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Dysregulation: Causes, Impacts, and Social Emotional Learning Opportunities in Elementary Classrooms

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DYSREGULATION: CAUSES, IMPACTS, AND SOCIAL EMOTIONAL LEARNING

OPPORTUNITIES IN ELEMENTARY CLASSROOMS

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ABSTRACT

Dysregulation is a recurring time in which a student loses control of their emotions, be it internalizing or externalizing behaviors. The prevalence of dysregulation among elementary school children is increasing, which concerns both parents and educators alike. The causes of dysregulation range from dysfunctional home life situations, negative peer interactions, or diagnosed disorders. Sadly, it causes feelings of fear, can lessen academic time, and instills negative behavior norms for regulated peers. It can also negatively impact students showing dysregulation by increasing their odds of being victimized or marginalized in social situations. Teachers can positively impact students by incorporating social emotional lessons and by using reappraisal techniques. This thesis, which includes a literature review with application emphasis, provides a picture book which discusses dysregulation in child-friendly terms and describes dysregulatory situations and causes at school and home.

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CHAPTER I: INTRODUCTION

Context of Research and Application

Classrooms are becoming increasingly diverse, especially with the variety of needs demonstrated by students. There are benefits to having an inclusive classroom, including more adult support, intensified teacher training, specific technology and resources, and most importantly, varied social interactions (Gottfried, 2014). To counter the benefits, there is heightened concern from educators and parents alike over how much students with disabilities, specifically emotionally behaviorally disturbed children, exacerbate other behaviors and demand attention away from learning. Indeed, teachers have named behavioral outbursts and subsequent feelings of inadequate support and preparation as the top reasons for the mass educator exodus that the nation is currently experiencing (Lopes et al., 2012). The term *dysregulation* encompasses the many ways a student may lose control of his or her emotions. There are various ways dysregulation manifests, including internalizing (withdrawn and/or dissociative) and the more known externalizing (violent and/or visible) behaviors (Sullivan et al., 2012). Unsurprisingly, student cases of dysregulation are on the rise and have been for some time (Eisenberg et al., 2000). What is largely unknown is what is causing the surge in dysregulatory episodes in current classrooms, how it impacts peers, and how to proactively teach emotional regulation.

It is a fairly new phenomenon for teachers to have to consider how dysregulation impacts classroom climate and how to teach social emotional tenets. Indeed, up until the Individuals with Disabilities Education Act was passed in 1990, students who suffered from externalizing behaviors were separated and schooled in different buildings than their peers (Fletcher, 2009). Coupling with separation, rates of dysregulation were lower in the twentieth century as well

(Fletcher, 2009). It was an assumed responsibility for parents to teach how to behave; schools were for academic learning soley. Now, in twenty-first century classrooms, not only do students have emotional needs, but also learning disabilities, hearing and speech impairments, physical handicaps, and English-language-learners. Teachers are expected to create a well-balanced schedule of social emotional learning mixed with standard based academics, while at the same time managing the individual accommodations and modifications required of their diverse caseload. It is safe to say that schools look very different than they did even fifty years ago.

Clearly, there is a need for resources, and as this thesis centers on dysregulation, it would follow that a social emotional teaching resource is needed. As a general education teacher, there have been numerous times after externalizing behaviors where I yearned for something to help my students process what just happened. Often, these dysregulatory episodes are surrounded by commands to ignore the student in question and praising on task behavior, without giving any time after the behavior concludes to reflect or ask questions. In fact, sometimes those questions are penalized with reminders to mind their own business. What that response is failing to do is help students reappraise the situation and create empathy for the student in question. In fact, it may be enhancing stereotypes or even instilling stigmas. The application portion seeks to address this gaping need without putting a burden on teachers to create extra resources or put in extra hours to prepare. Specifically by writing a children's book that provides an example of dysregulation, causes of dysregulation, and discussion questions. Responding to externalizing behaviors requires both teachers and students to view it empathetically, model acceptance, and create healthy, respectful boundaries, all of which will be explored during the thesis in both the literature review and the application section.

