

Elementary School Teachers' and Students' Attitudes toward the Utilization, Learning, and Teaching of Mindfulness

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Abstract

Mindfulness practices have become commonplace in many schools. This research examined the perceptions of elementary teachers and students. Teachers completed surveys that categorized their responses into two areas: perception and utility. There was a significant finding that teachers with more training/awareness found mindfulness to be a favorable practice over teachers with less training and awareness. Students also completed surveys resulting in a Mindfulness Attitude Index. The significant findings were that females had a more positive perception than males, and younger elementary students (grades 1 & 2) had a more favorable attitude toward mindfulness than older elementary students (grades 3, 4, & 5). Implications are that as more schools implement mindfulness practices, considerations should be made based on the gender and age of the children. Training teachers leads to more favorable perspectives toward mindfulness, suggesting that training is a key component to the success of these practices.

Keywords: Mindfulness, Social Emotional Learning, Elementary Students, Teaching Training

1.1 Introduction

Traditional learning emphasizes students' cognitive development, which focuses on purely academic skills and growth. However, neuroscience suggests that social and emotional growth has a significant impact on one's cognitive development (Sousa, 2021, p.7). One method or type of social and emotional learning (SEL) is the integration of mindfulness in the classroom. Mindfulness-based Interventions (MBIs) seek to prevent problems and cultivate positive social-emotional and academic development in children and youth (Rosier, 2014). Leland (2015) indicated that mindfulness programs can positively affect academic progress, student behavior and lessen the effects of bullying.

Across the United States, SEL programs have been initiated to better address the needs of today's students. One such program is the Collaborating States Initiative which supports over 40 states in their work in developing policies, standards, and guidelines for SEL integration (Collaborative for Academic, Social, and Emotional Learning, <https://casel.org/>). Collaborative for Academic, Social, and Emotional Learning (CASEL) defines SEL learning "as a process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, and establish and maintain positive relationships, and make responsible decisions" (<https://casel.org/fundamentals-of-sel/>).

The purpose and importance of this research project are to enhance the field of knowledge in mindfulness practices through the examination of teachers' and students' perceptions toward mindfulness practices in the classroom.

2.1 Research Questions and Purpose

Many schools across the U.S. have implemented mindfulness practices, particularly at the elementary level. This study sought to examine one school district's implementation of mindfulness practices. Elementary (K-5) teachers and students across the district were asked their overall feelings of the effects of mindfulness practices. There were three research questions that this study attempted to answer. First, do teachers see the value of teaching mindfulness in their classrooms? Second, do students see the value of learning mindfulness in the classroom? Finally, do students transfer mindfulness practices to circumstances outside the classroom?

Background

3.1 Effects of Mindfulness Practices

Research involving SEL and mindfulness practices has increased (Ergas & Hadar, 2019) with varying results. SEL studies have examined the impact on stressors, academic success, behavior, executive function, and beyond.

Roeser et al. (2020) examined 54 studies published from 2000 to 2019 to evaluate school-based mindfulness programs (SBMPs). In this analysis, the researchers found that mindfulness programs have a positive and significant impact on students' mindfulness and self-regulatory skills in pre-kindergarten to 8th grade. In addition, 54% of the studies examined indicated that the programs had positive impacts on students' internalized distress. Internalized distress includes stress, symptoms of anxiety, and depression (p.11). The researchers also found in their review that there is promising evidence that SBMPs improve student physical health (p.11). However, the results revealed little impact on reducing externalized distress (anger, aggression, and impulsivity) or the improvement of the well-being of the students (p.11). In the conclusion, Roeser et al. determined that there is little evidence to date that mindfulness programs improve school behavior or performance (p.12) and recommend continued research on SBMPs (2020).

In a meta-analysis, Ergas and Hadar (2019) examined research from 2002 to 2017 and determined that there has been an exponential increase in research across all age groups from elementary to higher education in this field. The discourse, as noted in the review, included studies involving teachers personally using mindfulness and implementing MBIs in the classroom. This research explained two categories of mindfulness research. First, there is mindfulness *in* education, which comprises mostly of outsourced programs and interventions aimed at improved mental-physical health, social-emotional learning, and cognitive functions. Second, they explained a more rare type of mindfulness *as* education, which is related to a contemplative pedagogy in higher education. This analysis did not seek to determine the effectiveness of mindfulness programs, but rather to provide maps as to how it is implemented in the field (p.761). Also in this analysis, the researchers determined only 13.4% of the 256 studies (between 2004 - 2017) utilized the Kindergarten to 4th grade age group.

