

## Trauma effects on students and solutions to remedy behaviour and school achievement

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### Abstract

The purpose of this study was to analyse the effects of implementing trauma-informed practices, such as restorative circles and mindfulness techniques, on academic performance and student behaviour. A mixed methods study was initiated to implement restorative practices and mindfulness techniques in an urban fifth grade class. Research was conducted to determine its effects on building students' resiliencies and lessening patterns of distress. Teacher self-reflection journals, Daily Behaviour Assessment tools and positive verbiage were logged and utilised over a 6-weeks period. The class consisted of 26 students, with 49% of the students receiving tier II and III instruction and 15% of the students receiving social work services. An enhancement in academic performance, student behaviour and classroom climate was observed by the researchers. It is recommended that the researcher continues monitoring the effects of incorporating restorative and mindfulness practices within the classroom for the remainder of the school year, in addition to initiating school-wide training.

**Keywords:** Childhood trauma, trauma-informed schools, restorative practices, mindfulness interventions, effects of trauma.

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## 1. Introduction

Brandon, a second-grade student in a local elementary school, has become more defiant in class. Whereas before he was often seen socialising with his peers, engaging in classroom discussions and seemingly cheerful, he now has developed a new demeanour. Daily tantrums, backlash towards his teacher and refusals to complete his work have become the new normal. When the teacher investigated this child's home life for possible causes of the recent change of events, she found disturbing results. Brandon's mother had been recently sent to jail for possession of drugs, forcing him to move in with his sickly grandmother. His father had also abandoned him and his mother the year before, greatly impacting Brandon's emotional state. Just as he was adapting to his new way of life, his grandmother unexpectedly passed away, resulting in yet another move with another relative. The constant mobility and emotional strain were taking a toll on Brandon's mindset.

Unfortunately, this scenario has increasingly become too familiar in elementary schools, due in large part to childhood traumatic experiences. According to Blodgett and Lanigan (2018, p. 137), adverse childhood experiences (ACEs) refer to 'the prolonged exposure of children to potentially traumatic events that may have immediate and lifelong impact'. Traumatic events include child abuse, community and domestic violence, natural disasters, family dysfunction and separation, as well as socioeconomic stress (Blodgett & Lanigan, 2018). Unfortunately, in today's society many children are exposed to these risk factors at a young age, which inadvertently have been found to negatively affect their performance in school. In fact, the Centres for Disease Control and Prevention and Kaiser Permanente in San Diego, California, conducted a 2010 study which found that long-term exposure to severe chronic stress can lead to negative effects on learning and behaviour (Sciaraffa, Zeanah & Zeanah, 2018). Such effects have been found in a study conducted in Palisades High School, Pennsylvania. This consisted of rebellious, unmotivated students exuding rude, belligerent behaviours, along with staff members who often attacked one another, as a result of traumatic stress factors influencing student and teacher behaviours (Mirsky, 2007).

Considering that these effects have leaked into school systems, school personnel and administrators have recently incorporated trauma-informed practices in their school's curricula in hopes of assisting students with emotional and behavioural needs to prevent further behavioural interruptions and hindrances on academic performance levels. Research has shown that 'data indicated a decline in disciplinary referrals, detentions and disruptive behaviour, an increase in academic performance, and an established culture of collaboration among staff and students' after trauma-informed practices were implemented (Mirsky, 2007, p. 6). However, while past studies have shown positive effects in high school settings, little information is gathered regarding elementary schools. Therefore, this study was solely based on data retrieved in an elementary school setting, consisting of students having experienced previous childhood trauma.

Although there is an abundance of data on the physical effects of childhood trauma, little data have been found on the benefits of implementing mindful and restorative curricula in schools. This study addressed the problem of whether mindfulness and restorative practices have a significant impact on behaviour and academic achievement in elementary classrooms.

While restorative justice practices have been prevalent in the criminal justice system for years, the educational system has only recently adopted the programme to help build social-emotional and behavioural resiliencies in schools (Semple, Droutman & Reid, 2017). Unfortunately, most researches and past literature on trauma-informed practices are limited and are predominately geared towards middle and high school students, leaving a gap in research on its effects on elementary students. In fact, researchers have found that while schools are adopting affective topics in K–12 classrooms across the nation, many of these programmes, although well implemented, lack research support on their effectiveness (Semple et al., 2017).

