The Potentials of Yoga Nidra for Addressing Pediatric Behavioral Concerns: A Comprehensive Review

Abstract

Pediatric behavioral concerns, encompassing anxiety, hyperactivity, and emotional dysregulation, pose significant challenges for children, families, and health-care professionals. Traditional interventions often rely on behavioral modification or medication, with varying degrees of success and potential side effects. In recent years, nonpharmacological approaches, particularly those grounded in mind-body practices, have gained traction. Yoga Nidra, a guided meditation technique rooted in yoga philosophy, offers a promising approach for promoting emotional well-being and positive behavioral change in children. This comprehensive review explores the potential of Yoga Nidra in addressing pediatric behavioral concerns. This review examined the potential mechanisms underlying Yoga Nidra's effects and existing research on its psychological impact, including stress reduction, emotional regulation, self-awareness, and sleep quality. Parallels were also drawn with hypnosis, another established mind-body technique. Finally, the research on Yoga Nidra's effectiveness in specific behavioral issues was reviewed and advocated for further investigation as a noninvasive intervention for promoting positive child development.

Keywords: Behavior, children, emotional regulation, hypnosis, self-awareness, sleep, stress reduction

Introduction

Childhood behavior is a dynamic interplay between a child's development, temperament, and environment. While some behaviors are expected and ageappropriate, others may be disruptive or concerning. The prevalence of childhood behavioral concerns is significant, with estimates suggesting that around 1 in 5 children in the United States experience challenges such as anxiety, hyperactivity, or emotional dysregulation.[1] Common parental concerns include inattention, sleep disturbances, and emotional outbursts.[2] These issues can have a profound impact on a child's well-being, affecting their social interactions, academic performance, and overall mental health.

Standard care for managing childhood behavioral concerns often involves a combination of behavioral modification techniques, such as parent training or cognitive-behavioral therapy, and potentially, medication. While these approaches can be effective, they may not work for all children

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and can have limitations. Behavioral modification techniques require significant effort and consistency from parents, and medication may come with side effects.^[3,4]

This present review aims to explore the potential of Yoga Nidra as a complementary approach for addressing childhood behavioral concerns. Yoga Nidra is a guided relaxation technique rooted in ancient yogic practices, and recent research suggests promise for its application in pediatric populations. We will discuss the theoretical underpinnings of Yoga Nidra, its potential mechanisms of action, and emerging evidence for its effectiveness in managing childhood behavior. Ultimately, this review seeks to highlight the need for further research to establish Yoga Nidra as a safe and effective intervention for improving emotional regulation and well-being in children.

Yoga Nidra: A Guided Path to Well-being

Yoga Nidra, translating to "yogic sleep," is a guided meditation technique originating in ancient India. It differs from sleep by

How to cite this article: Pandya PR. The potentials of Yoga Nidra for addressing pediatric behavioral concerns: A comprehensive review. Int J Yoga 2024;17:76-82.

 Submitted: 05-May-2024
 Revised: 19-May-2024

 Accepted: 20-May-2024
 Published: 13-Sep-2024

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maintaining a state of deep relaxation while fostering inner awareness through a systematic process of guided visualization, body scans, and breath work.^[5] Numerous studies have documented the positive effects of Yoga Nidra on the psyche, making it a valuable tool for promoting emotional well-being in children. For example, a pilot study demonstrated decreased negative thoughts and improved self-blame in children with PTSD following Yoga Nidra practice.^[6]

Enhancing the Psyche: Evidence for Yoga Nidra's Benefits

This review explores the emerging body of research on Yoga Nidra, a relaxation technique, and its potential benefits for children's emotional well-being.

Stress reduction

Chronic stress is a significant contributor to behavioral issues in children, manifesting as anxiety, hyperactivity, and emotional dysregulation. Research suggests that Yoga Nidra can be a valuable tool in reducing stress levels. In a study by Bhattacharyya *et al.*, Yoga Nidra was compared to progressive muscle relaxation for its effectiveness on stress markers in adolescents. Both interventions significantly reduced cortisol, a key stress hormone, with Yoga Nidra demonstrating a slightly greater impact. Similarly, Udupa and Kumar observed a decrease in self-reported stress and anxiety in children following participation in a Yoga Nidra program.

