



Comparison of Treatments for Anxiety in Adolescents

Introduction

The anxiety and depression association of America (ADAA) states that 1 in 13 individuals in the world are suffering from anxiety (ADAA,2021). The steep rise of anxiety and depression in adolescents can be attributed to lockdowns, zoom, and mask-wearing due to the COVID-19 pandemic (Chen, et al., 2020). Untreated anxiety can have detrimental outcomes on health and is correlated with mental health disorders. Studies were analyzed to compare how pharmacological treatment alone, versus nonpharmacological alone, versus combined therapy (CBT + pharm) could decrease signs and symptoms of anxiety in adolescents.

PICO Question

(P) In adolescents diagnosed with anxiety disorder, are combined **(I)** psychotherapy and pharmacological therapies **(O)** more efficient in decreasing signs and symptoms than **(C)** pharmacologic treatment alone?

Search Strategy

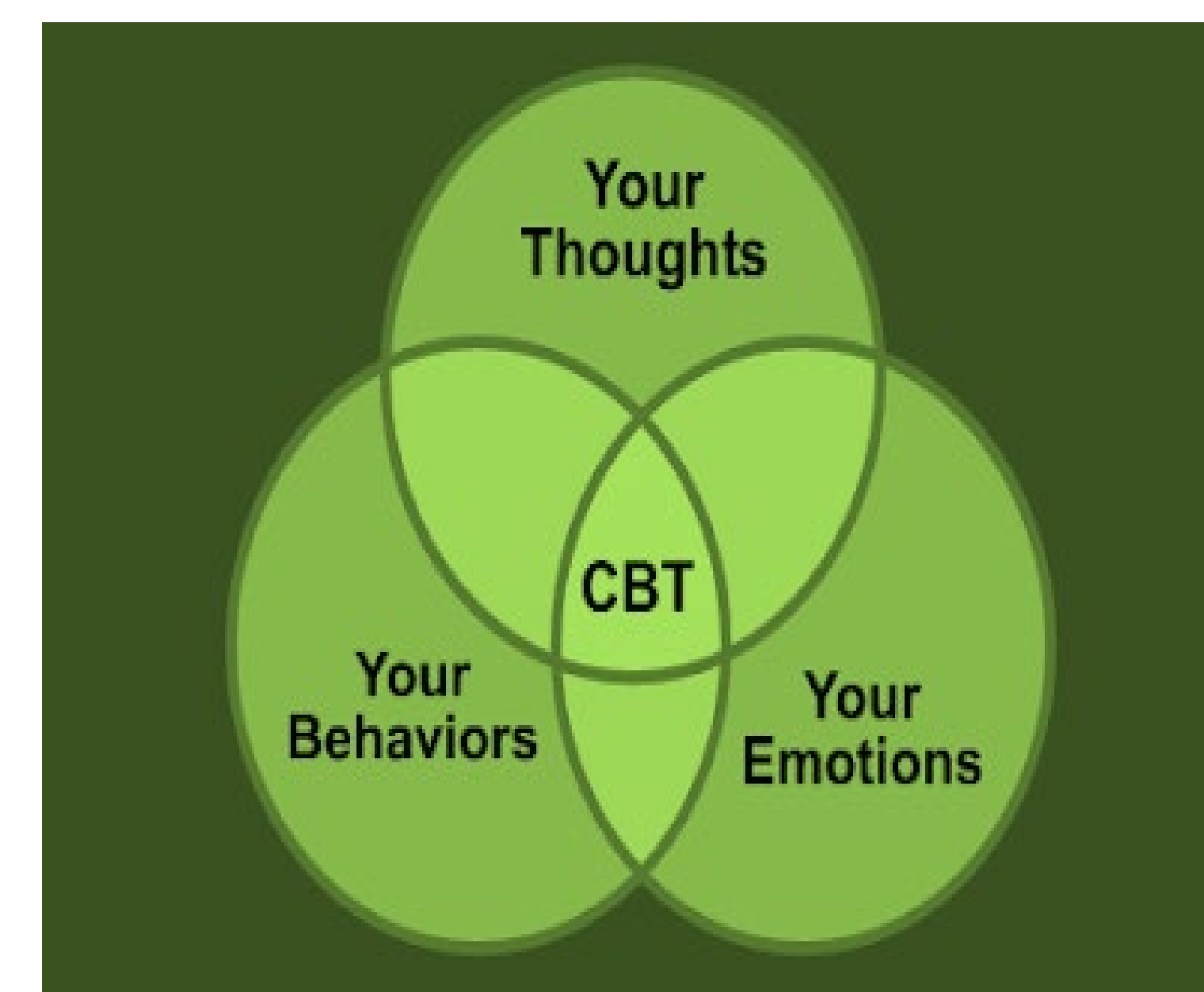
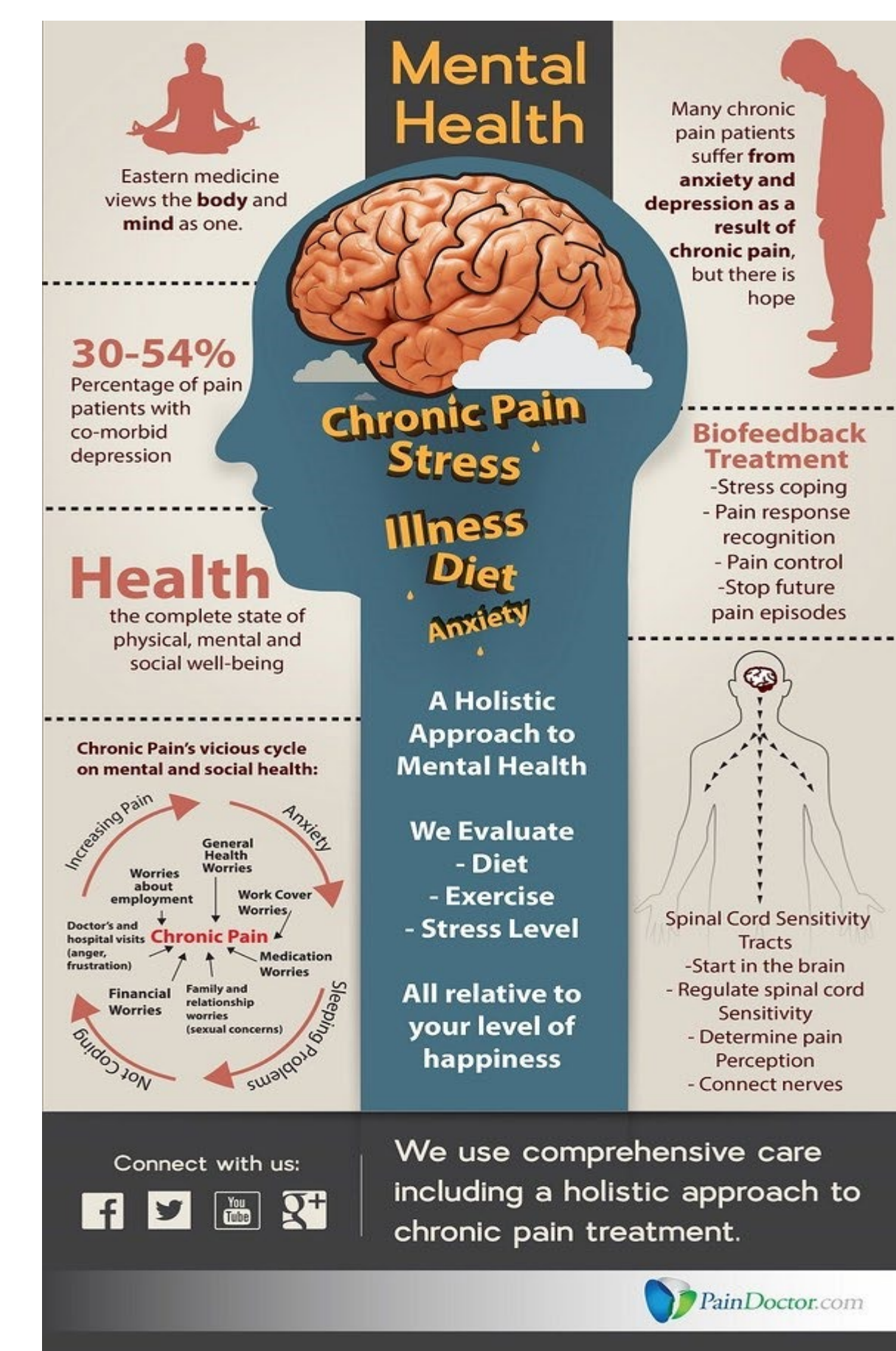
Articles analyzed were between the years 2017 to 2021. Keywords such as "anxiety", "cognitive behavior therapy" yielded 54 articles. CINAHL was also employed using similar keywords. A total of ten articles were selected for analysis.