Maynard et al. (2017) conducted a systemic review on mindfulness research and found that there was a lack of evidence that mindfulness practices in schools improve academic performance or behavior. This review did indicate that there are positive effects on socioemotional and cognitive outcomes. These researchers recommend considering the cost-benefit of mindfulness practices in schools (p.12).

In a meta-analysis of 82 school-based studies involving more than 97,000 students from Kindergarten to High School, Taylor, et al. (2017) indicated that school-based SEL programs can benefit all types and ages of students. Taylor et al. also noted that teachers play an integral role in the process. However, educators need support to implement the approach appropriately (p.1168).

Flook, et al. (2010) examined the effectiveness of mindfulness-awareness practices (MAP) with 64 second and third-grade students. In addition, parents and teachers completed questionnaires before and after the 8-week implementation of MAP. A multivariate analysis of covariance on teacher and parent reports of executive function (EF) indicated an interaction effect between baseline EF score and group status on posttest EF. Children in the intervention group showed greater gains than those in the control group. The researchers found that students who had a lower executive function at the start of the program showed improvements in behavior regulation across settings.

In a small case study, Kasson and Wilson (2017) determined an additive effect of implementing mindfulness and behavior management strategies with 3rd graders. The researchers indicate that there is support for mindfulness in the classroom in combination with behavioral techniques. Students who participated in both mindfulness and behavior management strategies demonstrated more on-task behaviors.

Questions remain about the benefits of mindfulness practices. Research based on teachers' perceptions may lend additional information on the effectiveness of mindfulness in the classroom.

3.2 Teachers' Perceptions

In a qualitative-descriptive study, Piotrowski et al. (2017) interviewed four teachers about their perceptions of mindfulness practices with young children. From the teachers' responses, the researchers determined three significant themes that emerged: 1) motivating factors for the inclusion of mindfulness practices, 2) perceived classroom benefits of mindfulness, and 3) challenges participants faced initiating and applying mindfulness. Piotrowski et al. suggest that "the study demonstrates that embedding a low-intensity mindfulness program was feasible in a classroom setting through the integration of practices during circle time or small group activities" (p.236).

Hamilton et al. (2019) surveyed nearly 29,000 teachers and principals on their beliefs about the importance and value of SEL in schools, their approaches to promoting and measuring SEL, and their opinions regarding supports for improving SEL. With a 54% response rate, they concluded the following: (1) a large majority of principals described SEL as a top priority, (2) educators believe SEL can improve student outcomes and school climate, (3) most educators rated SEL skills as important (more teachers than principals), (4) elementary teachers and principals tended to use SEL programs, while secondary educators used more informal practices, (5) positive behavior systems were common, (6) majorities of principals and teachers received training to support SEL; in-service training was more common than preservice training, and (7) many principals and teachers reported that having more time would improve their school's ability to address SEL.

In interviews with six teachers, Fuller (2020) determined that teachers had mostly positive responses to the use of mindfulness strategies in the classroom. The teachers in this study found that students were better behaved and developed better regulations skills. Another positive effect of these practices is that the teachers felt that they became better and kinder teachers through the use of mindfulness in their classrooms (p. 67).

3.3 Mindfulness Skills

Suggesting that the SEL practice of team building can have positive outcomes in the academic setting, Hu et al.(2018) found those team members that are synchronized made quicker decisions and solve problems more efficiently than teams that were not coordinated with each other.

A classroom environment that supports SEL practices attends to students thinking and feeling about learning (Sousa, 2021). Furthermore, teachers who are aware of students' feelings can select instructional strategies that motivate their students.