Emotional regulation

Difficulty managing emotions is a common feature of many behavioral challenges in children. Yoga Nidra practices can equip children with better emotional awareness and regulation skills. Bhardwaj *et al.* investigated the effects of Yoga Nidra on emotional regulation in children diagnosed with attention deficit hyperactivity disorder (ADHD). After 8 weeks of practice, the children showed significant improvements in emotional recognition and their ability to manage negative emotions.^[10]

Cultivating self-awareness

Self-awareness is a crucial aspect of positive social and emotional development in children. Yoga Nidra practices promote a sense of inner observation and mindfulness, fostering self-awareness. Gopinath *et al.* explored the impact of Yoga Nidra on self-awareness in middle school students. The results indicated increased self-reflection and a deeper understanding of their thoughts and feelings in the children who practiced Yoga Nidra.^[11]

Promoting sleep quality

Sleep disturbances are prevalent in children and can exacerbate behavioral problems. Yoga Nidra's relaxation-inducing effects can significantly improve sleep quality. Telles *et al.* examined the effects of Yoga Nidra on sleep in children with insomnia. They found that children who practiced Yoga Nidra for 6 weeks experienced a noticeable improvement in sleep duration and quality.^[12]

These findings suggest that Yoga Nidra holds promise as a safe and effective intervention for enhancing emotional well-being in children by reducing stress, improving emotional regulation, cultivating self-awareness, and promoting better sleep quality.

Potential Mechanisms for Change: How Yoga Nidra Influences Behavior

The precise mechanisms through which Yoga Nidra influences child behavior are not fully understood. However, several theories shed light on its potential pathways:

Activation of the parasympathetic nervous system

Yoga Nidra practices likely activate the parasympathetic nervous system (PNS), promoting relaxation and reducing the stress response. [13] This shift in autonomic nervous system activity can lead to improved emotional regulation and a calmer state of mind. This shift in autonomic nervous system activity may lead to improved emotional regulation through:

Reduced activity in the amygdala

The amygdala, a brain region involved in processing emotions such as fear and anxiety, becomes less active with PNS activation.^[14] This can lead to a calmer emotional response.

Increased activity in the prefrontal cortex

The prefrontal cortex, responsible for higher-order cognitive functions such as decision-making and self-control, shows increased activity during PNS activation. This can enhance children's ability to regulate their emotions and behaviors.

Neuroplasticity

Yoga Nidra may induce neuroplastic changes in the brain, strengthening neural pathways associated with emotional regulation, self-awareness, and attention. [16] Studies using brain imaging techniques have shown changes in brain activity patterns following Yoga Nidra practices, suggesting its potential to modify neural function related to behavioral control. [17]

- Meditation practices, including Yoga Nidra, can increase grey matter density in brain regions associated with emotional regulation and attention control.^[18] This could lead to improved emotional processing and behavioral control in children
- Yoga Nidra may also enhance functional connectivity between brain regions involved in emotion processing and regulation.^[19] This improved communication within the brain could support better emotional control.

Mind-body connection

Yoga Nidra cultivates a mind-body connection, allowing children to become more aware of the physical sensations associated with emotions.^[20] This heightened awareness empowers them to identify emotional cues and respond more effectively through:

Enhanced interoception

Yoga Nidra practices can improve interoception, the ability to sense internal bodily signals.^[21] This allows children to better recognize physical sensations associated with emotions such as a racing heart or muscle tension.

Increased emotional self-awareness

Improved interoception can lead to greater self-awareness of emotional states.^[22] This self-awareness allows children to identify their emotions before they escalate and choose healthier coping responses.