Design/Sample

- Randomized/non-randomized control trials
- Double blind randomized control trials
- Meta analysis
- Perspective and longitudinal studies
- Youth male and female participants

Results

- Cervin et al. (2020) used a randomized control trial using sertraline, CBT therapy and combined therapy and found that combination therapy yielded reduced symptoms of anxiety.
- Melvin et al. (2019) used a double-blind randomized control trial that found that fluoxetine plus CBT therapy correlated with lower incidences of suicidal ideation and self-injury
- Peris et al. (2017) used a randomized control study and found that CBT plus pharmacotherapy yielded greater results in reducing anxiety symptoms compared to CBT alone.
- Strawn et al. (2018) used a meta-analysis model and found that the use of psychotherapy enhanced the effects of pharmacotherapy since it could target different symptoms.
- Swan et al. (2018) used a randomized control study, a prospective and a longitudinal study and found that the long-term effects of treatment was beneficial to participants for up to 3-12 years after receiving treatment.
- Wang et al. (2017) used randomized and non-randomized comparative studies which concluded CBT and plus medications were effective and safe for childhood disorders.
- Zehgeer et al. (2018) used a randomized control study and showed that there are few predictors of adherence to treatment. However, what it did find was that living with two parents and positive expectations of treatment had more favorable outcomes.



Analysis

Based on multiple studies, it was found that combination therapy (CBT + pharmacological therapy) yielded the highest reduction of anxiety symptoms in adolescents.

Summary

In summary, after a detailed literature review, it was found that adolescents benefited more in reduction of their anxiety symptoms with treatment that consisted of pharmacotherapy plus cognitive behavioral therapy.

Conclusions/Further Study

The literature illustrated that the adolescent population may vary in responses to different treatment regimens and providers should tailor care for each patient that best fits their needs. A very important point of focus should be on training the health care providers to be able to accurately diagnose anxiety at an early age to mitigate the adverse effect of these conditions transitioning into adulthood (Brandon et al., 2014).

