

Using Grounding Technique as a Mindfulness Tool to Enhance Working Memory and Cognitive Flexibility Among Bereaved Individuals

Ms. T. Ramya¹, Ms. R. Rajaswathy²

¹Postgraduate student in clinical psychology, Department of psychology, Rathinam college of arts and science, Coimbatore- 642021, Tamilnadu, India.

²Assistant professor, Department of psychology, Rathinam college of arts and science, Coimbatore- 642021, Tamilnadu, India.

Abstract:

This study looks at how well the grounding technique works as a mindfulness method to improve working memory and cognitive flexibility in people between the ages of 20- 60 yrs who have recently lost a family member or someone important within 6 months post bereavement to 2 years . Grounding techniques help people stay focused on the present by using their senses and thinking clearly, like the 5-4-3-2-1 method. These techniques are suggested to make thinking easier and lessen emotional pain that can affect memory during times of loss. Here the main factors are working memory and cognitive flexibility. A total of 30 people who had lost someone were chosen through purposive sampling. The grounding technique was given one-on-one for 4 weeks, with 3 sessions each week, making a total of 12 sessions. Cognitive performance was measured using the Stroop Test as the only tool for assessment. Stroop interference scores helped check how flexible someone's thinking is, and Stroop ratio scores were used to measure their working memory. Participants are expected to show progress in both areas after the intervention. The study shows that using grounding techniques to manage emotions can help lower mental effort, improve the ability to think flexibly, and boost memory in people who have experienced a loss. This suggests that grounding is a useful, drug-free method to build mental strength and resilience.

Keywords: Bereavement, Working Memory, Cognitive Flexibility, Grounding Technique

Introduction

Bereavement happens to everyone when they lose someone who is important to them, typically because that person has passed away. Even though it's normal to lose someone in life, the way people feel and act when they experience this loss can vary a lot from person to person. For many people, grieving is a usual feeling that causes sadness, missing someone, and emotional hurt. Bereavement is a deeply impactful life event that often receives limited attention in community and cultural contexts, even though it significantly disrupts daily functioning. It serves both as a causative and contributing factor to cognitive impairment in individuals, particularly affecting young and older adults alike. Research by (Hoffmann et al., 2024) shows that prolonged grief disorder is connected to cognitive problems, but the exact brain and mental process

reasons, especially in the early stages of grief for older adults, are not yet understood. This study shows that older adults who are not getting enough attention are a very vulnerable group. When they lose someone important, like a loved one, it often causes feelings of grief, which can lead to problems like sadness or emotional disorders. It can also cause memory issues or trouble with thinking clearly. Losing someone is called bereavement, which is the act of dealing with the loss. Grief, on the other hand, is the feelings and reactions people have after losing someone. Research shows that grief affects many parts of the brain that are involved in controlling emotions, understanding others, remembering things, recognizing faces, and managing body responses. This neural network might explain the special, personal feeling of grief and could offer new ways to understand how grief affects health and the brain's connection to emotions (Gündel et al., 2003). When someone loses a loved one, they often experience strong emotions and mental confusion, like trouble remembering things, focusing, and paying attention. This process of dealing with loss can also impact a person's ability to remember and adapt mentally, making everyday tasks harder and affecting their overall life.