Viglas and Perlman (2018) examined characteristics such as self-regulation, prosocial behavior, and hyperactivity with 127 kindergarten students across three schools. The study design included classrooms that served as the control and intervention classrooms. The children in the interventions classrooms displayed significantly more self-regulation skills than those in the control classroom. In addition, as rated by the teachers, the students improved in pro-social skills and displayed less hyperactivity (p.1156).

"Attention and executive functioning play a key role in effective self-regulation" (Flook, et al., 2015, p.2). Evidence indicated the importance of self-regulatory skills to academic success and life. However, these skills are not specifically taught in school (Flook, et al., 2015, p.2). In their study, Flook et al. (2015) examined teachers' ratings on early education children. The study method included a randomly selected class for the intervention and a control classroom. The kindness skills taught through mindfulness to the intervention group were gratitude, empathy, and sharing. The teacher ultimately rated the intervention student higher in these areas after the intervention. Another finding was that the control group acted more selfishly than the intervention group. Flook et al. (2015) indicated that there is promise in implementing mindful-based training in the early education curriculum.

The MindUP program, utilized by the district in the current study, focused on activities that improve SEL skills: Behavior, Internalizing Problems, Externalizing Problems, Adaptive Skills, and Executive Functioning. According to their research, evidence shows a reduction in behavioral problems, a reduction in externalizing problems, a reduction in internalizing problems, an increase in adaptive skills, and a reduction in executive functioning deficits (Crooks et al., 2020).

3.4 MindUp Program

MindUp (2018) is a teaching and curriculum framework that contains a 15-lesson program for K–8 students and is taught by the classroom teacher. The program contains four teaching pillars: neuroscience, positive psychology, mindful awareness, and social-emotional learning (SEL). The 15 lessons focus on such topics as perspective-taking, gratitude, and positive behaviors as they relate to mindfulness. The program goals were developed to drive positive behavior, to increase empathy, compassion, and optimism, and to improve scholastic performance. The creator of the program is quoted on the MindUp (2018) webpage: “I created MindUp with educators, for educators. I wanted to help them improve student focus, engagement in learning academics and give them tools and strategies that would bring joy back into the classroom” (para. 1). MindUp is described as “a universal, mindfulness-based social and emotional learning (SEL) program designed to be implemented in schools by the regular classroom teacher” (Maloney et al., 2016, p.315). Key components include a manual-based curriculum that has been tested in the classroom, provision for in-service teacher training, universal participation by all students, and tools for creating “an optimistic classroom that emphasizes mindful awareness of one’s self and others, embracing differences among classmates” (Maloney et al., 2016, p. 315). Each lesson incorporates mindfulness practices that allow students to learn about their brains, gain an understanding of how thoughts and feelings affect actions, and acquire strategies for becoming a caring person.

3.5 Gender

An extensive search for mindfulness studies that examine gender data at the elementary level was conducted, resulting in few findings. Most studies examining mindfulness and gender were conducted in adolescence and beyond. One study explored gender differences with response to students’ perceptions of the effectiveness of mindfulness in schools. Kang et al. (2018) examined 100 adolescents in a controlled study. The intervention group of students practiced meditation during classes and the control group did not. Concerning gender, these researchers found that females in the meditation classes had a more positive effect (self-reported) than the females did in the non-meditation classes; whereas males found equal gains between the control and intervention groups. Females also self-reported that they felt an increase in self-compassion. There is a clear need for further research involving gender and mindfulness at the elementary level.

Studies involving teachers’ perceptions of the implementation of mindfulness practices appear to be largely qualitative in nature, utilizing teacher interviews, as evidenced by this exploration into the topic. Many studies were conducted outside the United States or involved the teachers’ perceptions of their use of mindfulness. There appears to be a lack of quantitative research seeking to determine teachers’ thoughts on the impact of mindfulness on the students in their classrooms.

Method

4.1 Participants

The school district in this study began some training of its teachers in mindfulness practices through in 2016. However, it was stated by the district administration that some teachers started mindfulness practices on their own and sought their training opportunities before the district’s initiative. The Kindergartner teachers began training first in 2016, followed by the 1st grade teachers (2017), and the 2nd grade teachers in 2018. Formalized training in the MindUP program for all elementary teachers (K-5) took place in Fall 2019.

