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The Hard Science of Soft Skills

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Students need a strong foundation in academic skills paired with social and emotional skills to prepare for future careers and a life of well-being. Recently a connection has been made in the literature between mindfulness and emotional learning skills as both national and state-level attention turns to SEL curricula for improved education, understanding, and validation assessment becomes critical. In Rhode Island specifically, an emphasis on mindfulness is reflected in the Basic Education Plan. Although the state is quick to encourage districts to adopt SEL practices, they are lagging in providing viable assessments.

Research Goals

The current study looks to:

1) Understand how a small battery of measures, including two mindfulness self-report surveys on mindfulness.

2) Examine the Center for Resilience SEL/mindfulness program using the battery of measures to determine which is most sensitive to the curriculum delivered.

Methods

Pre- and post-assessments took place in the fall, before students received the mindfulness programming, and again after 7 months of the program. At both the pre and post-assessments students were administered two self-report surveys on mindfulness. Teachers also administered two self-report surveys on mindfulness. At both the pre and post-assessments students were received the mindfulness programming, and again after 7 months of treatment. Students need a strong foundation in academic skills paired with social and emotional skills to prepare for future careers and a life of well-being. However, resilience for allowing the observation of their practice in the classroom is reflected in the Basic Education Plan.

Procedure

All of the t-tests conducted on pre- and post-test data were statistically insignificant resulting in no detectable difference between students’ scores in SEL skills and mindfulness after receiving the program.

Results

Research Goal 1

➢ Looking at the correlation matrix, the two self-report measures of mindfulness, the MASS-A and CAMM, were significantly correlated accounting for about 32% to 34% of the variance in scores.

➢ Neither of the two mindfulness measures, the MASS-A or CAMM, were correlated with the SEL measure DESSA-mini, at either time point.

➢ Even though mindfulness is being used as a method for teaching SEL skills, the way both constructs are being measured differs significantly in the surveys examined.

Research Goal 2

➢ Of the battery of measures used in the study, none were found to be sensitive to the SEL/Mindfulness curriculum intervention.

➢ All of the t-tests conducted on pre- and post-test data were statistically insignificant resulting in no detectable difference between students’ scores in SEL skills and mindfulness after receiving the program.

➢ It is important to recognize that although resources are being spent to implement the SEL/mindfulness program, this small scale analysis finds no detectable change in students skill set.

Limitations and Future Discussions

➢ With a maximum sample size of n = 29, the distribution was non-normal and thus failing to reject the null hypothesis may have been an instance of type II error.

➢ Participants answered questions at a reading level higher than would be expected for their age affecting the validity of MASS-A scores.

➢ Ideally, this study could be replicated in the future with a larger sample size for a more appropriate set of data.

➢ Given the intervention was only delivered to participants for 40 minutes each week it may be students did not receive enough of the curriculum to show detectable improvement.

Discussion

Psychometric Properties of Measures

Internal Reliability

<table>
<thead>
<tr>
<th>Measure</th>
<th>Item Total</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindful Attention Awareness Scale - Adolescents (MASS-A)</td>
<td>14</td>
<td>a = .81</td>
<td>a = .80</td>
</tr>
<tr>
<td>The Child and Adolescent Mindfulness Measure (CAMM)</td>
<td>10</td>
<td>a = .76</td>
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<tr>
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Construct Validity

<table>
<thead>
<tr>
<th>Measure</th>
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<tr>
<td>MASS-A</td>
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Pre and Post-test Results [Significance Testing]

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<td>26.8, 23.4, 21.2, 18.4</td>
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Reliability and Validity

➢ Measures: Mindfulness as it applies to awareness and attention, one’s ability to deal with situations as they arise.

➢ Reliability: Cronbach’s alpha

➢ Validity: Found to have high internal reliability using Cronbach’s alpha along with high test-retest reliability.

➢ It has also shown to have good incremental validity and criterion-related concurrent validity.

➢ Measures: SEL, students’ general development of social and emotional learning skills over time (also identifies at need students) internal reliability has been reported as strong in previous studies using Cronbach’s alpha.

➢ Validity: Has been found to have strong criterion related concurrent validity as well as high discriminant validity.

Literature Cited


Acknowledgments

Thank you to Dr. Bryan Dewsbury, Department of Biology and Dr. Grant Willis, Department of Psychology for their mentorship and members of the SEAS lab for their support. Additional gratitude towards the Rhode Island Office of the Postsecondary Commissioner for funding, and most importantly the Center for Resilience for allowing the observation of their practice in schools.

Introduction

Students need a strong foundation in academic skills paired with social and emotional skills to prepare for future careers and a life of well-being. Examine the Center for Resilience SEL/mindfulness program Assessments took no longer than 30 minutes for both students and teachers. Assessments were administered by the researcher and two graduate students from the SEAS research lab.

Pre- and post-assessments took place in the fall, before students received the mindfulness programming, and again after 7 months of the program. At both the pre and post-assessments students were administered two self-report surveys on mindfulness. Teachers also completed a survey that allowed them to report on the social and emotional learning competencies of each of their students. Assessments took no longer than 30 minutes for both students and teachers. Assessments were administered by the researcher and two graduate students from the SEAS research lab.

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