School Based Yoga Intervention for Childhood Stress Management

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SCHOOL BASED YOGA INTERVENTION FOR CHILDHOOD STRESS MANAGEMENT

Townshend, VT
Erica Marden
October-November 2014
Mentors: Dr. Maurice Geurts
PROBLEM IDENTIFICATION

- Childhood stress can have immediate and long-term negative impacts on physical health, mental health, school performance, self-esteem, and relationships\(^1,2\).

- Children face increasing stresses at school beginning at younger ages with the curricular demands on standardized testing and larger class sizes.

- For children in rural communities there are fewer resources available as recreational and therapeutic outlets for healthy stress reduction.

- Extracurricular activity involvement also puts significant financial and time burdens on families.

- Children in Townshend and Jamaica often have to travel 30-40 minutes to Manchester or Brattleboro VT for activities not offered by the local schools.
PROBLEM IDENTIFICATION

- There is a particular need to provide children in rural areas with tools to manage stress that can be incorporated into the school day and require few resources.

- Yoga is an excellent school-based activity that has proven benefits on physical and emotional health for both students and teachers\(^3,4\).

- School-based yoga has shown to be effective at improving children's sense of wellbeing and reducing self-perceived levels of stress\(^3,4\).

- An added benefit of yoga is that it can practiced individually at home without requiring any special equipment.
While the long term cumulative effects of childhood stress are difficult to assess, yoga and mindfulness techniques have been shown to help manage a variety of other childhood conditions\textsuperscript{5}.

- Conditions such as ADHD, Anxiety, Depression, Autism, Conduct Disorder account for a substantial economic burden.

- Rural communities are at a particular disadvantage because there are fewer psychiatric and community resources available.

- Local costs in Townshend and Jamaica, VT are particularly dominated by transportation costs and time to see specialists in Bennington and Brattleboro.
  
  - Time spent on travel and specialist visit is ~3.5 hours.
  
  - Roundtrip cost in gas to go to Bennington, VT getting 25mpg is ~$12.48 + parental cost of loss of a workday.
# Public Health Costs

## National Estimated Costs per Child per Year

### ADHD:
- **Health and mental health care:** $460 to $3,140
- **Education:** $2,360 to $13,190
- **Crime and delinquency/justice system:** $280 to $8,380
- **Family lost productivity:** $150 to $850
- **Social services:** $45-190

### Stress, Anxiety and Depression:
- **Health and mental health care:** $150 to $1,970
- **Family care:** $90
- **Education, reduced productivity and school absences:** $1,680 to $1,790
- **Social care:** $49 to $1,120
1. What types of stresses do children face during the school?

>> Our required curriculum means that the **daily schedule is quite demanding** which can be overwhelming especially for younger students. Larger class sizes can also be difficult for some children who are more sensitive to **environmental stressors**.

2. Do you think children would benefit from yoga and mindfulness incorporated into the school day?

>> Absolutely, I have always wanted to try doing yoga with one of my classes but have never done it. I personally love going to the community yoga classes at Grace Cottage and I know a Kindergarten teacher in a neighboring district incorporates yoga into some of her lesson plans. **Some kids will come to school with a lot on their minds from stress at home** which can make it challenging for them to have a successful day at school. Also the **kids love having anything new or different to look forward to during the day**.
Interview 2: [Name Withheld]—Community yoga instructor at Village Yoga in Newfane, VT

1. What do you see as the major health benefits of yoga for adults and children?
   >> “There are so many that I could name but I think that the major ones that I focus on are **building strength, flexibility, balance, mindfulness and body awareness**.”

2. Do you see a role for yoga in schools?
   >> “Absolutely, I think expecting children to learn by only reading books and taking tests is not going to get us to a better place. We **need to give kids tools to become more aware of what they are feeling and an opportunity to express it.** I think **yoga and meditation can open children’s minds to absorb so much more.**”

3. What health challenges do people in rural Vermont communities face?
   >> “I think **access is a large limitation in these areas.** In the **winter months there is a lot of being indoors** and that can lead to obesity, malnutrition and depression.”

4. What other forms of mindfulness can be helpful for stress reduction particularly in a rural setting where there are not a lot of resources available?
   >> “Meditation is another area that I focus on just as much as the movement. It is very important for people to be able to sit still for a period of time to give their mind a rest and to give their bodies an opportunity to feel. **The great thing about meditation is you don’t need anything special to do it.** You just need to have some discipline for sitting still.”
I developed and taught two yoga lessons to the 1st and 2nd grade class at Jamaica Village School. Each lesson was 30 minutes long and incorporated aspects of yoga, meditation, and breathing self-awareness. The yoga sequences were based on Hatha yoga teachings but adapted for children. Used animal names for poses instead of traditional Sanskrit. Used the classroom speakers to play soft instrumental music. Focused on mindful breathing throughout and provided dedicated periods of meditative reflection. Discussed how internal feelings can manifest as physical ailments and how important it is to recognize emotions. Incorporated individual and group work to keep it calming but also fun.
INTERVENTION

- Lesson Plan #1-attached
- Lesson Plan #2-attached
- Some example poses included:

  - Balloon Breath:
  - Tree Pose
  - Shoulder twists and rolls:
  - Frog Pose
Lesson 1:
- Full participation by all students
- Incredibly positive reaction by all the kids
- Select quotes:
  - “It made me feel strong, I could feel my muscles”
  - “I felt really relaxed”
  - “I liked tree pose and child pose”
  - “Can you come back?”
- Teacher was very impressed with how engaged the class was particularly during the meditative silent poses
  - “We all LOVED it”
Lesson 2:

Students very excited for second lesson

- Peering out of classroom door when I entered the school and quickly rushed to get into crossed-legged seated pose on the rug
- “She’s in the building!”

Select quotes:

- “It made me feel sleepy, I will sleep so well tonight”
- “I feel calm”
- “Last time after you left, the three of us [points to herself and two other girls] did yoga during our choice time”
- “Can you move here so we can do this forever?”
EVALUATION OF EFFECTIVENESS

- Evaluating effectiveness based on 4 areas:
  - Participation
    - 100% participation during both lessons
    - Many volunteers during pre-lessons when questions were posed to the group
  - Focus/Engagement
    - Students’ were persistent about holding poses even if they briefly lost balance
    - Stayed quiet during periods of mediation and mindful breathing exercises
  - Student Response
    - Incredibly positive and eager to do more yoga
  - Teacher Response
    - Surprised at how quiet the student were able to be during long 5 min meditation poses
    - Felt that the students were calmer after the lessons

- Overall both yoga lessons were extremely successful if judged by the kids’ enthusiasm, ability to quietly meditate, focus during poses, and positive responses
- Students also expressed a desire to continue practicing poses on their own
- Limitations included only being able to do 2 lessons and not gathering direct quantitative survey data
RECOMMENDATIONS FOR FUTURE

- Continue providing opportunities for stress reduction for school aged children
- Ideally work with a community yoga studio, such as Village Yoga in Newfane or Grace Cottage Hospital’s Community Health Yoga Series, to offer a workshop for rural teachers to learn some basic poses and breathing techniques to do with their classrooms
- Offer teacher refresher courses once a semester so they continue to learn new poses and strategies to incorporate into their classrooms
- Gather quantitative data from students rating how their emotional state and overall mood is affected by consistent yoga incorporation in the classroom
REFERENCES