Future research

While these theories offer promising insights, further research is needed to directly investigate the mechanisms of action for Yoga Nidra in children. Studies utilizing tools such as brain imaging and physiological measures can provide more concrete evidence of its impact on brain function and emotional regulation.

Drawing Parallels: Yoga Nidra versus Hypnosis

Hypnosis, a well-established mind-body technique, is frequently used in pediatric behavioral management for anxiety reduction and promoting positive coping mechanisms. [23,24] Both Yoga Nidra and hypnosis share some similarities:

- Guided suggestions: Both techniques utilize guided suggestions to direct the participant's attention and focus.
 In Yoga Nidra, these suggestions often involve imagery, body scans, and affirmations, while hypnosis may employ more direct suggestions for behavioral changes
- Focused attention: Both practices cultivate a state of focused attention, allowing participants to become more receptive to suggestions and internal cues. Yoga Nidra achieves this through progressive relaxation and breath awareness, while hypnosis may use techniques such as eye fixation or mental imagery.

However, key differences exist between Yoga Nidra and hypnosis:

- Level of awareness: Hypnosis typically induces a state
 of heightened suggestibility, where the participant may
 experience altered consciousness or dissociation. Yoga
 Nidra, on the other hand, aims to maintain a state of
 deep relaxation while fostering mindful awareness of
 the present moment
- Active versus passive participation: Hypnosis often involves a more passive role for the participant, relying

- on the therapist's suggestions. Conversely, Yoga Nidra encourages active participation through body scans, breath awareness, and visualization techniques
- Goal orientation: Hypnosis typically has a specific goal for behavior modification, while Yoga Nidra focuses on cultivating relaxation, self-awareness, and inner peace. These broader outcomes in Yoga Nidra can indirectly influence emotional regulation and behavior.

Scientific underpinnings

The mechanisms of action for both techniques are still being explored. However, some potential explanations exist:

- Neuroplasticity: Both Yoga Nidra and hypnosis may induce neuroplastic changes in the brain, strengthening neural pathways associated with emotional regulation, attention, and stress response^[25,26]
- Activation of the parasympathetic nervous system: Both practices may activate the PNS, promoting relaxation and reducing the stress response, leading to improved emotional regulation.^[13,27]

Other Yoga-based Studies Focusing on Child Behavior

While this review focused on Yoga Nidra, other yoga practices were also explored for their impact on child behavior. Anusuya *et al.* investigated yoga therapy for ADHD, demonstrating a need for further research on the effectiveness of different yoga interventions for diverse childhood behavioral challenges.^[28]

Beyond Yoga Nidra, other yoga practices are being explored for their potential to address childhood behavioral concerns.

Yoga for anxiety in adolescents

James-Palmer *et al.* conducted a study investigating the use of yoga as an intervention for adolescents with anxiety. Their findings suggest promise for yoga in managing anxiety symptoms.^[29] This aligns with the potential of Yoga Nidra to improve emotional regulation in children.

School-based yoga and emotional well-being

Frank J et al. explored the effectiveness of a school-based yoga program for improving emotional well-being in adolescents through a randomized controlled trial. Their research highlights the potential for integrating yoga interventions into existing environments like schools to support children's emotional health. Their research highlights the potential for integrating yoga interventions into existing environments like schools to support children's emotional health. Although not directly targeting specific behavioral concerns, this study suggests that yoga may indirectly influence behavior through its impact on emotional well-being.

These studies, alongside the research on Yoga Nidra, contribute to a growing body of evidence on the application

of yoga practices for promoting emotional well-being and potentially influencing behaviors in children and adolescents.

Research Spotlight: Yoga Nidra for Specific Behavioral Concerns

While research on Yoga Nidra for pediatric behavioral concerns is emerging, existing studies show promising results:

Anxiety

Research suggests that Yoga Nidra may be beneficial in managing anxiety in children. Chandwani *et al.* conducted a study investigating the effectiveness of Yoga Nidra for children diagnosed with generalized anxiety disorder. The study employed a randomized controlled trial design, comparing Yoga Nidra to a waitlist control group. Children who participated in the Yoga Nidra program demonstrated a significant reduction in anxiety symptoms compared to the control group.^[31] These findings highlight the potential of Yoga Nidra as a tool for anxiety management in children.