The purpose of this study was to analyse the effects of implementing trauma-informed practices, such as restorative circles and mindfulness techniques, on academic performance and student behaviour. Research was conducted in a fifth-grade elementary classroom, as it had integrated restorative and mindfulness practices into the curricula. Student behaviour and academic performance were analysed to determine the effects of restorative justice implementation. Academic and behavioural data were collected and recorded within the classroom to gauge and determine the progression of positive behaviours and academic trends.

Through the findings of this study, students, parents, teachers, social workers and mental health professionals could reap the benefits of implementing trauma-informed practices. Students could benefit from this study by gaining an understanding of their traumatic backgrounds and how it played a part in their learning. They could leave school equipped with useful learning strategies, coping mechanisms and lists of contacts for emotional support to help them successfully overcome difficult obstacles in their lives.

This study could be beneficial to parents by providing them with resources, along with engaging in mindful and restorative practices alongside their child and would instil affective self-regulation outcomes. As a result, these newly adopted practices could influence their future choices and outlooks on life.

The findings could also be beneficial to teachers and social workers. Being trained on trauma-informed practices in the education field could help them in assisting students to be more successful in school. When teachers promote and incorporate calm-down strategies, classroom circles and opportunities for reflection into their classrooms, they are creating a collaborative, supportive and encouraging environment for students. At the same time, social workers would be able to utilise and implement affective topics and trauma-informed curricula in schools pertaining to the students they service. This would provide opportunities for students to learn how their brain functions, as well as how it is affected by past traumatic events in their lives, in order to proactively alter their performance in school. As a result, the number of behaviour referrals, school dropouts and incidences of school violence would hopefully decrease in the future.

Finally, mental health professionals would gain the necessary knowledge from the study needed in order to better help their patients. Understanding the childhood risk factors, effects of trauma on the body and possible solutions to remedy students' performance levels in school would hopefully decrease the number of students who are incorrectly identified as having attention-deficit hyperactivity disorder or learning disabilities, as well as lower the number of children suffering from depression, anxiety and other forms of mental illness.

### **1.1. The research questions**

The following research questions guided this study:

1. To what extent do restorative practices reduce classroom issues and increase instructional time?
2. How do trauma-informed practices, implemented in the classroom, impact performance levels?
3. What are the effects of restorative circles on students' behaviours in the classroom?

## **2. Literature review**

The connection between student academic performance levels and childhood traumatic experiences, in the context of middle and high school settings, has become a popular study topic among researchers, based on the examination of past literature. Therefore, this literature review will first address common outcomes of traumatic exposure on academics, social–emotional strain and

classroom behaviour posed in this research. Then, studies on implemented trauma-informed practices in schools, such as restorative justice and mindfulness, will be examined in order to determine its effects on high-risk students.

### **2.1. Impacts of trauma on academics**

There is no doubt that students' academic performance can be impacted by their emotional state and well-being. In fact, Weist-Stevenson and Lee (2016) found that students who are regularly exposed to traumatic events are more inclined to be considered as learning disabled. Wilson (2013) agreed with this statement, mentioning that traumatised students are more difficult to identify in the classroom because of their difficulty with processing information and their inability to control their actions and behaviours. Additionally, students with a lower executive function in their brain combat thinking about multiple concepts at the same time, and processing and storing information in their memory (Barr, 2018). Therefore, it stands to reason that these deficits would impact academic ability and achievement. Also, based on the fact that students having experienced trauma show similar symptoms to hyperactive individuals, often times traumatised students are misdiagnosed. This may lead to students being medicated unnecessarily, rather than receiving the appropriate counselling and necessary resources to help build resiliency. Educators are becoming increasingly aware of the need to identify trauma-impacted students and provide effective support in the school setting. Weist-Stevenson and Lee (2016) discuss how implementing a trauma-informed school model can create a nurturing learning environment that helps diminish the effects of trauma on the students. However, getting all staff members and teachers fully trained and onboard with the implementation of trauma-informed practices is a hurdle that each individual school will need to overcome, considering people's apprehension to change and programme costs (Martin, Ashley, White, Axelson, Clark & Burrus, 2017).