Mindfulness

Mindfulness helps the brain work better by making the connections in the brain stronger, especially in parts that help with focusing, remembering things, and controlling actions. It can also lead to more gray matter in areas like the hippocampus. By being aware of the present moment without judgment, it helps reduce stress caused by cortisol, decreases mental effort, and improves memory, which leads to better concentration, smarter decisions, and stronger control over emotions. Key Ways Mindfulness Improves Cognitive Function (Zainal & Newman, 2023): Mindfulness practices, like focusing on one thing at a time, teach the brain to stay attentive and bring attention back when it wanders, which improves the ability to concentrate. Regular practice helps improve the ability to hold and work with information, which is important for doing complex tasks. Improved Executive Function (Stein & Witkiewitz, 2020). It helps with better control over thinking, making it easier to make good decisions, solve problems, and think more flexibly. Research shows that regularly practicing mindfulness meditation can lead to changes in the brain. It may boost the amount of gray matter in the hippocampus, which is linked to memory, and make the outer layer of the brain thicker. At the same time, it can reduce the size and activity of the amygdala, which is connected to how the body responds to stress. Mindfulness helps by lowering stress thoughts and emotional reactions, which makes it easier for the mind to focus and think more clearly. Metacognitive awareness helps people keep track of their own thinking and stop getting stuck in thoughts that don't help. Mindfulness is about being aware of your thoughts, feelings, and the world around you in the present moment, without judging them. It's a calm and accepting way of paying attention that you can work on deliberately to feel relaxed and think more clearly. Practices like meditation, breathing exercises, and yoga help develop mindfulness by training your focus and awareness. New research shows that combining mindfulness with other mental strategies can help improve thinking skills, such as remembering things and staying focused. A study with 19 people who took part in an 8-week mindfulness program found that the training changed how different parts of the brain communicate when the mind is not busy (Huang et al., 2020). This suggests that mindfulness can improve attention, focus, thinking skills, and help manage wandering thoughts. In simple terms, it can also help with negative emotions. For people going through the period of losing someone, this mindfulness training can help them deal with their emotions and improve their thinking abilities. When someone practices mindfulness during difficult times, it helps them accept the reality of losing a loved one and process their feelings, making it easier for them to cope and

handle daily life. One example of a mindfulness technique is grounding, which helps people stay in the present moment by using sensory and cognitive awareness. An example of this is the 5-4-3-2-1 sensory technique. Grounding strategies help people manage strong emotions or upsetting memories by focusing on what is happening right now, like moving their body (PharmD, 2024).

Working memory is one of the most important brain functions. It helps us hold and use information we get from our senses. It temporarily stores and processes a small amount of information, which helps us think, understand things, and stay focused (Cowan, 2013). For example, when you count numbers backward, your working memory is keeping track of that and changing the information (Baddeley, 1992). Working memory has four main parts: (i) executive functions, which act like a supervisor by controlling and managing incoming information for use, (ii) the phonological loop, which handles verbal and auditory information, (iii) the visuospatial sketchpad, which helps us hold and process visual and spatial information, like remembering the way from home to a grocery store, and (iv) the episodic buffer, which connects information with our long-term memory. Bereavement can affect working memory, especially in older adults (Atalay & Staneva, 2020). Grief is linked to bereavement, and while normal grief doesn't cause long-term problems, prolonged grief can affect cognitive functions, attention, and memory. Cognitive flexibility is the ability of a person to quickly change and move smoothly between different ideas or ways of thinking. It means adjusting your thoughts when facing new or unexpected situations, learning from those experiences, and using that knowledge in other areas. This helps someone deal with changes in their surroundings, both inside and outside. It includes things like switching between tasks or goals, looking at things from different angles, stopping old habits or rules, and changing how you think to fit new situations. In dealing with loss, having cognitive flexibility is important because it helps people use different strategies depending on what the situation needs (S. H. Huang et al., 2022). A study on how people cope with loss found that adults who didn't show symptoms of grief were better at expressing their emotions compared to those who had complicated grief (Gupta & Bonanno, 2011). Both working memory and the ability to shift thoughts flexibly are key parts of executive function, which helps people handle daily tasks. When someone experiences loss or long-term grief, it can affect their ability to function in daily life and their cognitive skills, such as memory, attention, focus, and other mental abilities.

Review of literature:

This review explains how prolonged grief disorder impacts older people by looking at evidence from psychology, social factors, and brain research. It says that around 3 to 10 percent of people who have lost someone experience PGD, and this condition can lead to problems like memory issues and a higher chance of dying. The study finds problems in important brain systems that help with focus, thinking about oneself, and managing tasks, which can lead to issues with memory and controlling emotions. The study says that tailored, biology-based approaches are important for better results in evaluating and treating older people who have long-term grief (Goveas et al., 2026). Cox and their team in 2025 wanted to create a program based on evidence that helps people deal with grief. They developed a program called "Creating Space for Grief," which is a special kind of support tailored for college students. The study found that about 60% of students go through a loss while they are studying, and often there isn't enough help on campus for dealing with grief. To address this, the authors created CSG, which helps students with their thinking, social interactions, and emotions. This program offers grief support at the university level to improve students' emotional health (Cox et al., 2025). Knowles et al. (2025) Knowles and their team in 2025 looked into how mindfulness training and progressive muscle relaxation affect the mental health of older adults who

