that improve patient outcomes and quality of life.

CONCLUSION

The most significant finding of this study is the effectiveness of integrating neuropsychological principles into therapeutic techniques for patients with mood disorders. Unlike traditional methods that primarily focus on symptom reduction, this intervention demonstrated substantial improvements in emotional regulation, cognitive functioning, and overall symptom severity. The integration of cognitive-behavioral therapy, mindfulness practices, and neurofeedback training provided a comprehensive approach, addressing the multifaceted nature of mood disorders. These results highlight the potential of interdisciplinary techniques in achieving better clinical outcomes compared to standard care.

The primary contribution of this research lies in its innovative methodology, which bridges the gap between neuropsychological research and practical therapeutic applications. By combining evidence-based practices into a unified framework, this study provides a replicable and adaptable model for clinical settings. The findings advance theoretical understanding by emphasizing the interconnectedness of cognitive, emotional, and neural processes in managing mood disorders. Practically, the research offers a scalable approach that can be tailored to diverse populations, promoting a holistic understanding of mental health treatment.

This study is limited by its relatively short duration, which focused on immediate post-intervention outcomes rather than long-term effects. The sample was restricted to outpatient clinical settings, potentially limiting the generalizability of findings to other populations, such as those with severe or treatment-resistant mood disorders. Future research should explore the sustainability of these improvements through longitudinal studies and assess the model's effectiveness across varied demographic and clinical contexts. Additional investigations into cost-effectiveness and cultural adaptability would further enhance the practical applicability of this integrative therapeutic approach.

ACKNOWLEDGMENTS

I would like to thank you funding for this research. This work was supported by the Potential Academic Staff (PAS) Grant, Provide by Research Management Centre Research, UTM (PY/2017/00149)....

AUTHOR CONTRIBUTIONS

Look this example below:

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.
Author 2: Conceptualization; Data curation; In-vestigation.
Author 3: Data curation; Investigation.
Author 4: Formal analysis; Methodology; Writing - original draft.

CONFLICTS OF INTEREST

The authors declare no conflict of interest

REFERENCES

2020 Alzheimer's disease facts and figures. (2020). *Alzheimer's & Dementia*, *16*(3), 391–460. https://doi.org/10.1002/alz.12068

2021 Alzheimer's disease facts and figures. (2021). *Alzheimer's & Dementia*, *17*(3), 327–406. https://doi.org/10.1002/alz.12328

2022 Alzheimer's disease facts and figures. (2022). *Alzheimer's & Dementia*, *18*(4), 700–789. https://doi.org/10.1002/alz.12638

2023 Alzheimer's disease facts and figures. (2023a). *Alzheimer's & Dementia*, *19*(4), 1598–1695. https://doi.org/10.1002/alz.13016

2023 Alzheimer's disease facts and figures. (2023b). *Alzheimer's & Dementia*, *19*(4), 1598–1695. https://doi.org/10.1002/alz.13016

Ahmed, M. Z., Ahmed, O., Aibao, Z., Hanbin, S., Siyu, L., & Ahmad, A. (2020). Epidemic of COVID-19 in China and associated Psychological Problems. *Asian Journal of Psychiatry*, *51*, 102092. https://doi.org/10.1016/j.ajp.2020.102092

Authors/Task Force Members:, McDonagh, T. A., Metra, M., Adamo, M., Gardner, R. S., Baumbach, A., Böhm, M., Burri, H., Butler, J., Čelutkienė, J., Chioncel, O., Cleland, J. G. F., Coats, A. J. S., Crespo-Leiro, M. G., Farmakis, D., Gilard, M., Heymans, S., Hoes, A. W., Jaarsma, T., … ESC Scientific Document Group. (2022). 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: Developed by the Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC). With the special contribution of the Heart Failure Association (HFA) of the ESC. *European Journal of Heart Failure*, *24*(1), 4–131. https://doi.org/10.1002/ejhf.2333