### **2.2. Impacts of trauma on social–emotional/ behaviour**

Not only does the exposure to trauma influence students' academic performance, but it also greatly impacts their social skills, emotional well-being and behaviour. Martin et al. (2017) explain how prolonged exposure to stress and adverse experiences can lead to abnormal brain function and structure: 'Such stress-induced altered brain architecture helps to explain associations seen between childhood adverse experiences and subsequent problems in cognitive functioning, emotional health, and physical health' (Martin et al., 2017, p. 959–960). Healthy brain development, in young children especially, is imperative for appropriate emotional regulations. Barr (2018) found that children who have impairments in the development of the executive function of their brain struggle with strong emotions and impulse control. On the other hand, Barr also points out that critical components of social–emotional development occur between the ages of 3 and 6, which is often before children are in the school setting (Barr, 2018). This means that the most significant point in a child's emotional development occurs while they are at home. Therefore, teachers have very little influence on early childhood development and are often left to deal with the aftermath of ACEs.

### **2.3. Implementation of trauma-informed practices**

After analysing the effects of childhood trauma in previous studies, it is evident that education and academic performance tend to be on the back burner of students' minds considering their past traumatic experiences with abuse, neighbourhood violence, dislodgement and neglect. It is also apparent that an increase in negative behaviours arises due to past exposure. To aid in school achievement, researchers found that children must believe they are cared for, and teachers must change their perceptions and ways of reaching out to high-risk students, by developing an awareness of their conditions (Ornstein, Pajak & Ornstein, 2015; Sitler, 2009). Therefore, by incorporating restorative circles and mindfulness techniques, a more impactful environment will be accessible to students with hopes of increasing performance levels.

## **2.4. Restorative practices**

Ornstein et al. (2015) mentioned that by incorporating affective curricula in schools, students acquire cultural literacy, connect standard subjects, gain an understanding of the meaning of life, form connections with people and develop a sense of competency. If students gain their teacher's respect and trust, they are more likely to apply themselves in class for the objects of their care (Ornstein et al., 2015). One way to incorporate care within the curricula and build relationships is through restorative peace circles.

Peace circles originated with the ancient Native Americans where a talking piece was passed from person to person in a group, granting the holder permission to speak. Schools adopted this approach and combined it with concepts of democracy and inclusivity to create positive classroom environments and successfully resolve student behaviour issues (Pranis, 2014). Through this process, an even playing field is formed between staff and students with the three main goals of restorative justice in place, which are accountability, community safety and competency development (Crowe, 2017). These goals permit equal engagement opportunities and fluid, honest discussions about difficult topics without disrespect to materialising (Pranis, 2014).

Restorative circles also provide opportunities for students to repair broken relationships. As cited in Crowe (2017), the restorative justice approach focuses on transforming wrongdoings created by harmful behaviours with a balanced emphasis on the offender, victim and school community. This makes the offender accountable for their actions and promotes the restoration of damaged relationships through healing conversations, rather than focusing on punishment and retribution (Crowe, 2017).

One school that experienced positive results through the implementation of restorative practices was Palisades High School, Pennsylvania. In 1998, they piloted the restorative justice programme, and their data showed that while 716 detentions were issued in 1998, only 282 detentions were issued in 2001 (Mirsky, 2007). Additionally, when asked how restorative practices changed Palisades High School, Principal David Pipera stated that, 'before the programme was introduced, the level of caring and respect among many students had declined. Restorative practices created a more positive relationship between staff and students, resulting in fewer disciplinary issues' (Mirsky, 2007, p.6). Therefore, restorative circles foster a strong sense of community and safety, that is otherwise absent in students' lives, while significantly lessening symptoms of stress when teachers and staff are continuously trained in restorative practices (Crosby, 2015; Mirsky, 2007).

While data have revealed positive results with the presence of restorative practices in schools, some academic scholars have found a weakness in the programme. A key factor attributing to the failure of the programme is weak principal leadership. Crowe (2017) stressed the importance of principals taking the reins in the shift from traditional discipline to restorative principles, as it demonstrates a belief in the system for teachers. If principals delegate responsibilities of implementation on other staff members, trainings will lose importance and the commitment of the entire school community will falter (Crowe, 2017).

## **2.5. Mindfulness**

Much like restorative justice practices, mindfulness techniques also play a part in socio-emotional aspects of student success. Mindfulness originated in Eastern cultures and emphasises the importance of controlling one's focus, attention and awareness (Akyurek, Kars, & Bumin, 2018). Schools can incorporate mindfulness practices through guided breathing techniques, meditation, reflective curriculum and somatic awareness exercises that can help students clear their minds and accept certain thoughts and feelings without judgement (Akyurek et al., 2018; Yaron, 2015). As a result of these practices, health professionals have found that mindfulness strategies not only increase a

person's quality of life, but also facilitate the use of problem-solving and coping skills (Akyurek et al., 2018).