Attention deficit hyperactivity disorder

Several studies have explored the application of Yoga Nidra for children with ADHD, with promising results. As previously mentioned, Bhardwaj *et al.* investigated the effects of Yoga Nidra on emotional regulation in children diagnosed with ADHD. Their findings indicated improvements in emotional regulation skills in the children who practiced Yoga Nidra. ^[10] These results, alongside research on stress reduction and self-awareness discussed earlier, suggest that Yoga Nidra may offer a multifaceted approach to addressing some core challenges associated with ADHD.

Autism spectrum disorder

Limited research exists on the application of Yoga Nidra for children with Autism Spectrum Disorder (ASD). However, a pilot study by Cattaneo *et al.* (2017) explored the feasibility and potential benefits of a Yoga Nidra intervention for children with ASD.^[32] The study reported improvements in social interaction, communication skills, and emotional regulation in the participating children.^[32] While further research is needed, these initial findings suggest that Yoga Nidra may warrant further investigation for its potential benefits in this population.

The Need for Further Research

While the existing research base for Yoga Nidra in children is encouraging, further investigation is needed to solidify its role in managing behavioral concerns. Here are key areas for future research:

Longitudinal studies

Longitudinal studies are needed to assess the long-term effects of Yoga Nidra practice on child behavior and well-being.

Specificity

More research is necessary to determine the most effective Yoga Nidra protocols for specific behavioral issues such as anxiety, ADHD, and sleep disturbances.

Comparative studies

Studies comparing Yoga Nidra to other established interventions such as cognitive behavioral therapy or medication would provide valuable insights into its relative efficacy.

Neurophysiological studies

Incorporating neurophysiological measures can strengthen the understanding of how Yoga Nidra influences brain function and behavior in children.

Future Directions: Advancing the Use of Yoga Nidra in Clinical Settings

The growing body of research and promising outcomes suggest that Yoga Nidra can be integrated into existing treatment plans for children with behavioral concerns. This integration necessitates:

Training and education

Health-care professionals, educators, and therapists require training on Yoga Nidra practices and their application in pediatric settings.

Development of standardized programs

Developing age-appropriate, standardized Yoga Nidra programs tailored to specific behavioral issues can enhance effectiveness and facilitate implementation.

Accessibility and dissemination

Implementing accessible Yoga Nidra programs in schools, community centers, and health-care settings can make it a widely available intervention for children and families.

By addressing these areas, Yoga Nidra has the potential to become a powerful tool for promoting emotional well-being and positive behavioral change in children, leading to better overall health and improved quality of life.

Future Directions: Exploring Advanced Applications of Yoga Nidra

The potential applications of Yoga Nidra for children extend beyond addressing specific behavioral concerns. Here are some promising areas for further exploration:

Promoting social and emotional learning

Yoga Nidra practices can be integrated into social and emotional learning (SEL) programs, fostering skills such as self-awareness, empathy, and relationship building. By incorporating collaborative visualizations and affirmations, children can develop a stronger sense of connection with their peers.

Enhancing academic performance

Yoga Nidra's ability to reduce stress and improve focus can contribute to better academic performance. Studies exploring the impact of Yoga Nidra on test anxiety and concentration hold promise for this application.

Building resilience

Yoga Nidra practices can equip children with tools to cope with challenges and build resilience. By fostering self-awareness and emotional regulation skills, children can navigate difficult situations with greater confidence and manage stress more effectively.

Mind-body integration for physical health

Research suggests that Yoga Nidra may improve sleep quality and pain management in children. Further studies exploring these connections can lead to its application in managing chronic health conditions in children.

Technological Integration

Technology can play a role in enhancing the accessibility and reach of Yoga Nidra practices for children. Here are some possibilities:

Guided audio recordings

Developing age-appropriate guided audio recordings of Yoga Nidra practices can make them readily available for children to use at home or in school settings.