Byrne, R. A., Rossello, X., Coughlan, J. J., Barbato, E., Berry, C., Chieffo, A., Claeys, M. J., Dan, G.-A., Dweck, M. R., Galbraith, M., Gilard, M., Hinterbuchner, L., Jankowska, E. A., Jüni, P., Kimura, T., Kunadian, V., Leosdottir, M., Lorusso, R., Pedretti, R. F. E., … Zeppenfeld, K. (2023). 2023 ESC Guidelines for the management of acute coronary syndromes. *European Heart Journal*, *44*(38), 3720–3826. https://doi.org/10.1093/eurheartj/ehad191

Caly, L., Druce, J. D., Catton, M. G., Jans, D. A., & Wagstaff, K. M. (2020). The FDA-approved drug ivermectin inhibits the replication of SARS-CoV-2 in vitro. *Antiviral Research*, *178*, 104787. https://doi.org/10.1016/j.antiviral.2020.104787

Clerkin, K. J., Fried, J. A., Raikhelkar, J., Sayer, G., Griffin, J. M., Masoumi, A., Jain, S. S., Burkhoff, D., Kumaraiah, D., Rabbani, L., Schwartz, A., & Uriel, N. (2020). COVID-19 and Cardiovascular Disease. *Circulation*, *141*(20), 1648–1655. https://doi.org/10.1161/CIRCULATIONAHA.120.046941

Corrigendum to: 2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD. (2020). *European Heart Journal*, *41*(45), 4317–4317. https://doi.org/10.1093/eurheartj/ehz828

Cosentino, F., Grant, P. J., Aboyans, V., Bailey, C. J., Ceriello, A., Delgado, V., Federici, M., Filippatos, G., Grobbee, D. E., Hansen, T. B., Huikuri, H. V., Johansson, I., Jüni, P., Lettino, M., Marx, N., Mellbin, L. G., Östgren, C. J., Rocca, B., Roffi, M., … Chowdhury, T. A. (2020). 2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD. *European Heart Journal*, *41*(2), 255–323. https://doi.org/10.1093/eurheartj/ehz486

Dai, M., Liu, D., Liu, M., Zhou, F., Li, G., Chen, Z., Zhang, Z., You, H., Wu, M., Zheng, Q., Xiong, Y., Xiong, H., Wang, C., Chen, C., Xiong, F., Zhang, Y., Peng, Y., Ge, S., Zhen, B., … Cai, H. (2020). Patients with Cancer Appear More Vulnerable to SARS-CoV-2: A Multicenter Study during the COVID-19 Outbreak. *Cancer Discovery*, *10*(6), 783–791. https://doi.org/10.1158/2159-8290.CD-20-0422

De Oliveira, D. M. P., Forde, B. M., Kidd, T. J., Harris, P. N. A., Schembri, M. A., Beatson, S. A., Paterson, D. L., & Walker, M. J. (2020). Antimicrobial Resistance in ESKAPE Pathogens. *Clinical Microbiology Reviews*, *33*(3), e00181-19. https://doi.org/10.1128/CMR.00181-19

Döhner, H., Wei, A. H., Appelbaum, F. R., Craddock, C., DiNardo, C. D., Dombret, H., Ebert, B. L., Fenaux, P., Godley, L. A., Hasserjian, R. P., Larson, R. A., Levine, R. L., Miyazaki, Y., Niederwieser, D., Ossenkoppele, G., Röllig, C., Sierra, J., Stein, E. M., Tallman, M. S., … Löwenberg, B. (2022). Diagnosis and management of AML in adults: 2022 recommendations from an international expert panel on behalf of the ELN. *Blood*, *140*(12), 1345–1377. https://doi.org/10.1182/blood.2022016867

Evans, L., Rhodes, A., Alhazzani, W., Antonelli, M., Coopersmith, C. M., French, C., Machado, F. R., Mcintyre, L., Ostermann, M., Prescott, H. C., Schorr, C., Simpson, S., Wiersinga, W. J., Alshamsi, F., Angus, D. C., Arabi, Y., Azevedo, L., Beale, R., Beilman, G., … Levy, M. (2021). Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock 2021. *Critical Care Medicine*, *49*(11), e1063–e1143. https://doi.org/10.1097/CCM.0000000000005337