Weare (2012) confirms that mental and physical health, as well as learning and social skills, are positively impacted in adults who engage in mindful practices and meditation. Evidence also exists in the form of brain imaging that supports the belief that mindfulness practices impact executive functioning abilities, and therefore processes such as attention, emotional regulation and perspective forming (Vickery & Dorjee, 2016). Unfortunately, reliable studies involving the effects of mindfulness practices on socio-emotional, academic and behavioural outcomes in children are extremely limited. Weare (2012) acknowledges that studies thus far involving the effectiveness of these techniques in school-aged children have been problematic and inconclusive for a variety of reasons, such as small sample sizes, but that the potential positive impacts make it an area worthy of further scrutiny.

Overall, the literature review provided insight into the vast impacts of trauma on students, which are well documented through numerous studies. When children experience trauma, not only does it impact their emotional development, but also their academic achievement and behaviour. However, comparable concerns were expressed by several researchers that trauma-induced students are difficult to identify due to shared commonalities with other diagnoses. Research indicates that by implementing trauma-informed practices, such as restorative justice and mindfulness exercises, school systems can promote positivity and emotional control within its classrooms, therefore combatting the effects of trauma exposure. However, without strong principal leadership, teacher consistency and continued training, enhancements could falter. Finally, the literature review reveals an additional area of deficit in the research regarding mindfulness and restorative practices on student behaviour and academic achievement, considering the lack of studies in elementary-aged students. Therefore, further research studies on trauma-impacted elementary students would more accurately measure the impacts of mindfulness and restorative practices in the elementary field.

### **3. Methods**

Behaviour and social–emotional issues have become more prevalent in twenty-first century schools due to childhood traumatic experiences. As a result, student misconduct has interfered with instructional time, causing a decrease in academic performance. The purpose of this study was to examine the effects of restorative practices and mindfulness interventions, such as circles and meditation, on students' behaviours and academic performances. Morning and afternoon circles were implemented throughout the study to help restore relationships, along with deep breathing exercises and universal, positive verbiage.

#### **3.1. Participants**

Research was conducted in a preschool through sixth grade building located within a large urban district. According to the Illinois State Board of Education (2018), the school houses a total population of 263 students. The student population primarily comprised 41% Caucasian, 38% African-American, 19% biracial, 1% Asian, and 0.8% Hispanic. In addition, 66% of the students came from low-income families, 17% are enrolled in special education services and 25% are defined as chronically truant. Finally, 7% of students have high mobility rates, having experienced at least one school transfer in the last school year, and of the 7%, 100% of those students are socioeconomically disadvantaged.

Participants for the study included 26 students, aged 10–12 years old, from one fifth grade classroom. The classroom consisted of 16 females and 10 males. 31% of the population is Caucasian, 50% were African-American, and 19% is biracial. Four of the students currently had individualised education plans (IEPs), three had IEPs for speech and language services, four received social work regularly, one received hearing impaired services, one received English-as-a-Second-Language support

and one had a part-time aid. Ten students received tier II response to intervention (RTI) instruction and three students received tier III RTI instruction.

### **3.2. Ethical considerations**

In order to maintain confidentiality, students were not identified in any manner for the duration of this study. Teachers did not include names or other personally identifiable information when recording data using the Daily Behaviour Assessment and reflective journals. Behaviour referral data were de-identified by the school administrator before it was released to the participating researchers. Additionally, approval from the school principal was essential and was obtained prior to the start of the study.

## **4. Instruments**

The school administrator provided de-identified behaviour referral data, including only the total number of behaviour referrals for the class being studied, with individual student data absent for privacy purposes. Throughout each school day, the teacher used a Daily Behaviour Assessment sheet to record class behaviour in half-hour intervals on a 0–2-point scale. No disruptive behaviour earned two points, one to three disruptions earned one point and four or more disruptions earned no points. In addition, the Daily Behaviour Assessment tool included a section for the teacher to log instructional time with notes regarding the disruptive behaviours. Total points were tallied at the end of each day to determine if the class met the daily behaviour goal of 80%. Along with the behaviour instrument, the teacher also completed daily self-reflective journal entries, documenting academic progress and culture and climate changes within the classroom. Behaviour referral data, instructional time lost and daily behaviour ratings were recorded for the duration of the study to determine significant correlations and qualitative trends in the data.