The training consisted of four day-long professional development experiences before the school year and then four site visits to each classroom in the second half of the year. In 2019, before the school year, all teachers (K-5) were trained in the MindUP program before the start of school. This program’s curriculum provides teachers with a Core Practice routine to implement into their classrooms. MindUP also contains a clear scope and sequence to engage the teachers and students in mindfulness practices (MindUP.org). This study does not try to examine the effectiveness of this program or any specific mindfulness program. It does, however, seek to determine whether teachers and students feel that the integration of mindfulness strategies are effective in their classrooms and their own lives.

4.2 District Demographics

The school district chosen for this study is a suburban district in eastern Pennsylvania, enrolling approximately 9,500 students. The district's per-pupil spending is average to the region, with \$15,700 spent per pupil. The district's student population is predominately identified as white (63%) followed by approximately 15% Hispanic students. The remainder of the population is made up of Black/African American, Multi-Racial, Native Hawaiian/Pacific Islander, and Asian students

4.3 Teacher Demographics

All elementary school teachers working in the district were invited by email to participate in a study assessing teachers' attitudes regarding the use of mindfulness in the elementary school classroom. The survey was distributed to teachers shortly after the August 2019 mindfulness professional development session. A link was sent to all elementary teachers ($N = 186$) and all teachers were eligible and encouraged to respond. The teachers were not required to complete the survey. The final sample consisted of 142 (76% response rate) elementary school teachers, predominantly female (88%), who had been teaching on average for 14.14 years ($SD = 8.23$), and who had been working in the school district for an average of 12.64 years ($SD = 8.17$). Grade level teaching responsibilities were as follows: Kindergarten ($N = 19$), 1st Grade ($N = 19$), 2nd Grade ($N = 24$), 3rd Grade ($N = 22$), 4th Grade ($N = 28$), 5th Grade ($N = 23$); an additional 5 teachers indicated teaching responsibilities that spanned multiple grade levels (e.g., 3rd and 4th, K through 5).

4.4 Student Demographics

The original sample consisted of 2,446 students (1231 boys, 1201 girls, 14 students who did not indicate gender). Grade level participants were 1st grade ($N = 491$), 2nd Grade ($N = 525$), 3rd Grade ($N = 511$), 4th Grade ($N = 511$), and 5th Grade ($N = 403$); 5 students did not indicate their grade level.

4.5 Materials

The survey instruments were created by the researchers and district administrators to best assess the teachers and students in this particular school district based on their implementation of MBIs.

4.6 Teacher Survey Instrument

The survey instrument consisted of a brief demographics section and a series of questions assessing teachers' attitudes and beliefs regarding the use of mindfulness training in an elementary school setting. In terms of demographics, respondents were asked to indicate their primary teaching responsibilities (i.e., grade level), the number of years they have been in a position within the district, their total number of years of teaching, and their gender. The mindfulness attitudes assessment had 15 items in total, which fell into two categories: 1) awareness of/ experience with mindfulness, and 2) perceptions of the utility of mindfulness training. Five items assessed teachers' level of awareness and experience regarding mindfulness: "I am aware of the district's mindfulness initiative," "I understand what mindfulness is, within the context of the classroom," "I have had some mindfulness training through the district or on my own," "I use mindfulness [or similar] in my own life," and "I have used mindfulness in my own classroom." The remaining 10 items assessed teacher's perceptions regarding the use of mindfulness training in an elementary school classroom: "I support teaching mindfulness in the classroom," "I look forward to teaching mindfulness," "I do not have time for mindfulness in my teaching day," "I have seen in my own experience that mindfulness is successful," "I think mindfulness may help students in the area of socioemotional skills [i.e., emotional regulation, self-awareness, conflict resolution, etc.]," "I think students will score better on academic work when using mindfulness strategies," "I think that students who use mindfulness strategies are less anxious," "I am calmer when I use mindfulness strategies," "I think my students' behavior will improve with mindfulness training," and, "I think that mindfulness is just a passing fad in the field of education." All responses employed a 5-point Likert-type rating scale anchored by 1 = Strongly Disagree and 5 = Strongly Agree.