have lost their spouses. Their study found that both mindfulness training and progressive muscle relaxation helped lower feelings of depression and negative emotions. The research shows that practices that connect the mind and body, such as mindfulness and relaxation techniques, can be very effective in helping people who have experienced the loss of a spouse deal with emotional pain. (Buur et al., 2024) looked at how older adults deal with losing their spouse and explained how cognitive-behavioral therapy can be adjusted to help with complicated grief. They discovered that activities like exercise, learning about mental health, and writing letters were especially useful. The study shows that older adults need therapy that is customized, taking into account memory challenges and the changes that come with living without a partner. The study by (Békés et al., 2023) tried to create a model that explains how grieving affects thinking and feeling. It also found that during times of loss, the connection between the basal ganglia and the medial temporal lobe systems can get messed up. The results show why it's important to understand grief from a brain and thinking perspective, which can help make better support for people who are going through loss. (Zainal & Newman, 2023) did a big study looking at how mindfulness practices affect different parts of thinking. Their findings showed that mindfulness-based interventions can help improve overall thinking skills, better working memory, focus, the ability to switch between tasks, and staying attentive. The best results were seen in people who had mental health issues. The study says that doing mindfulness regularly can really help with important thinking abilities, especially focusing and keeping things in mind. A study by (Huang et al., 2020) looks at how mindfulness-based cognitive therapy (MBCT) influences emotional control and brain activity in people who are dealing with grief from losing someone. Both brain scans and self-reported questionnaires were done before and after the therapy. The results show that changes in how parts of the brain connect, especially in deeper brain areas, are linked to better mindfulness, less anxiety, and improved emotional control. The study finds that MBCT helps people who are grieving to feel more emotionally stable and better at managing their thoughts. (Atalay & Staneva, 2020) wanted to look at how losing a spouse, relative, or close friend affects the thinking abilities of older adults in Australia. Their study found that experiencing such a loss caused a noticeable drop in cognitive abilities, especially in working memory and how quickly someone can process information. They used data collected over time to make this discovery. The researchers also noticed that people tended to engage less in social activities and cognitive exercises after losing someone they cared about. This long-term study examined how losing a spouse impacts brain function and whether being male or female, along with the quality of the marriage before the loss, plays a role in this impact. According to the MIDUS study, researchers discovered that when men lose their spouse, it has a more negative impact on their mental abilities compared to women. Also, people who were not happy in their marriage before their spouse passed away had more difficulties with their thinking than those who had a poor marriage. The results show that when someone loses their spouse, it doesn't affect everyone in the same way. It depends on the person's gender and how their marriage was before the loss. This means that when supporting someone who has lost their spouse, it's important to take into account their gender and the condition of their marriage before the loss (Min & Song, 2022).

Research gap

Studies have found that having long-lasting grief can change how the brain functions, impact memory, and affect thinking skills, especially in older people. However, most of these studies just describe what happens and don't look at ways to treat or help with this issue (Goveas et al., 2026; Békés et al., 2023). Many treatments designed to help with grief mostly focus on emotional health, but they don't pay much

attention to improving mental skills like working memory and focus (Cox et al., 2025; Buur et al., 2024). Research shows that losing a loved one can make it harder for people to think clearly, but not many studies have created treatments to help with these thinking problems (Atalay & Staneva, 2020). Mindfulness-based interventions have been found to help with cognitive abilities, but there isn't much research on using these techniques with people who have experienced loss to improve their thinking skills. And also Studies shows that people experience sadness in different ways depending on their gender, how close they were to the person who passed, and other personal factors. This means that treatments should be tailored to each person's needs (Min & Song, 2022). There are not many studies that look at short, organized, and mind-focused ways to help people who are grieving, especially ones that work on things like remembering information (working memory) and being able to switch between different thoughts (Cognitive Flexibility).

Methodology:

Aim

The aim of the present study is to examine the effectiveness of grounding techniques as a mindfulness-based intervention in enhancing working memory and cognitive flexibility among bereaved individuals.

Objectives

1. To assess grieving people with the Complicated Grief Inventory.
2. To check working memory with the Stroop ratio and to test cognitive flexibility through Stroop response inhibition.
3. To implement grounding-based mindfulness intervention
4. To check how well the grounding technique helps improve working memory and cognitive flexibility, we look at the scores from the test before and after the intervention.

Hypothesis

H0-There will be no significant difference in working memory and cognitive flexibility among bereaved individuals before and after the grounding technique as a mindfulness based intervention.