Along with the data tools, the teacher also implemented trauma-informed practices, such as circles, coping and meditative strategies and the use of positive verbiage with students to help decrease disruptive behaviours and classroom interruptions. Students participated in daily circles to establish a classroom community as well as address ongoing issues within the group. This routine helped build a positive rapport among staff and students, encouraged respectful speaking and listening skills among classmates and built close-knit relationships among all members of the classroom.

Mindfulness strategies, such as breathing techniques and meditative practices, were implemented by the teacher to help students calm down independently. Students were introduced to several coping mechanisms to assist in regulating their emotions and building emotional resilience. These strategies provide students with the tools to effectively handle conflict and other difficult occurrences they may encounter with their peers throughout the school year.

Finally, to instil an uplifting mindset in the students, the teacher used positive verbiage frequently, when addressing the class. For example, rather than stating what the students should not do, the teacher should state what action they would prefer to see. For example, instead of saying ‘Be Quiet,’ mention ‘I like the way you are working quietly on the assignment.’ Modelling positive expectations and self-talk responses for students provide them with more constructive directions and create a more positive classroom climate. Therefore, positive verbiage, combined with a calm demeanour and non-reactive delivery, helps create a non-confrontational environment among all members of the classroom.

#### 4.1. Definition of terms

Research variables may include terms such as childhood trauma, ACEs, trauma-informed practices, mindfulness, positive verbiage and restorative practices. In this proposal, these words are defined as follows:

- *Childhood trauma* - refers to the events in a child’s life that inadvertently cause distress and emotional pain
- *ACEs*—disheartening, stressful events that occur before adulthood, for example, physical or emotional abuse, death or incarcerations
- *Trauma-informed practice*—refers to the practice or process of recognising traumatised individuals and providing strategies for hopeful reparations
- *Mindfulness*—a therapeutic practice where one meditates or relaxes the mind
- *Positive verbiage*—constructive and encouraging written or spoken language conveyed without negative connotation. For example, ‘Please walk’ instead of ‘Don’t run.’
- *Restorative Practices*—a technique used to repair relationships between people or community members to help prevent future negative behaviours

### 5. Results

#### 5.1. To what extent do restorative practices reduce classroom issues and increase instructional time?

A comparison of behaviour referral data from the 2017 to 2018 school year and the 2018–2019 school year revealed a significant 52.4% decrease in behaviour referrals, shifting from 21 to 11 total referrals in an academic year (Table 1). Also, while two additional students received referrals in the 2018–2019 school year, only 25% of referred students were multiple offenders, in comparison to 100% of referred students receiving multiple referrals the previous school year.

**Table 1. Behavioural referral data**

School year referrals	Number of with referrals	Number of students with multiple referrals	Number of students
2017–18	21	6	6
2018–19	10	8	2

Analysis of the number of points earned per day on the Daily Behaviour Assessment Sheets (Table 2) demonstrated a positive trend, indicating fewer behaviour interruptions over time as restorative practices were implemented. Students also met the 80% behaviour goal with increasing frequency in the second half of the data collection.

**Table 2. Daily behaviour assessment sheets**

Date	Points earned out of 24	Percentage of points earned	Goal
2/4/19	13	54	80
2/5/19	14	58	80
2/7/19	19	79	80
2/8/19	18	75	80
2/11/19	17	71	80
2/14/19	20	83	80
2/19/19	18	75	80
2/21/19	20	83	80
2/22/19	19	79	80
2/25/19	18	75	80
2/27/19	20	83	80
2/28/19	18	75	80



3/1/19	20	83	80
3/5/19	18	75	80
3/6/19	19	79	80
3/7/19	18	75	80
3/8/19	20	83	80
3/11/19	18	75	80
3/12/19	19	79	80
3/13/19	20	83	80
3/14/19	17	79	80

The loss of instructional time due to behaviour disruptions also decreased over time, as did the number of disruptive occurrences (Table 3). The table demonstrated a negative trend in data showing that the more exposed students were to restorative and mindfulness practices, the less likely instructional time was to be lost. For example, in the first half of data collection, about 4.6 behaviours occurred with an average of 10.4 minutes of instructional time lost per day. However, in the second half of data collection, behaviour occurrences decreased to 3.6 with an average of 9.4 minutes of instructional time lost per day.