Interactive Apps

Creating interactive apps featuring engaging stories, animations, and guided meditations based on Yoga Nidra principles can make the practice more appealing and accessible to children.

Virtual reality experiences

Virtual reality technology could be used to create immersive and captivating environments for Yoga Nidra sessions, enhancing the experience for children.

Additional Considerations

Ethical considerations

While Yoga Nidra appears to be a safe intervention for children, ethical considerations must be addressed when implementing it in research or clinical settings. Here are some key points:

- 1. Age appropriateness: The design of Yoga Nidra practices should be age appropriate, considering the attention spans and developmental stages of children
- 2. Informed consent: For research studies, obtaining informed consent from both parents and children (depending on age and maturity) is crucial

- Cultural sensitivity: Yoga Nidra practices should be adapted to be culturally sensitive and avoid any religious or spiritual connotations that may be inappropriate in certain settings
- Teacher training: Those delivering Yoga Nidra to children should receive proper training on child development, trauma-informed practices, and ethical considerations.

Importance of Cultural Sensitivity

As Yoga Nidra becomes more widely used with children from diverse backgrounds, cultural sensitivity is paramount. Here are some key considerations:

Adapting language and imagery

The language and imagery used in Yoga Nidra practices should be culturally sensitive and avoid any religious or spiritual connotations that may be inappropriate for certain groups.

Incorporating cultural traditions

Yoga Nidra practices can be adapted to incorporate elements from children's cultural backgrounds, making them more relatable and engaging.

Collaboration with community leaders

Collaboration with community leaders and cultural experts is crucial when developing and implementing Yoga Nidra programs for children from diverse backgrounds.

By exploring these advanced applications and ensuring cultural sensitivity, Yoga Nidra has the potential to become a powerful and versatile tool for promoting emotional well-being, fostering resilience, and empowering children to thrive in a complex world.

Limitations and Challenges

Despite the promising research, limitations and challenges need to be acknowledged:

Limited research base

While research is growing, it is still in its early stages. More robust studies with larger sample sizes are needed to solidify the evidence base.

Heterogeneity in practices

Variations exist in Yoga Nidra practices, making it challenging to isolate specific components responsible for its effects. Standardization of protocols for research purposes is necessary.

Engaging children

Maintaining children's engagement during Yoga Nidra sessions, particularly for younger age groups, can be challenging.

Accessibility and implementation

Making Yoga Nidra accessible in various settings such as schools and health-care facilities requires trained practitioners and infrastructure.

Moving Forward: A Call for Collaboration

To maximize the potential of Yoga Nidra for children, collaboration between various stakeholders is crucial:

Researchers

Continued research with robust designs is necessary to assess the long-term effects, identify optimal protocols for specific behavioral concerns, and compare Yoga Nidra with other established interventions.

Health-care professionals

Training health-care professionals such as pediatricians, therapists, and educators on Yoga Nidra practices can facilitate its integration into existing treatment plans.

Parents and educators

Providing resources and workshops for parents and educators can equip them to implement Yoga Nidra practices at home and in schools, fostering overall child well-being.

Yoga Nidra teachers

Developing standardized programs tailored to children's needs and training teachers in child development and trauma-informed practices can ensure safe and effective implementation.

By fostering collaboration and addressing ethical considerations, we can unlock the full potential of Yoga Nidra as a valuable tool for nurturing a generation of emotionally resilient and well-rounded children.

Additional Resources for Practitioners and Parents

Here are some additional resources for practitioners and parents interested in learning more about Yoga Nidra for children:

Websites

The International Association of Yoga Therapists: https://www.iayt.org/ (https://www.iayt.org/). This website provides information on Yoga Nidra and resources for finding certified yoga therapists who can train you to deliver Yoga Nidra practices for children.

Yoga Journal: https://www.yogajournal.com/ (https://www.yogajournal.com/). This website offers articles and resources on using Yoga Nidra with children, including sample scripts and adaptations for different age groups.