Variables

- Independent Variable: Grounding Technique Intervention
- Dependent Variables: Working Memory and Cognitive Flexibility
- Screening Variable: Complicated Grief Inventory

Research Design

- Pre-Experimental design
- One-group pre-test post-test design
- Intervention based study

Sample method

- Sample size: 30 bereaved individuals
- Age range: 20–60 years
- Sampling method: Purposive sampling

Tools used

- Complicated Grief Inventory (screening)
- Stroop Color and Word Test – Stroop Ratio (Working Memory) – Stroop interference effect(Cognitive Flexibility)

Intervention plan

- Grounding Technique - Sensory Grounding(5-4-3-2-1)
- Duration: 3–4 weeks
- Sessions: 10–12
- Session length: 30–40 minutes

Inclusion criteria

Participants were selected based on the following,

- Adults aged between 20 and 60 years
- People who have lost a close family member or someone important to them.
- Minimum 6 months post-bereavement
- Ability to understand the instructions and provide informed consent.
- No formal mindfulness training has been done in the past 6 months.

Exclusion criteria

Participants were excluded,

- Presence of severe depression with suicidal ideation
- Diagnosed neurological or neurocognitive disorders
- Current substance dependence
- Uncorrected vision problems or color blindness, as needed for giving the Stroop Test.

Procedure

After checking if participants met the right conditions, we built a good relationship and got their permission to take part. Socio-demographic information was gathered using a structured data sheet. Participants were selected using the complicated grief inventory as a screening tool. The basic check of working memory and cognitive flexibility was done with the Stroop Color–Word Test. To assess cognitive flexibility we used Stroop interference effect and for working memory we used Stroop ratio. Participants then took part in a four-week mindfulness program that focused on grounding techniques, called Sensory grounding. They had three sessions each week, and each session lasted about 30 to 40 minutes. After the intervention ended, a post-test was done using the Stroop Color–Word Test. The data that was collected was given scores, organized into a table, and ready for statistical analysis.

Results

Table 01: Shows the normality of the data

Variables	Kolmogorov Smirnov D	p	Shapiro-Wilk W	p
Stroop Interference Difference	.122	.200*	.974	.660
Stroop Ratio Difference	.009	.200*	.966	.432

Table 02: Shows the Descriptive Statistics for Pre-and Post-test Scores

Variables Score	Test	Mean	Std.Deviation	Std.Error
Stroop Interference (Cognitive Flexibility)	Pre	135.23	25.673	4.687
	Post	60.43	23.844	4.353
Stroop Ratio (Working memory)	Pre	2.3990	.26997	.04929
	Post	1.6747	.14668	.02678

Table 03: Shows the paired sample t-test results

Comparison	Mean Difference	SD	SE	95%CI Lower	95%CI Upper	t	df	p
Stroop Interference (Pre-Post)	74.800	29.456	5.378	63.801	85.799	13.909	29	< .001
Stroop ratio (Pre-Post)	0.72433	.28772	.05253	.61690	.83177	13.789	29	< .001

DISCUSSION

This study looked at how a mindfulness approach focused on grounding can help improve working memory and cognitive flexibility in people who have lost someone, using performance on the Stroop task as a way to measure the results. Before checking if the hypothesis is correct, we looked at whether the data follows a normal distribution. Both the Kolmogorov–Smirnov and Shapiro–Wilk tests showed that the difference scores for Stroop interference and Stroop ratio followed a normal distribution ($p > .05$). This means it was okay to use the paired samples t-test for parametric analysis. The results from the paired samples showed a big improvement from the pre-test to the post-test for both measurements. For cognitive flexibility, which was measured using the Stroop interference effect, the average score dropped a lot from 135.23 (with a standard deviation of 25.67) to 60.43 (with a standard deviation of 23.84). Lower interference scores show better control over distractions and the ability to switch attention, so this decrease means there was a real improvement in cognitive flexibility after the intervention. Working memory performance, measured using the Stroop ratio, got better as shown by a drop in the average score from 2.3990 (with a standard deviation of 0.26997) before the test to 1.6747 (with a standard deviation of 0.14668) after the test. These changes in description already show that the participants were able to think and process information more efficiently after doing the grounding practice.