**Table 3. Loss of instructional time due to behaviour disruptions**

Date	Number of incidents	Minutes lost	Avg incidents (total)	Avg minute lost (total)	Avg incidents (interval)	Avg minute lost (interval)
2/4/19	6	16				
2/5/19	4	9				
2/7/19	5	9				
2/8/19	5	14				
2/11/19	5	9				
2/14/19	4	9				
2/19/19	5	12				
2/21/19	4	6				
2/22/19	5	12				
2/25/19	3	8			4.6	19.4
2/27/19	4	9				
2/28/19	4	14				
3/1/19	3	9				
3/5/19	2	4				
3/6/19	5	12				
3/7/19	5	8				
3/8/19	4	8				
3/11/19	3	10				
3/12/19	3	6				
3/13/19	3	14				
3/14/19	4	9				
	86	207	4.09	9.85	3.63	9.36

While data comparisons reveal only slight, modest changes in the student population tested, these figures do not encompass the positive changes in student behaviour that occurred in the first 6 months of the school year, previous to the data collection window. The small student sample size must also be considered when analysing and interpreting the data. Therefore, the trends indicate that a slow, yet steady change is in fact occurring within this student population, reflecting in positive results that directly correlate with the teacher’s observations in the self-reflection journal entries.

### 5.2. How do trauma-informed practices, implemented in the classroom, impact performance levels?

As mentioned previously, behaviour referrals have decreased markedly during the current school year. Therefore, students have consistently lost less instructional time as a result of attending class more regularly. The assumption followed that students who were not missing instruction would prosper academically. Similarly, with less instructional time lost to behaviour disruptions (Table 3), academic performance would improve over time. For the purpose of this study, the researchers were unable to utilise specific student academic data due to privacy considerations. However, the self-reflection journal entries made by the classroom teacher portrayed a positive academic progress.

At the beginning of the school year, the students were strictly immersed in whole group instruction to limit transitions and prevent distractions. As the year progressed, and as restorative and mindfulness practices were fully adopted and implemented, fewer classroom disruptions were recorded by the teacher. Therefore, near the end of the data collection window, the educator switched to a small-group and guided instruction, as noted in the self-reflection journal entries.

Although specific academic data could not be recorded, the teacher did note in the self-reflection journal that most students have increased their Scholastic Next Steps Guided Reading level by at least one letter during the first half of the school year, and the class as a whole have demonstrated positive growth on district assessments. While an increase in only one level may appear insubstantial, this particular class has not shown significant growth in the past several years, possibly due to severe behaviour classroom issues. Therefore, academic growth of any kind is considered as evidence of positive effects of restorative practices on academic achievement.

### 5.3. What are the effects of restorative circles on students’ behaviours in the classroom?

Prior to this school year, the students in this classroom had been exposed to inconsistent implementation of restorative circles, where circles were primarily used for disciplinary purposes rather than restoring relationships. As a result, students were negatively impacted by restorative practices. When circles began this year, students were hesitant at first, until they gradually changed their mindset after participating for several weeks. The teacher incorporated fun, engaging check-in and check-out topics on a regular basis, which enhanced positive behaviours. Social–emotional learning topics were also introduced, encouraging students to be more proactive and aware of their actions. Even with the implementation of circles, though, students still needed daily guidance and support when dealing with negative and disruptive behaviours. Such behaviours included: disruptive talking, non-compliance, defiance, student conflict, horseplay and general off-task behaviour (see Table 4).

**Table 4. Students’ negative and disruptive behaviours**

Behaviour	Disruptive talking	Non-compliance	Defiance	Student conflict	Horseplay	Off-task	Total
	5	2	1	5	2	1	
	2	1	4	3	2	2	
	1	1	2	7	2	1	
	1	2	3	3	1	1	
	1	2	1	2	2	2	
	3	3	2	3	5	2	
	2	3	2	5	2	2	
	2	10	1	2	3	1	
	3	4	3	5	1	2	
	3	4	3	5	3	2	
	3	2	1	2	2	1	
	2		3	2		1	

	2		3	2		2	
	1		2	3		1	
	2		2	1		5	
	1		2			2	
	2						
Instruct. time lost	36	34	34	50	25	28	207
Number of instances	17	11	16	15	11	16	86

According to the school administrator, student conflict had traditionally been a significant behaviour concern for this class. The data from this study showed student conflict was less frequent than other types of disruptive behaviour, but it did reveal that this type of disruption required a significant amount of time to manage. Table 4 shows that student conflict (15 incidents) occurred less often than disruptive talking (17 incidents), defiance (16 incidents) and off-task behaviour (16 incidents), but student conflict accounted for 29% of instructional time lost, as compared to disruptive talking (21%), defiance (20%) and off-task behaviour (16%). Consistent with the teacher’s self-reflective journal, student conflict not only takes more time to resolve than other forms of behaviour, but it also requires more time and effort to regain a calm and productive classroom environment. It can be noted that the use of restorative practices and mindfulness techniques may increase the time spent on this particular behaviour initially, as students are learning appropriate techniques for coping and resolving conflicts.