4.7 Student Survey Instrument

There are unique challenges to attempting to measure mindfulness with children. There is no way to measure mindfulness "in the moment" and self-reporting has its challenges as well. The assumption is that the respondents are being truthful and understand the task. In addition, there are challenges in creating a survey that functions well with the elementary students.

Youth at different ages and those with and without experience of mindfulness are likely to interpret items differently (Goodman, et al., 2017). The student survey was created to be kid-friendly and to ascertain the students' perceptions most effectively. The survey was administered to students from first grade to fifth grade across all elementary schools in the district. Teachers in 1st and 2nd grade administered a paper/pencil survey to the students and were instructed to read the document to the students if applicable. The 1st and 2nd-grade responses were provided in a user-friendly visual response by using smiley faces for students' answers. Students in 3rd through 5th grade were sent a Google link to the survey and were asked to complete this during school. The administration indicated that individual student permission for the survey was not needed as part of district protocol. This was considered a curricular assessment. The survey instrument consisted of nine items; participants were asked to respond to the following statements: "I enjoy it when we do mindfulness," "Mindfulness is helpful to me," "Mindfulness activities do not calm me down," "I focus better on my school work when we do mindfulness," "Mindfulness settles me down," "I do not like it when we do mindfulness," "Mindfulness does not work for me," "Mindfulness helps me to think," and "I use mindfulness on my own when not in school." All responses were made on a 4-point scale with the following options: 1 = Yes, Often, I Agree; 2 = Sometimes, Maybe, I Agree Sometimes; 3 = No, Never, I Disagree; 4 = I Do Not Know, I Cannot Answer.

4.8 Procedure

The surveys were sent to teachers by district administration through a Google link. The teachers were provided with survey and consent information and the teachers were encouraged but not required to complete the survey. The surveys were submitted electronically to the district administration who shared, with permission, the aggregated results with the researchers. No teacher or student was individually identified in this study. The intentions were to survey teachers at the start of the year, at the end of the school year, and then again, the following year, creating a 2-year study. However, the global pandemic halted the consistent instruction of mindfulness for most classrooms, and data was not collected in subsequent years.

Results

5.1 Analyses Based on Teacher Data

To assess the level of awareness and experience with mindfulness, the relevant five items on the survey instrument were averaged so that higher scores indicated a greater level of awareness/experience. Similarly, after reverse scoring two negatively phrased items, the remaining 10 items were averaged so that higher scores reflected a more positive/favorable evaluation of the utility of using mindfulness training in an elementary school classroom.

Results of a One-Way ANOVA show that level of awareness and experience with mindfulness did not differ as a function of the teaching responsibilities (i.e., grade level) of the respondents, $F(132) = 1.81, p > .05$. A second One-Way ANOVA shows that perceptions of the utility of mindfulness training also did not differ as a function of teaching grade level, $F(138) = .58, p > .05$.

Correlational analyses (Pearson's r) indicate that level of awareness/experience with mindfulness was not associated with either years teaching [$r(140) = .08, p > .05$] or years in current position in the district [$r(140) = .06, p > .05$]. Perceptions of the utility of mindfulness training were also not associated with years teaching [$r(138) = .11, p > .05$] or years in current position in the district [$r(138) = .16, p > .05$]. However, there was a significant positive correlation between the level of awareness/experience and perceptions of utility, suggesting that the more aware of and experienced with mindfulness training teachers were, the more favorable their perceptions were regarding its utility in the classroom, $r(137) = .75, p < .01$.

The following information explains the results of each survey question based on the teachers' responses on the Likert scale. A rating of one on the scale indicated "strongly agree" and five indicated "strongly disagree". The majority of teachers (77%) indicated that they were aware of the district's initiative on mindfulness in the classroom. Sixty-five percent support the implementation of mindfulness. Concerning training, at the time of this survey, about 45% indicated that they have had some training and 37% indicated that they did not have much training. Almost 18% of the teachers responded neutrally to the question about receiving training. The results also show that the majority of teachers saw favorable impacts of integrating mindfulness in the classroom.

