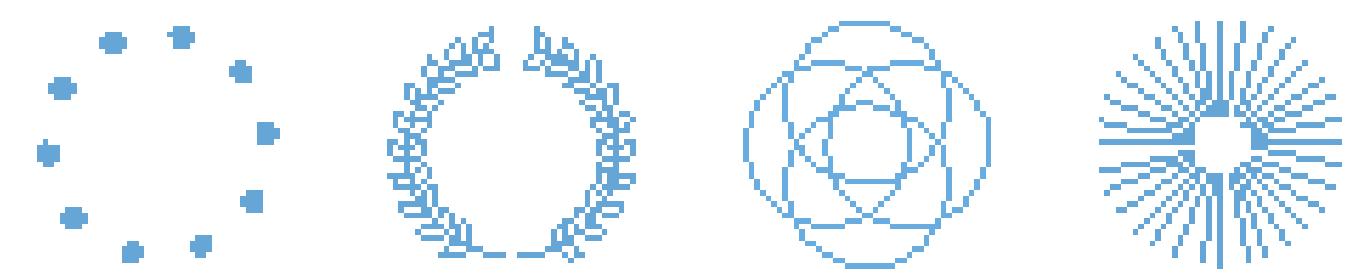


Meditation: Effects on Student Academic Performance and Behavior

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Introduction



Carrboro Elementary School

- This project aimed to help regulate and manage students' testing anxiety and other stress-related behaviors due to frequent amount of testing at Carrboro Elementary School in a "traditional" third grade classroom

Problem & Proposed Solution:

- CHCCS district starts mandatory state testing at third grade
- Resulted in student and teacher burnout, with student test scores being abysmal due to the frequency
- Out of 180 school days, CES have tested around 118 times
- This project addressed the frequent high-stakes testing students have and served to calm them down during testing or feelings of being stressed or anxious through meditation

Literature

- Not many of the perceived academic benefits of high-stakes testing has strong evidence to back it up entirely (French et al., 2023)
- Test anxiety was "significantly and negatively related to a wide range of educational performance" which include assessments such as standardized tests, university exams, and GPA (Embse et al., 2018)
- Stress management techniques used by children and adolescents are helpful in reducing anxiety, stress, and depressive symptoms, leading to more improved social skills and academic achievement (Zisopoulou and Varvogli, 2023)
- Classroom-based short physical and mindfulness breaks could support attention and reading comprehension, which are known to support overall academic success (Muller et al., 2021)

Methods

Using previous literature and research, an intervention was created and put in place for students to participate in.

Participants

- "Traditional" third grade classroom at CES, chosen through internship placement
- Consists of a total of 36 students
 - 15 girls
 - 21 boys
 - 32 White students
 - 2 Black students
 - 2 Asian students
 - Some students under "Exceptional Children" (EC)

Procedures

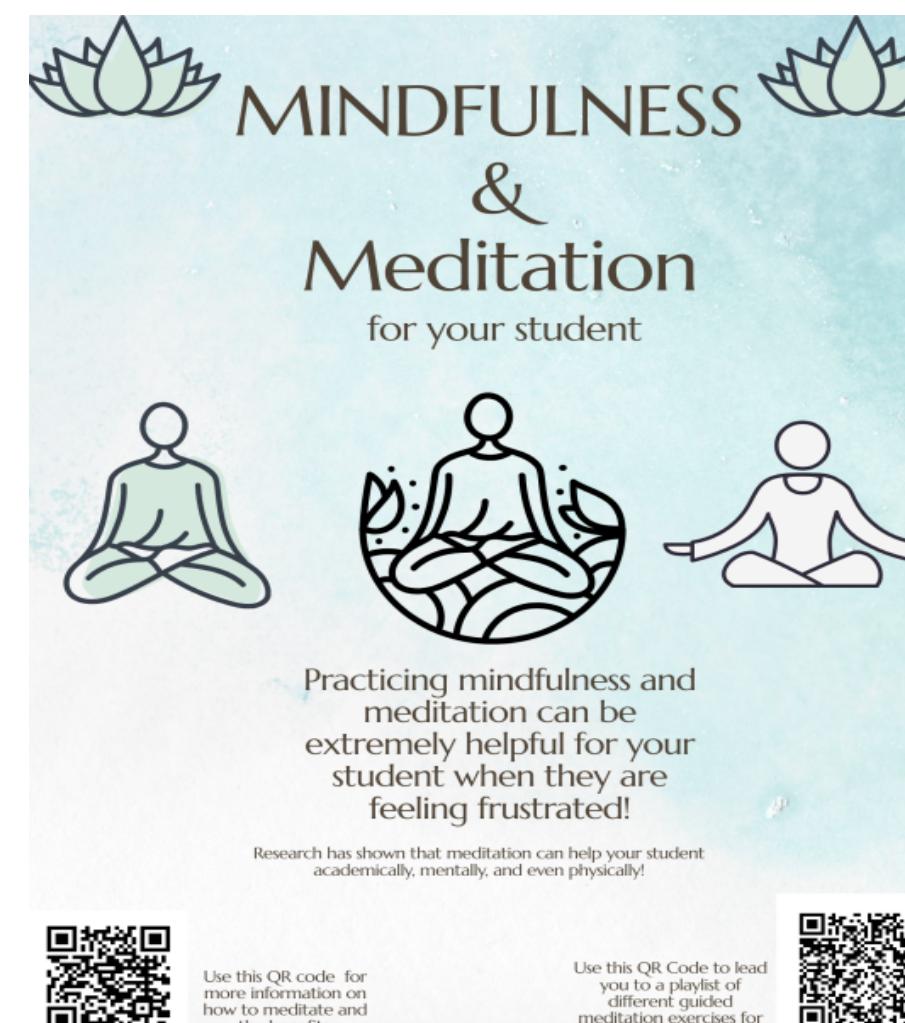
- Survey form via Google Forms was sent to the teacher, addressing any concerns or expectations from the results of this study
- Intervention began with students watching meditation videos from YouTube
- After intervention, students received assessment based on last year's reading check-in to compare to practice reading assessment
- Students and teacher received a post-intervention Google Survey and a resource made