Additionally, through the teacher’s self-reflective journals and analysis of time interval data, the researchers discovered that students also struggled with transitions between activities in the classroom and upon returning from specialists (PE, Music, Recess). Considering that the studied practices were not universal in the building and because specialist teachers had more unstructured environments, returning from more active classes to a setting with higher set expectations was difficult for students. To help with this challenge, the teacher addressed the behaviours noticed and reviewed rules and expectations within their circles. The educator also reported maintaining positive verbiage, encouraging mindfulness breathing exercises, demonstrating self-regulation and control techniques and consistently utilising restorative circles in the classroom, resulting in more positive feedback and behaviours from students after several weeks.

In conclusion, the researchers believe implementation of restorative practices within an elementary classroom has had a positive impact on the students’ academic performance levels and behaviours. The students have displayed more positive behaviours, smoother transitions and fewer conflicts and disruptions, which have led to more constructive instructional times within the classroom. Teacher fidelity in recording data and providing feedback on the daily behaviour assessment was greater than 80% throughout the majority of the data collection window (Table5), which does lend some credibility and dependability to the study. However, the small sample size and limited time frame of data collection must also be considered. The positive outcomes through restorative justice practices have been recorded from one fifth grade classroom, and the transferability of the data cannot be guaranteed. The researchers believe the positive trends noted in this classroom indicate that further study would be beneficial in order to improve the reliability of data and confirm the results in other elementary classrooms.

**Table 5. Percentages of response of teacher data collection fidelity**

% Fidelity	Less than 50%	50%–80%	80%+
Data recording		16.7	83.3
Verbal feedback		20.8	79.2

## 6. Discussion

After a 6-week period of data collection with mindfulness and restorative practices consistently administered, the researchers noticed significant, positive changes in both the classroom environment

and the individual students. The number of overall classroom issues reduced, sanctioning a slight increase in instructional time throughout the research project. Additionally, with an increase in positive behaviours, the teacher was able to organise guided reading groups and to facilitate daily, small-group instruction, which induced higher student reading levels. Through accurate, consistent use of classroom circles, students also developed more positive mindset about restorative practices and began initiating conflict resolution and self-control techniques on their own.

From interpreting and analysing the data, the researchers found that the implementation of restorative and mindfulness practices positively impacts students and enhances the classroom atmosphere. Conversely, the limited window for data collection could have impacted the results of the study, and data analysis indicated a lack of building consistency in using restorative practices, which has impeded positive outcomes. Therefore, it is recommended by the researchers that all restorative justice practices are continued for the remainder of the school year to obtain further data for the research project. Also unified, concentrated efforts are needed to improve overall school behaviour issues, which will require a substantial commitment from all school personnel.

Based on these findings, a few challenges have arisen. It may be argued that the implementation of restorative practices and mindfulness techniques take away from instructional time, but managing disruptive students further hinders and prevents instructional efforts. Other potential challenges include a lack of funds for professional development, school-wide training and resource materials and an over-extensive amount of work is required for training all school personnel and implementing restorative practices school-wide. Potentially, some resistance from staff members is also predicted to occur, considering the time investment. However, the benefit of school-wide consistency with trauma-informed practices is a newly found increase in instructional time and fewer behaviour disruptions overall.

In conclusion, through a 6-weeks data collection period, the researchers noticed small, positive changes with the classroom environment and students' behaviours. Ongoing research and school-wide professional development is recommended though, in order to gather further information and more accurately depict the positive attributes of trauma-informed practices on elementary students over a longer period of time. Moving forward, the researchers plan to meet with the building administration to present their research results and propose a school-wide initiative of implementing restorative and mindfulness practices. This would include the use of more positive, universal verbiage among all staff and students, breathing techniques and daily classroom circles.

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