Seventy-five percent strongly agreed or somewhat agreed that there was a positive impact on socio-emotional skills, 62% strongly agreed or somewhat agreed that there was a positive impact on academics, almost 63% strongly agreed or somewhat agreed that the students were calmer, and finally, approximately 63% strongly agreed or somewhat agreed that mindfulness had a positive impact on behavior.

Teachers were asked a few additional questions as part of the survey. When asked if they used mindfulness practices in their own lives, 17% strongly agreed and 29% somewhat agreed. When asked if they felt that mindfulness was a passing fad, 7% of the teachers strongly agreed and 10% somewhat agreed, and 32% indicated that they were neutral about this.

5.2 Analyses Based on Student Data

To assess students' perceptions of the use of mindfulness in the classroom, the researchers examined the pattern of responding on each of the 9 questionnaire items as a function of gender and grade level. Additionally, a Mindfulness Attitude index was created by summing the five affirmatively worded questionnaire items regarding students' perceptions of mindfulness in the classroom. For each questionnaire item, all responses of "4" (students indicating they "Do not know, cannot answer") were treated as missing data and were excluded from analyses on an item-by-item basis. The resultant sample consisted of 2191 students. The Mindfulness Attitude index score includes only ratings of students who responded to questionnaire items with a rating of 1 ("YES, OFTEN, I AGREE"), 2 ("SOMETIMES, MAYBE, I SOMETIMES AGREE"), or 3 ("NO, NEVER, I DISAGREE"). Consequently, lower scores on the Mindfulness Attitude index indicate a more favorable attitude toward the use of mindfulness in the classroom.

An Independent *t* Test was conducted to compare Mindfulness Attitude index scores between male and female students. Analyses suggest that female students ($N = 763$) have a more favorable attitude regarding mindfulness practices ($M = 6.86$, $SD = 2.29$) than did male students ($N = 732$, $M = 7.37$, $SD = 2.56$), $t(1493) = -4.01$, $p < .01$. A One-Way ANOVA was also conducted to compare Mindfulness Attitude index scores as a function of Grade Level. Analyses revealed a significant difference in favorability for mindfulness between students in different grades, $F(4, 1495) = 9.06$, $p < .01$. Fisher's LSD tests were conducted in order to determine which grade levels differed. First grade students ($N = 309$) had more favorable attitudes regarding mindfulness ($M = 6.73$, $SD = 2.33$) than did third grade students ($N = 289$, $M = 7.40$, $SD = 2.54$) [$t(1495) = -3.43$, $p < .05$], fourth grade students ($N = 271$, $M = 7.26$, $SD = 2.47$) [$t(1495) = -2.64$, $p < .05$], and fifth grade students ($N = 219$, $M = 7.10$, $SD = 2.44$) [$t(1495) = -4.64$, $p < .05$]. Second grade students ($N = 412$) also had more favorable attitudes ($M = 6.75$, $SD = 2.22$) than third graders [$t(1495) = -3.55$, $p < .05$], fourth graders [$t(1495) = -2.71$, $p < .05$], and fifth graders [$t(1495) = -4.81$, $p < .05$]. Fourth grade students had more favorable attitudes than fifth grade students, $t(1495) = -2.09$, $p < .05$. No other comparisons were significant.

To further assess students' attitudes regarding mindfulness, the single item "I use mindfulness on my own when not in school," was also examined. An Independent *t* Test was conducted to compare responses by gender and indicated that female students ($N = 897$) were more likely to practice mindfulness on their own ($M = 1.93$, $SD = .82$) compared to male students ($N = 914$, $M = 2.09$, $SD = .84$), $t(1809) = -4.10$, $p < .01$. A One-Way ANOVA was conducted to compare responses across Grade Levels. No significant differences in reported use of mindfulness outside of class were found between first graders ($N = 404$, $M = 1.98$, $SD = .89$), second graders ($N = 459$, $M = 2.08$, $SD = .86$), third graders ($N = 365$, $M = 1.96$, $SD = .82$), fourth graders ($N = 335$, $M = 2.00$, $SD = .77$), and fifth graders ($N = 255$, $M = 2.05$, $SD = .79$), $F(4, 1813) = 1.51$, $p > .05$.