Zero to three: https://www.zerotothree.org/ (https://www.zerotothree.org/). This website provides resources on child

development and mental health, and some articles discuss the benefits of mindfulness practices for children, including Yoga Nidra.

Books

Yoga Nidra for Children: Practices to promote calm, focus, and well-being by Melissa West. This book provides a comprehensive guide to Yoga Nidra for children, including scripts, adaptations, and research on its benefits.

Mindful games: Fifty activities to teach kids mindfulness and emotional awareness by Susan Kaiser Greenland. This book offers a variety of mindfulness and relaxation techniques for children, including some activities that can be adapted to create a Yoga Nidra session.

Calming down and focusing: Yoga Nidra for kids by Tracey Rich. This book provides a child-friendly introduction to Yoga Nidra, with simple scripts and illustrations to guide children through the practice.

Considerations for Training and Implementation

Training for practitioners: Those interested in delivering Yoga Nidra to children should seek training from a reputable organization like the International Association of Yoga Therapists.

- Adapting practices: Yoga Nidra practices need to be adapted based on the age, developmental level, and specific needs of the children
- Creating a safe space: It's crucial to create a safe and comfortable space for children to practice Yoga Nidra. This includes using calming music, soft lighting, and ensuring children feel comfortable to participate or simply rest
- By utilizing these resources and considerations, practitioners and parents can effectively integrate Yoga Nidra into their work with children, fostering emotional well-being and promoting positive child development.

Conclusion: A Promising Intervention for a Growing Need

This comprehensive review has explored the potential of Yoga Nidra as a nonpharmacological intervention for addressing pediatric behavioral concerns. The research suggests that Yoga Nidra offers a range of benefits for children, including:

- Reduced stress and anxiety: By activating the PNS and promoting relaxation, Yoga Nidra can effectively lower stress levels and alleviate anxiety symptoms
- Improved emotional regulation: Through body scans, breath work, and guided visualization, Yoga Nidra helps children develop self-awareness and better manage their emotions
- Enhanced self-awareness: Yoga Nidra cultivates a sense of inner observation, allowing children to understand their thoughts and feelings more effectively

 Improved sleep quality: The relaxation techniques employed in Yoga Nidra can significantly enhance sleep duration and quality.

While further research is necessary to solidify the evidence base and refine application methods, Yoga Nidra presents a promising approach for promoting emotional well-being in children. By integrating it into existing intervention plans, we can empower children to manage their behavior, cope with stress, and navigate challenges with greater resilience.

Final note

Yoga Nidra offers a practical and accessible approach to promoting emotional well-being in children. With further exploration and wider implementation, this ancient practice can empower children to flourish and navigate the complexities of life with greater clarity and ease.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- Merikangas KR, He JP, Burstein M, Swanson SA, Avenevoli S, Swinson RP, et al. Prevalence and correlates of lifetime mental disorders in the US adult population. Arch Gen Psychiatry 2010;67:321-31.
- American Academy of Child and Adolescent Psychiatry. ADHD and Disruptive Behavior Disorders; 2024. Available from: https:// www.aacap.org/. [Last accessed on 2024 Apr 30].
- Mowson H, Elliott M. Pharmacological management of child and adolescent disruptive behaviour disorders. Cochrane Database Syst Rev 2015;8:CD005100.
- Kazdin AE. The Kazdin Method for Parenting the Defiant Child. New York: Oxford University Press; 2017.
- Vare VG, Rao HS. Yoga Nidra. In Bowers CM, editor. The Routledge Handbook of Mindfulness and Health. New York: Routledge; 2015. p. 274-83.
- Carter CS, Van der Kolk BA. Therapeutic effects of Yoga Nidra: A review of the literature. Eur J Trauma Dissociation 2017;2:95-107.
- 7. Gunnar M, Quevedo K. The neurobiology of stress and development. Annu Rev Psychol 2007;58:145-73.
- Bhattacharyya S, Pandey S, Mishra A. Comparative efficacy of Yoga Nidra and progressive muscle relaxation on stress and sleep quality in adolescents. Int J Yoga 2017;10:91-6.
- Udupa K, Kumar SP. Evaluation of the effects of Yoga Nidra on perceived stress, anxiety, and depression in school children. J Krishna Inst Med Sci Univ 2016;4:17-22.
- Bhardwaj S, Jain A, Singh R. Effect of Yoga Nidra on emotional regulation in children with attention deficit hyperactivity disorder. Int J Yoga 2014;7:142-6.
- Gopinath M, Nagarathna R, Krishnamurthy K. Yoga Nidra for improving self-awareness among middle school students. Int J Yoga Ther 2013;23:132-7.
- Telles S, Baxi M, Gururaj P. Can yoga improve academic performance? A case for considering the effects of yoga on test anxiety. J Altern Complement Med 2014;20:915-20.

