Head Games: Mindfulness in Rock Climbing for Children and Adolescents

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Agenda

1. Objectives
2. Mindfulness Exercise
   - The operational, scientific definition of mindfulness put forth 13 years ago.
   - Mindfulness is letting go of taking things for granted
   - Mindfulness means to return to the present moment
   - Mindfulness is the self-regulation of attention with an attitude of curiosity, openness, and acceptance
   - Focusing on the past is often correlated with depression, guilt, and sadness
   - Focusing on the future is associated with fear, anxiety, and nervousness
   - Remaining present in the moment positively impacts, and enhances, neural pathways related to emotional control, focus, attention and stress regulation.
   - Exercises which require physical coordination and mental agility seem to have specific effects on cognitive abilities such as concentration and focus
3. Mainstream Meditation
   - Millions of people practice mindfulness to keep themselves focused on the "here-and-now"
   - Manage internal dialogue which feeds stress and anxiety
   - Help maintain emotional balance in complicated lives
   - Mindfulness creates resilience because it promotes interaction with and understanding of one's emotional state
   - Influences one's ability to control the degree to which emotions impact one's overall state of mind
   - Encourages a deeper exploration of what we are fully capable of

Objectives

1. Identify potential benefits of rock climbing
2. Learn how to implement rock climbing as a supplement to psychotherapy
3. Identify common factors between mindfulness and rock climbing
Benefits of Mindfulness

Researchers have found that mindfulness-based practices, when combined with evidence-based practices, may decrease symptoms of psychopathology related to:

- Depression
- Post-traumatic stress
- Anxiety

Mindfulness and meditation require present-focused attention, thus the individual is not able to focus on past/future concerns which might instigate maladaptive symptomatology.

Mindfulness with Children

- Prolonged and/or intense stress takes a toll on a child.
- Anxiety, depression, acting out, physical illness, and learning issues
- Mitigate stress early using a variety of forms of mindfulness.

Research done by Stress in America on behalf of the American Psychological Association (APA)

- Teens ages 13 to 17 feel a similar amount of stress as adults.
- Scale of 1 to 10, teens reported their stress levels as 5.8 during the school year (healthy is considered 3.9), and even in the summertime their levels were 4.6

Mindfulness has emerged as a way of treating children and adolescents with conditions ranging from:

- ADHD
- Anxiety
- Autism spectrum disorder
- Depression
- Stress.

Mindfulness with Children

- Childhood neurological development
- Our brains are constantly developing and changing
- Connections in the frontal circuits are created at their fastest rate during childhood.

Mindfulness promotes skills controlled in the prefrontal cortex → Focus and cognitive control for self-regulation, judgment, and patience during childhood.

Fostering mindfulness in preschoolers with tools like pictures, objects, food, simple movements, and music, can help them develop an ability to focus attention at a great level.

Mindfulness Apps, Games, Appropriate Language, Classroom Techniques

- Mindfulness isn’t something that can be outsourced. For parents and caregivers, the best way to teach a child to be mindful is to embody the practice oneself.

Benefits for Children

- Overall, studies on mindfulness for children have supported...
- Improves immune function (fewer illnesses)
- Increases concentration
- Improves self-acceptance and self-esteem
- Strengthens resilience
- Helps to control anger and hyperactivity
- Decreases stress.

Research confirms that for children, mindfulness can:

- Mitigate the effects of bullying (Zhou, Liu, Niu, Sun, & Fan, 2016)
- Enhance focus in children with ADHD (Zhang et al., 2016)
- Reduce attention problems (Crescentini, Capurso, Furlan, & Fabbro, 2016)
- Improve overall mental health and emotional well-being
- Improve social skills when well-taught and practiced consistently by children and adolescents.

Mindfulness over Detention

- Patterson High School in Baltimore
- Diverse student population (30 countries & 20 languages)
- Students from high conflict areas and under refugee status
- Within the first year:
  - Suspensions and verbal and physical altercations decreased by more than half
  - Attendance rates increased by three percent
  - Grade promotions increased by 19 percent
  - Average student GPA increased by a half percent

Other examples of implementation

Mindful Physical Activity

- Historically, recreational activities have also been utilized to supplement talk-therapy interventions for psychological distress.
- Exercise has been linked to improved mood and sleep quality, increased energy, and increased subjective well-being.

With the surge in research related to the benefits of mindfulness combined with existing research about the benefits of recreational interventions on mental health, there has been an influx in participation in recreational activities which incorporate elements mindfulness.

