

Working Memory Deficits in Anxiety Disorders: A Cognitive Load Perspective.

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Anxiety disorders are among the most prevalent mental health conditions worldwide, often characterized by excessive worry, heightened arousal, and cognitive disruptions. One of the most frequently reported impairments in individuals with anxiety is a deficit in working memory (WM) — the system responsible for temporarily holding and manipulating information. From a cognitive load perspective, these deficits can be better understood in terms of the mental effort required to manage anxious thoughts alongside task demands [6, 7, 8].

Working memory has limited capacity, and anxiety increases cognitive load by diverting attentional resources toward threat-related stimuli or internal worry. This competition for cognitive resources can impair task performance, especially on tasks that require sustained attention or mental manipulation. For example, individuals with generalized anxiety disorder (GAD) often report difficulties in concentrating, which can be attributed to the overuse of WM capacity by worry-laden intrusive thoughts [1, 2, 3, 4, 5].

Research suggests that under high cognitive load conditions, anxious individuals show reduced accuracy and slower response times, particularly in tasks requiring executive control. Neuroimaging studies also support this, revealing altered activation in brain regions responsible for WM (e.g., prefrontal cortex) during cognitive tasks in anxious populations [9, 10].

Conclusion

From a cognitive load perspective, working memory deficits in anxiety disorders can be explained by the overconsumption of limited cognitive resources by worry and hypervigilance. Understanding this relationship can inform therapeutic approaches that aim to reduce cognitive interference and enhance WM capacity through mindfulness, cognitive-behavioral strategies, and cognitive training interventions.

References

1. Stephenson S. Vibrant: A Groundbreaking Program to Get Energized, Own Your Health, and Glow. BenBella Books; 2021.
2. Rehman R, Sheikh A, editors. Polycystic Ovary Syndrome-E-Book: Basic Science to Clinical Advances Across the Lifespan. Elsevier Health Sciences; 2022.
3. Ford-Juntin P, Baker J. The Everything Guide to Managing Type 2 Diabetes: From Diagnosis to Diet, All You Need to Live a Healthy, Active Life with Type 2 Diabetes-Find Out What Type 2 Diabetes Is, Recognize the Signs and Symptoms, Learn How to Change Your Diet and Discover the Latest Treatments. Simon and Schuster; 2012.
4. Wright H. The PCOS diet plan: A natural approach to health for women with polycystic ovary syndrome. Ten Speed Press; 2017 May 2.
5. Calonje JE, Brenn T, Lazar AJ, et al. McKee's Pathology of the Skin, 2 Volume Set E-Book. Elsevier Health Sciences; 2018.
6. Sivaprasad S, Sen S, Cunha-Vaz J. Perspectives of diabetic retinopathy—challenges and opportunities. Eye. 2023;37(11):2183-91.
7. Kuo JZ, Wong TY, Rotter JJ. Challenges in elucidating the genetics of diabetic retinopathy. JAMA ophthalmology. 2014;132(1):96-107.
8. Stitt AW, Lois N, Medina RJ, et al. Advances in our understanding of diabetic retinopathy. Clinical science. 2013;125(1):1-7.
9. Duh EJ, Sun JK, Stitt AW. Diabetic retinopathy: current understanding, mechanisms, and treatment strategies. JCI insight. 2017;2(14).
10. Stitt AW, Curtis TM, Chen M, et al. The progress in understanding and treatment of diabetic retinopathy. Prog Retin Eye Res. 2016;51:156-86.

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