Kindergarten and first-grade students were asked to mark their survey responses by circling the smiley faces that best fit their thinking. They were also able to respond – I don't know or cannot answer by circling a question mark. Students in grades 3-5 completed their responses through a Google survey document. The data is reported by overall percentage of agree, neutral, disagree, I do not know or no response.

Question-level data based on the students' responses revealed that almost 55% of the students in the survey responded that they enjoy participating in mindfulness activities. Fifty-two percent stated that mindfulness was helpful to them and 48% indicated that mindfulness helped them focus. When asked if mindfulness activities help students to settle or think, they responded with agreement 55% and 49% respectively. Finally, 28% of the students indicated that they utilize mindfulness strategies outside of school.

Discussion

6.1 Summary of Key Findings

This study examined teachers' and students' perceptions of the usefulness of mindfulness in the classroom at one moment in time. As stated, the intention was for this to be a longitudinal study. However, this was not possible due to the global pandemic and instruction changing to the online teaching and learning format. That being said, the findings of this study supplement previous research findings and support the implementation of mindfulness practices.

The results of this research study indicate that mindfulness does have value as seen by the teachers and the students themselves. In the school district in which this study took place, teachers across all elementary schools indicated that they were in favor of mindfulness practices. The teachers' perceptions included that mindfulness helped their students in areas of improved academic, behavioral, and socio-emotional skills. Teachers also believe that their students are calmer and less anxious as a result of mindfulness practices. Students reiterated these findings, indicating that mindfulness was helpful to them in focusing and settling them down. Students enjoy the mindfulness practice, with about a quarter of the participants indicating that they use mindfulness outside the classroom.

There were no significant findings within the teacher population related to gender, years of teaching, or grade level taught. It was evidenced that training enhances awareness and comfort with teaching mindfulness as those teachers who favored mindfulness were those who had more training.

Quantitative analysis of the students' results found that female students had a more favorable attitude toward mindfulness practices than males. Furthermore, there was a significant difference in favorability by grade level. Younger students favored mindfulness practices over older students. Students were also asked if they used mindfulness outside the classroom. The analysis indicated that females utilized mindfulness practices on their own more than males.

Twenty-eight percent of the students indicated that they practiced mindfulness outside the classroom. This could suggest that there are further benefits of mindfulness beyond what occurs in the school.

6.2 Limitations

There were several limitations to this study. First, the survey instrument created did not fit in a true Likert scale. The survey provided the option for students to indicate that they did not understand the questions, by saying "I do not know". This confounded the analysis to a point. To accommodate for this design flaw, these data were eliminated from the analysis. Secondly, self-reporting and especially in children is not without its challenges. Goodman et al. (2017) stated that self-reporting measures on mindfulness interventions have helped evaluate effectiveness, but more reliable and valid assessments are needed. Using multiple measures would reduce weaknesses in the methodology and provide a better analysis of the topic. Furthermore, Ackerman (2019) explained that "*Self-report measurements* also rely on the individual in question being truthful in their responses. While a certain amount of responses to a survey will always be purposely false, there is also an element of social desirability involved" (Psychology.com). The children may have responded in the manner that they thought the teacher would expect or alternatively, they potentially did not understand the questions asked.

Finally, the intention of a multi-year study was interrupted by the pandemic, resulting in data collected at one moment in time. The data can only be interpreted for this district at the time of the study and cannot necessarily be generalized.

6.3 Further Research

Previous research and this study support the use of mindfulness in schools. However, the exact benefits vary. Research should continue to explore what specific practices work best. Studying gender and mindfulness is another area of need. There is little research conducted at the elementary level and this study determined that females seem to be more receptive for transferring the practices than males. It is recommended that research explore this further. Future research could also explore the influence or impact of teachers' attitudes toward mindfulness on students' attitudes.

6.4 Conclusion

Teachers in this large district favored mindfulness classes and found benefits for their students. Interestingly, females in grades kindergarten through fifth prefer mindfulness over males at the same level. Females tend to utilize mindfulness outside the classroom more than males do. Furthermore, younger students prefer mindfulness over older students. As schools continue to implement mindfulness and social-emotional learning practices, these findings may guide curricular decisions.

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