Such activities include:

- Yoga
- Tai Chi
- Power walking/Running
- Rock Climbing
Rock Climbing

- Activity in which participants climb up, down, or across artificial rock walls or natural rock structures.
- Goal: To reach a formation's summit, or the pre-defined endpoint of an artificial route.
- Styles:
  - Indoor and/or Outdoor
  - Bouldering
  - Sport climbing
  - Soloing
  - Traditional (“trad”) climbing
  - Ice climbing

Rock Climbing: Measured Difficulty

- All climbs vary in difficulty and use a standardized “grading” system.
- Grading systems take into account the difficulty of the holds, foot placements and the necessary muscular moves, not the danger of the route.
- Essentially, it’s impossible to measure ability based on climbing grades since it’s almost entirely subjective and idiosyncratic.

Sport or “Trad” Climbing Grading System

- Yosemite Decimal System: Grading system used for hiking, climbing, and scrambling.
  - 5.12a:
    - The first digit is always “5” and signifies completion of the route requires rope and/or other gear to climb to the summit.
    - Second digit ranges from 0-15 and describes the difficulty of the moves/holds.
    - Third digit is a, b, c, or d to further illustrate the difficulty of the climb.
  - A 5.0 to 5.7 is considered easy, 5.8 to 5.10 is considered intermediate, 5.11 to 5.12 is hard, and 5.13 to 5.15 is reserved for a very elite few.

Bouldering Difficulty

- Known as the Hueco System or the V-System.
  - The rating begins with “V” and ranges between V0-V16, with V0 considered to be easy and V16 saved for the elite.
  - Like the Yosemite system, it takes into account the difficulty of the holds, foot placements and muscular moves, not the danger of the route.

General Benefits of Climbing

- Cardio and Strength Building
- Burns Calories
- Muscle Groups Strengthened (Abs, Obliques, Biceps, Traps, Delts, Quads, Lats, Calves)
- Improves Flexibility
- Reduces Stress
- Increase Mental Strength and Cognitive Flexibility/Agility
- Problem-solving
- Facilitates Overcoming Fear
- Protective factor against chronic illnesses
- Sense of Victory
Therapeutic Benefits of Climbing

- Several organizations across the globe are using climbing in their work with refugees and at-risk youth.
- Exercise—climbing included—boosts mood-related chemicals in our brain like dopamine, norepinephrine, and serotonin, helping to lift our spirits.
- Climbing also promotes feelings of self-efficacy.
- First Descent, Adventure Therapy, self-worth, self-esteem, self-acceptance, and enhanced self-concepts are associated with better adjustment to chronic illness.
- Climbing as mindfulness therapy.

Rock Climbing for Kids

- Problem-solving
- Neural Development: Proprioception (sense of the relative position of neighboring parts of the body and strength of effort being employed in movement) and exercise boost long-term memory.
- Socialization and team building
- Fighting fatigue, enhancing motivation
- Mind-body connection
- "Nature effect"—actively connecting with nature enhances mood and self-esteem, decreases likelihood of mental and physical illness, enhances school performance.

Rock Climbing and Mindfulness

- Climbing is inherently a mindful activity.
- For a certain type of person, climbing can be motivating in a way other types of mindfulness exercises aren't.
- It's like practicing meditation—except you don't have to sit still.
- Specific, (usually) attainable goal and outcomes
- Measurable growth and change

Rock Climbing and Psychopathology

- Studies have supported the notion that rock climbing is associated with acute emotional regulation in depression.
- Concentration and coordination counteract the cognitive deficits and biases associated with depressive symptom pictures.
- Social aspects of climbing (partner and group climbs) mitigate emotional dysregulation.
- Peers encourage reorientation to positive features of a situation.
- Provide evidence against negative cognitive schemas.
- Goal-achievement bolsters against negative thoughts turned inward.
- Reductions in anxiety have been noted—using climbing to practice skills-based anxiety management has facilitated the reduction in anxiety symptomatology.
- Additionally, adaptive "channeling" of anxiety symptoms have been noted among those with generalized anxiety disorder who climb regularly.

Recommendations for the Future

- More research/robust empirical data collection on:
  - Impact on subjective wellbeing
  - Impact on cognitive development in children and adolescents
  - Impact on social development
- More robust investigation on long-term benefits of consistent involvement with climbing.
- Longitudinal studies.
DISCUSSION

References