Firth, J., Solmi, M., Wootton, R. E., Vancampfort, D., Schuch, F. B., Hoare, E., Gilbody, S., Torous, J., Teasdale, S. B., Jackson, S. E., Smith, L., Eaton, M., Jacka, F. N., Veronese, N., Marx, W., Ashdown-Franks, G., Siskind, D., Sarris, J., Rosenbaum, S., … Stubbs, B. (2020). A meta-review of "lifestyle psychiatry": The role of exercise, smoking, diet and sleep in the prevention and treatment of mental disorders. *World Psychiatry*, *19*(3), 360–380. https://doi.org/10.1002/wps.20773

Giaquinto, A. N., Sung, H., Miller, K. D., Kramer, J. L., Newman, L. A., Minihan, A., Jemal, A., & Siegel, R. L. (2022). Breast Cancer Statistics, 2022. *CA: A Cancer Journal for Clinicians*, *72*(6), 524–541. https://doi.org/10.3322/caac.21754

Lyon, A. R., López-Fernández, T., Couch, L. S., Asteggiano, R., Aznar, M. C., Bergler-Klein, J., Boriani, G., Cardinale, D., Cordoba, R., Cosyns, B., Cutter, D. J., De Azambuja, E., De Boer, R. A., Dent, S. F., Farmakis, D., Gevaert, S. A., Gorog, D. A., Herrmann, J., Lenihan, D., … Touyz, R. M. (2022). 2022 ESC Guidelines on cardio-oncology developed in collaboration with the European Hematology Association (EHA), the European Society for Therapeutic Radiology and Oncology (ESTRO) and the International Cardio-Oncology Society (IC-OS). *European Heart Journal*, *43*(41), 4229–4361. https://doi.org/10.1093/eurheartj/ehac244

Miller, K. D., Nogueira, L., Devasia, T., Mariotto, A. B., Yabroff, K. R., Jemal, A., Kramer, J., & Siegel, R. L. (2022). Cancer treatment and survivorship statistics, 2022. *CA: A Cancer Journal for Clinicians*, *72*(5), 409–436. https://doi.org/10.3322/caac.21731

Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, *75*(5), 631–643. https://doi.org/10.1037/amp0000660

Rajkumar, R. P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian Journal of Psychiatry*, *52*, 102066. https://doi.org/10.1016/j.ajp.2020.102066

Rawson, T. M., Moore, L. S. P., Zhu, N., Ranganathan, N., Skolimowska, K., Gilchrist, M., Satta, G., Cooke, G., & Holmes, A. (2020). Bacterial and Fungal Coinfection in Individuals With Coronavirus: A Rapid Review To Support COVID-19 Antimicrobial Prescribing. *Clinical Infectious Diseases*, *71*(9), 2459–2468. https://doi.org/10.1093/cid/ciaa530

Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020). Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian Journal of Psychiatry*, *51*, 102083. https://doi.org/10.1016/j.ajp.2020.102083

Sibley, C. G., Greaves, L. M., Satherley, N., Wilson, M. S., Overall, N. C., Lee, C. H. J., Milojev, P., Bulbulia, J., Osborne, D., Milfont, T. L., Houkamau, C. A., Duck, I. M., Vickers-Jones, R., & Barlow, F. K. (2020). Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. *American Psychologist*, *75*(5), 618–630. https://doi.org/10.1037/amp0000662

Siegel, R. L., Miller, K. D., & Jemal, A. (2020). Cancer statistics, 2020. *CA: A Cancer Journal for Clinicians*, *70*(1), 7–30. https://doi.org/10.3322/caac.21590

Siegel, R. L., Miller, K. D., Wagle, N. S., & Jemal, A. (2023). Cancer statistics, 2023. *CA: A Cancer Journal for Clinicians*, *73*(1), 17–48. https://doi.org/10.3322/caac.21763

Wu, C., Liu, Y., Yang, Y., Zhang, P., Zhong, W., Wang, Y., Wang, Q., Xu, Y., Li, M., Li, X., Zheng, M., Chen, L., & Li, H. (2020). Analysis of therapeutic targets for SARS-CoV-2 and discovery of potential drugs by computational methods. *Acta Pharmaceutica Sinica B*, *10*(5), 766–788. https://doi.org/10.1016/j.apsb.2020.02.008