Acknowledgements

References
 American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed., p. 1). Arlington, VA: American Psychiatric Association.
 Anxiety and Depression Association of America, ADAA. (2021). *Facts & Statistics*. Retrieved August 20, 2021, from <https://adaa.org/understanding-anxiety-facts-statistics>
 Aubrey L. Carpenter, Donna B. Pincus, Ellen C. Perris, Megan H. Bain-Merritt & Nicholas D. Minn (2018). Early identification of anxiety disorders: The role of the pediatrician in primary care. *Children's Health Care*, 47(1), 34-50, DOI: [10.1177/0898010117709088](https://doi.org/10.1177/0898010117709088)
 Bekhebi, N., Zennaro, M., & Razzi, F. (2018). Comparing the effectiveness of cognitive behavioral therapy focused on intolerance of uncertainty and pharmacotherapy on worry, intolerance of uncertainty, and cognitive avoidance in patients with generalized anxiety disorder. *Iranian Journal of Psychiatry and Clinical Psychology*.
 Brandon G. Scott, Natalie J. Burke, Carl F. Weems, Julia L. Hellmer & Victor G. Carrón (2014). The interrelation of adverse childhood experiences within an at-risk pediatric sample. *Journal of Child & Adolescent Trauma*.
 Burkhouse, K. L., Jagan Janny, Defilee, N., Klapp, H., Ajiloe, O., Hosseini, B., Fitzgerald, K. D., Monk, C. S., & Phan, K. L. (2020). Nucleus accumbens volume as a predictor of anxiety symptom improvement following CBT and SSRI treatment in two independent samples. *Neuropsychopharmacology: official publication of the American College of Neuropsychopharmacology*, 45(3), 561-569.
 Cervin, M., Sirock, E. A., Pincus, D., Birmaher, B., Compton, S. N., Almas, A. M., Gadow, E., Wolkstein, T., & Kessler, P. C. (2020). Symptom-specific effects of cognitive-behavioral therapy, sertraline, and their combination in a large randomized controlled trial of pediatric anxiety disorders. *Journal of child psychology and psychiatry, and allied disciplines*, 61(4), 492-502. <https://doi.org/10.1111/jcpp.13124>
 Chen, F., Zheng, D., Liu, J., Gong, Y., Guan, Z., & Luo, D. (2020). Depression and anxiety among adolescents during COVID-19: A cross-sectional study. *Brain, Behavior, and Immunity*, 88, 36-38. <https://doi.org/10.1016/j.bbi.2020.05.011>
 Courtney, D., Watson, P., Battaglia, M., Miliute, B. H., & Stammen, P. (2020). COVID-19 impacts on child and youth anxiety and depression: challenges and opportunities. *The Canadian Journal of Psychiatry*, 65(10), 688-691. <https://doi.org/10.1177/0898010120959081>
 Cuffield, A., Miller, J. R., Cheng, A., Novillo, L. K., Glade, R., Novillo, M. L., Hanson, C. L. (2019). ACEs and cortisol: ACEs: How positive and negative childhood experiences influence adult health. *Child Abuse & Neglect*, 96, 104889. doi:10.1016/j.chabu.2019.104889
 Galardi, A. P., & Merdady, C. P. (2011). Data retention after a patient withdraws consent in clinical trials. *Open access journal of clinical trials*, 2, 15-19. <https://doi.org/10.2196/2011.2.15>
 Mehta, G. A., Finnell, L., Telfs, J., Dalley, A. L., Klimkeit, E. L., Gordon, M. S., & Tonge, B. (2019). Adverse events reported by anxious school-refusing adolescents receiving cognitive behavioral therapy with and without fluoxetine. *Clinical child psychology and psychiatry*, 24(4), 892-905. <https://doi.org/10.1177/1362281618802581>
 McCarthy, C. (2019, November 20). Anxiety in teens is rising: what's going on? Retrieved August 20, 2021, from <https://www.healthchildren.org/English/health-issues/conditions/emotional-problems/Pages/Anxiety-Disorders.aspx>
 Narsis, L. (2020). Substance abuse and anxiety in children. *Anxiety Management in Children and Physical Health Problems*. Springer Series on Child and Family Studies, 53-69. doi:10.1007/978-3-030-35066-4_4
 Okassye, T. (2018). Efficacy of pharmacotherapy and psychotherapy in treating depression and anxiety disorders. *Nursing Capstones*, 263. Retrieved August 20, 2021, from <https://www.cdnlib.com/doi/10.2196/2018.263>
 Peris, T. S., Caporino, N. E., O'Rourke, S., Kendall, P. C., Walkup, J. T., Almas, A. M., Bergman, R. L., McCracken, J. T., Birmaher, B., Ginsburg, G. S., Sakolsky, D., Piacentini, J., & Compton, S. N. (2017). Therapist-reported rates of exposure tasks that predict differential treatment outcomes for youth with anxiety. *Journal of the*