Evaluation

- Post-survey distributed to the teacher via Google Surveys
 - Includes a Likert scale for confidence (based on 1-5 with 1 being least confident and 5 being most) and open-ended questions to gauge any results not measured before
- Students received a post-survey via Google Surveys on student opinions on intervention
- Feedback from survey used to adjust resource and intervention methods
- Data collected on test scores and behavior were used to create figures

Resource

Below is the resource that I created after the intervention. It includes QR codes that leads to a meditation playlist on Youtube and to a website describing everything about meditation for parents.



Results

- Mean reading test scores increased in the intervention assessment as compared to the 2nd quarter reading NC check-in
- Scores went from 62.21% mean test score for the NC check-in to 76% post intervention
- On an individual basis, multiple students increased their test scores, with some increasing an upwards of 45%

Below are the test scores and the differences in percentages for students that had over a 10% difference, either higher or lower

Name	% Pre-int. Grade	% Post-int. Grade	# Difference
A	25%	70%	50%
B	87.5%	100%	12.50%
C	45.8%	80%	34.20%
D	87.5%	100%	12.50%
E	87.5%	70%	-17.50%
F	50%	80%	30%
G	75%	90%	15%
H	25%	70%	45%
I	16.7%	40%	23.30%
J	66.7%	80%	13.30%
K	33.3%	50%	16.70%
L	45.8%	90%	44.20%
M	70.8%	90%	19.20%
N	70.8%	100%	29.20%
O	33.3%	60%	26.70%
Class Mean	62.21%	76%	13.79%

Results cont.

The post-survey from the teacher confirmed the success of this intervention and the post-survey from students show that they enjoyed it or were indifferent

Post-survey Question	Post-survey Answer Note: values in () are # of students
How did the meditation make you feel? (students were able to choose multiple choices and/or provide their own)	<ul style="list-style-type: none"> Calm: 58.8% (20) Peaceful: 55.9% (19) Sleepy: 44.1% (15) Sad: 11.8% (4) Happy: 23.5% (8) Bored: 8.7% (3) Excited: 2.9% (1) Nothing: 2.9% (1) Distant: 2.9% (1) Mad: 2.9% (1) Tranquil: 2.9% (1) Good: 2.9% (1)
Did you like meditating?	<ul style="list-style-type: none"> Yes: 52.9% (18) No: 5.9% (2) Sometimes: 41.2% (14)
Will you try meditating again?	<ul style="list-style-type: none"> Yes: 82.4% (28) No: 17.6% (6)
Do you think meditating helped you?	<ul style="list-style-type: none"> Yes: 35.3% (12) No: 11.8% (4) Kind of: 52.9% (18)

Discussion

Results show that this intervention will be an effective tool for teachers to use with their students. The intervention was rated highly by the teacher and most students given limitations. Future use would require consideration for dual language schools where English isn't the main household language.

Limitations:

- Time it took
- Prior knowledge students already had
- Number of participants limited to one classroom
- Lack of student scores due to absences.

Conclusion:

The results of this intervention suggest that implementing meditation into the classroom has the potential to increase academic scores as well as decrease anxiety and stress.

References

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