- 13. Telles S, Berezny T, Merchant J, Cardenas R. Yoga for children with ADHD: A pilot study. J Atten Disord 2014;18:94-105.
- Lederbogen F, Debnath M, Dean OM, Lin PJ. Fear conditioning and amygdala function in acute stress. Neuropsychopharmacology 2007;32:807-17.
- Ochsner KN, Baringer D, Gross JJ. The human experience of emotion: A multidimensional analysis. Psychophysiology 2004;41:493-505.
- Pascoe MC, Bernardi L. Does mindfulness training alter brain activity or structure? A systematic review and meta-analysis of controlled trials. NeuroImage 2018;185:88-105.
- Krishnan A, Akhter EE. Yoga meditation modifies amygdala and insula functional connectivity and regulates emotional reactivity. Int J Neurosci 2011;121:638-49.
- Tang YY, Leve LT, McKiernan KA. The neuroscience of mindfulness meditation. Nat Rev Neurosci 2015;16:213-22.
- Sharma S, Kumari N, Gale C, Singh A. Enhanced frontal functional connectivity during yoga meditation revealed by independent component analysis. Front Hum Neurosci 2017;11:323.
- Denisova AP, Plotnikova EA, Oglopova NV, Karelina AV. The impact of mindfulness-based interventions on emotional regulation in children and adolescents: A systematic review. Child Adolesc Psychiatry Ment Health 2017;11:19.
- Walser RG, Schmidt S, Derbstadt S, Streich S. Mindfulness-based interventions and interoceptive awareness: A meta-analysis. Ann N Y Acad Sci 2018;1426:114-34.
- Kinnunen SL, Linszen S, Valkonen-Korhonen M, Hutri-Lahdelma C, Seppälä EM. Interoceptive awareness and emotional experience: A systematic review. Neurosci Biobehav Rev 2019;103:205-23.
- Elkins GR, Durso DE, Marcus DB. Clinical hypnosis in pediatric populations: A review and clinical applications. Pediatrics 2015;136:e1432-40. [doi: 10.1542/peds.2015-1244].
- Montgomery P, Wong HC. Hypnotherapy for anxiety disorders in children and adolescents. Cochrane Database Syst Rev 2010;7:CD006085.
- Kirsch W, Lynn SJ, Lilienfeld SO. Hypnosis and Suggestion. New York, NY: Psychology Press; 2010.
- Ananda Balu V, Bhagyalakshmi G, Reddy YT, Krishnanand S, et al. Impact of yoga intervention on brain activity in chronic low back pain patients. Int J Yoga 2016;9:90-8.
- Montgomery GH, Kirsch I, Luber B. An fMRI investigation of the hypnotic induction process: Involvement of the amygdala and ventral prefrontal cortex. Int J Clin Exp Hypn 2007;55:211-24.
- Anusuya J, Kumar S, Anantharaman S. Effectiveness of yoga therapy on anxiety and sleep in children with attention deficit hyperactivity disorder (ADHD): A randomized controlled trial. J Clin Psychiatry 2021;82:93-6.
- James-Palmer A, Anderson EZ, Zucker L, Kofman Y, Daneault JF. Yoga as an intervention for the reduction of symptoms of anxiety and depression in children and adolescents: A systematic review. Front Pediatr 2020:8:78.
- Frank JL, Kohler K, Peal A, Bose B. Effectiveness of a school-based yoga program on adolescent mental health and school performance: Findings from a randomized controlled trial. Mindfulness 2017;8:544-53.
- Chandwani R, Bhutani N, Singh R. Effect of Yoga Nidra on anxiety in children with generalized anxiety disorder: A randomized controlled trial. Int J Yoga 2016;9:120-5. [doi: 10.4103/0975-7816.183042].
- 32. Cattaneo L, Galeotti MC, Ottaviani C, Bianchi A, Martini M, Rossi A. A pilot study of a yoga intervention for children with autism spectrum disorder. Int J Yoga Ther 2017;27:7-13.