The analysis showed that these improvements were definitely meaningful and not just by chance. The paired t-test showed a significant difference between the Stroop interference scores before and after the test, $t = 13.909$, $p < .001$, with a large average difference of 74.80. The difference in Stroop ratio scores was also significant, with a t-value of 13.789 and a p-value less than 0.001, showing an average decrease of 0.72433. The size of the t values shows a strong effect from the intervention. These results match with ideas that mindfulness-based grounding techniques improve executive functioning by keeping attention steady and lowering the mental effort needed when dealing with emotional problems. Losing someone can take a lot of mental energy because of unwanted thoughts, thinking over and over, and having trouble managing emotions, which can make it harder to focus and adapt to new situations. Grounding techniques help by focusing on what you can feel, hear, see, or smell right now, which can lessen distractions and make more mental space available for doing the task you need to focus on. The big drop in Stroop interference scores shows that participants got better at stopping their automatic reactions and changing how they focused their attention. Similarly, better performance in the Stroop test shows an improved ability to follow rules and handle information in working memory. From a clinical point of view, these improvements in executive functions can help people who are grieving to cope better, make decisions, and manage their daily activities more effectively. The study concluded that there was a significant difference in working memory and cognitive flexibility between bereaved individuals before and after they received the grounding technique intervention.

Conclusion

This study shows clear evidence that a mindfulness program based on grounding techniques can greatly improve working memory and cognitive flexibility which is the ability to switch between different thoughts and tasks in people who have experienced a loss. The big drops in Stroop interference and Stroop ratio scores from before the test to after the test show real progress in focusing attention, stopping unwanted thoughts, and thinking more clearly. These results show that grounding techniques can lower the mental confusion caused by strong emotions and help the mind use its energy more efficiently. The big differences in the average results and the high t values show that the improvements we saw are significantly strong. The findings match theories that highlight how mindfulness helps improve control over thinking and keeps attention steady. In the situation of losing someone, these mental improvements might help with dealing with stress, making choices, and managing everyday tasks. This approach seems like a useful and easy-to-use method for helping people who are emotionally sensitive to better handle mental challenges. However, without a control group and with a small number of participants, we should be careful when understanding the results. Future research should be used with bigger groups of people to verify and build on these results. The study shows that grounding techniques are important in both clinical and research settings, as they work well as mindfulness methods to improve cognitive abilities during times of loss.

Limitations

- The study uses a small number of participants ($N = 30$), which might make it harder to apply the results to a larger group.
- Without a control group, it's hard to know if the changes are really because of the grounding intervention.
- The brief time of the intervention might not show the full long-term impact on thinking abilities.

- People may experience grief differently based on how strong their feelings are, how they handle stress, and the kind of help they have around them, which can affect how things turn out for them.

Future Implication:

- The results could help create organized grounding techniques for people who have lost someone, which can be used in both medical and community environments.
- This study, even though it used a small group of about 30 people, can still act as a baseline study or initial research for bigger studies in the future.
- These results can help clinicians to include short mindfulness and grounding methods in grief counseling to improve executive functioning.
- This study might inspire future researchers to do more detailed studies, like randomized controlled trials and long-term research, to better understand the real causes and lasting impacts.
- The results could lead to more research on how the brain recovers from grief and bereavement.

REFERENCE:

1. Atalay, K., & Staneva, A. (2020). The effect of bereavement on cognitive functioning among elderly people: Evidence from Australia. *Economics & Human Biology*, 39, 100932. <https://doi.org/10.1016/j.ehb.2020.100932>
2. Atalay, K., & Staneva, A. (2020a). The effect of bereavement on cognitive functioning among elderly people: Evidence from Australia. *Economics & Human Biology*, 39, 100932. <https://doi.org/10.1016/j.ehb.2020.100932>
3. Baddeley, A. (1992). Working memory. *Science*, 255(5044), 556–559. <https://doi.org/10.1126/science.1736359>
4. Békés, V., Roberts, K., & Németh, D. (2023). Competitive neurocognitive processes following bereavement. *Brain Research Bulletin*, 199, 110663. <https://doi.org/10.1016/j.brainresbull.2023.110663>
5. Buur, C., Mackrill, T., Hybholt, L., Nissen, E. R., & O'Connor, M. (2024). Older Bereaved Individuals' Experiences of Cognitive-Behavioral Therapy for Complicated Grief Reactions: A Qualitative Multistage Focus group approach. *Cognitive and Behavioral Practice*, 32(1), 56–69. <https://doi.org/10.1016/j.cbpra.2024.06.002>
6. Bryant, R. A., Azevedo, S., Yadav, S., Cahill, C., Kenny, L., Maccallum, F., Tran, J., Choi-Christou, J., Rawson, N., Tockar, J., Garber, B., Keyan, D., & Dawson, K. S. (2024). Cognitive Behavior Therapy vs Mindfulness in Treatment of Prolonged Grief Disorder. *JAMA Psychiatry*, 81(7), 646. <https://doi.org/10.1001/jamapsychiatry.2024.0432>
7. Cowan, N. (2013). Working memory underpins cognitive development, learning, and education. *Educational Psychology Review*, 26(2), 197–223. <https://doi.org/10.1007/s10648-013-9246-y>
8. Cox, A., Boyle, S. L., Newby-Clark, E., & Lumley, M. N. (2025). Creating Space for Grief: Development of Evidence-Informed Bereavement Support Program for Post-Secondary students. *Journal of College Student Development*, 66(2), 209–222. <https://doi.org/10.1353/csd.2025.a958767>
9. Gupta, S., & Bonanno, G. A. (2011). Complicated grief and deficits in emotional expressive flexibility. *Journal of Abnormal Psychology*, 120(3), 635–643. <https://doi.org/10.1037/a0023541>

10. Gündel, H., O'Connor, M.-F., Littrell, L., Fort, C., & Lane, R. D. (2003). Functional Neuroanatomy of Grief: An fMRI Study. *American Journal of Psychiatry*, 160(11), 1946–1953. <https://doi.org/10.1176/appi.ajp.160.11.1946>
11. Goveas, J. S., Hwang, G., Blair, N. P., Stein, E. A., & Reynolds, C. F. (2026). Prolonged grief disorder in later life: advancing our understanding of biopsychosocial mechanisms to guide future personalized interventions. *Neuropsychopharmacology*. <https://doi.org/10.1038/s41386-026-02329-x>
12. Hoffmann, B. M., Blair, N. P., McAuliffe, T. L., Hwang, G., Larson, E., Claesges, S. A., Webber, A., Reynolds, C. F., & Goveas, J. S. (2024). Neuropsychological correlates of early grief in bereaved older adults. *International Psychogeriatrics*, 36(11), 1064–1069. <https://doi.org/10.1017/s1041610224000048>
13. Huang, F., Hsu, A., Chao, Y., Shang, C. M., Tsai, J., & Wu, C. W. (2020). Mindfulness-based cognitive therapy on bereavement grief: Alterations of resting-state network connectivity associate with changes of anxiety and mindfulness. *Human Brain Mapping*, 42(2), 510–520. <https://doi.org/10.1002/hbm.25240>
14. Huang, S. H., Birk, J. L., & Bonanno, G. A. (2022). Looking back and moving forward: dimensions of coping flexibility divergently predict long-term bereavement outcomes. *Anxiety Stress & Coping*, 36(3), 275–290. <https://doi.org/10.1080/10615806.2022.2099545>
15. Knowles, L. M., Kaplan, D. M., Flores, M., Friedman, S. E., & O'Connor, M. (2025). Mindfulness and Relaxation Interventions Reduce Depression, Negative Affect and Stress in Widow(er)s. *Journal of Loss and Trauma*, 1–24. <https://doi.org/10.1080/15325024.2025.2504951>
16. PharmD, J. C. (2024, September 9). *Step-by-step guide on grounding techniques*. <https://www.medicalnewstoday.com/articles/grounding-techniques>
17. Min, J., & Song, J. (2022). Spousal loss and cognitive function: the importance of gender and multiple dimensions of marital quality. *Aging & Mental Health*, 27(4), 755–764. <https://doi.org/10.1080/13607863.2022.2084715>
18. Stein, E., & Witkiewitz, K. (2020). Dismantling Mindfulness-Based Programs: a Systematic Review to Identify Active Components of Treatment. *Mindfulness*, 11(11), 2470–2485. <https://doi.org/10.1007/s12671-020-01444-0>
19. Zainal, N. H., & Newman, M. G. (2023). Mindfulness enhances cognitive functioning: a meta-analysis of 111 randomized controlled trials. *Health Psychology Review*, 18(2), 369–395. <https://doi.org/10.1080/17437199.2023.2248222>