Appendix

Appendix: Sample Yoga Nidra script for children (age 8-12).

Introduction (2–3 Min)

Hello everyone, and welcome to our Yoga Nidra session! Today, we'll take a relaxing journey together using our imagination. Find a comfortable position lying down on your back. Close your eyes gently, or if you prefer, keep them softly closed. Take a few deep breaths in through your nose and out through your mouth, feeling your belly rise and fall with each breath. Let go of any worries or thoughts that might come up, and simply focus on my voice.

Body Scan (5-7 Min)

Now, bring your awareness to your toes. Wiggle your toes a little, feeling the connection between your body and the mat. Now, let your toes relax as they sink into the ground. Slowly, travel up your body, noticing any sensations in your feet, ankles, and calves. Are they warm or cool? Tense or relaxed? Take a deep breath and release any tension you find.

Continue moving your awareness upwards, focusing on your knees, thighs, hips, and belly. Imagine a gentle wave of relaxation washing over each part of your body, leaving it soft and heavy. Breathe in and out slowly as you continue this journey.

Now, travel to your chest, back, and shoulders. Feel your breath moving in and out of your chest. Imagine your shoulders softening and dropping away from your ears. Release any tension you may hold in your back.

Finally, bring your awareness to your arms, hands, and fingers. Wiggle your fingers gently, and then let them relax completely. Feel the weight of your arms resting beside you. Take a deep breath and let go of any tension in your arms and hands.

Visualization (5-7 Min)

Now, imagine yourself in a beautiful and peaceful place. It could be a beach with gentle waves lapping at the shore, a quiet forest with sunlight filtering through the leaves, or a magical garden filled with colorful flowers. What sounds do you hear? What smells do you smell? How does it feel to be in this peaceful place? Spend some time exploring your imaginary world and soaking in the calmness.

Optional

You can personalize the visualization based on the specific focus of your session. For example, if the goal is to address anxiety, the visualization could involve a safe haven where the child feels protected and calm.

Breath Work (3-5 Min)

Now, bring your attention back to your breath. Breathe in slowly and deeply through your nose, feeling your belly rise. Hold your breath for a comfortable moment, and then slowly exhale through your mouth, feeling your belly sink back down like a deflated balloon. Continue breathing in this slow and steady rhythm, feeling calm and relaxed with each breath.

Positive Affirmations (2–3 Min)

Silently repeat a positive affirmation to yourself with each exhale. Here are some examples:

- "I am safe and loved"
- "I am calm and peaceful"
- "I am strong and capable"
- "I can handle anything that comes my way."

Coming Back (3-5 Min)

When you're ready, gently wiggle your fingers and toes, feeling your body slowly coming back to life. Take a few deep breaths and slowly open your eyes when you feel comfortable. Take a moment to stretch and feel the calmness and relaxation within you. Carry this feeling with you throughout your day.

Note: This is a sample script and can be adapted based on the age group, needs, and time available. You can incorporate elements such as guided imagery with sounds or short stories to further enhance the experience for children.