Rationale

Every educator has experienced student dysregulation to different degrees, and their ability to interact with and respond to dysregulation can veer in multiple directions. In response to behaviors, there is ignoring, there is removal, there is punishment, and there is actively teaching through dysregulation, but all of those responses center on the student having the behavior. Often, when crises happen, energy is diverted to the cause of the crisis. What I am proposing is a system, including the research in the thesis itself and a children's book, that not only helps educators understand the why behind the dysregulation, but also gives them tools to reflect and teach the regulated individuals during and after the behavior has concluded.

Specifically, I am focusing on the regulated peers of the dysregulated members of the classroom. I have always struggled on how to explain to my regulated students why others have such large reactions to small triggers, or why they have to leave the room, or why they might hurt others or things when they are overwhelmed. I have worried that the regulated students may feel unsafe in my classroom. To reassure them and to explain why students act the way they do, I am using my thesis to write a literature review with an application emphasis.   Loss of classroom climate, lowered feelings of safety and security, and unintended behavior modeling can be shifted instead into teachable moments, practicable social interactions, and teaching of disabilities. Namely, empathy can be gained.

Definition of Terms

The first and most important terminology relates to how children process and handle emotions. *Dysregulation* is a recurring time in which a student loses control of their emotions, be it internalizing or externalizing behaviors (Abry et al., 2017). *Regulation,* in contrast, can be viewed as two separate processes that work together. *Emotional Regulation* is the unseen, internal means of controlling emotions, whereas *Behavioral Regulation* is the visible and audible

reaction to the internal emotions at play (Eisenberg et al., 2000). When dysregulation happens, the behavior can manifest in two ways. *Internalizing Behaviors* stay internal, but are still harmful to the student such as negative self-talk, anxiety, depressive thoughts, and dissociative attitude (Abry et al., 2017). *Externalizing Behaviors* manifest in visual and audible ways and include, but are not limited to tantrums, crying, self harm, and physical aggression (Abry et al., 2017). These processes are especially pivotal to how a child handles different environments, including the school day.

At schools, students who display dysregulation may be experiencing *Classroom Level Adversity* which is a term used to describe students that enter schools already at a disadvantage and whose home environment can cause negative behaviors at school (Abry et al., 2017). Since these students may have at home crises to deal with, they often suffer from thoughts that ill-will is intended in peaceful situations that leads to aggressive outbursts that are justified in their minds due to the conditioning of their environments, also known as *Hostile Attribution Bias* (Hudley & Novac, 2007).   Because these students have elevated levels of *Cortisol*, which is a stress hormone, they will produce less *Tryptophan,* which is a neurotransmitter that controls inhibition and violent impulses (Evans & Kim, Hudley & Novac, 2007). Ultimately, their *Executive Functioning* can be lower than that of their peers, which is neurocognitive processes including memory, inhibition, attention, and cognitive flexibility (Tamm et al., 2021). All of these variables can lead to being categorized as *Emotionally Behaviorally Disturbed*, which is the classification students receive in schools if their disability involves emotional control with externalizing and/or internalizing behaviors, and doesn't respond to most interventions (Fletcher, 2009). This leads to an educational need for resources to help all students be successful. The belief in one's own abilities to control impulses and behaviors, or *Self-Efficacy,* is a great place to

start supporting students (Sullivan et al., 2012). Many schools have adopted *Social Emotional Learning* programs that encourage students to use social and self-awareness, self-management, relationship skills, and decision making in their daily lives (McKown, 2017). This can include *Reappraisal*, or reframing a high emotional moment, with students (Davis & Levine, 2013). Ultimately, schools are hoping to increase the instance of regulation in classrooms and reduce the probability that students will be Victimized, or bullied (Rose & Espelage, 2012).

Guiding Questions

Dysregulation is multifaceted. A child's dysregulation during a school day does not just impact him or her, but also the entire classroom of other learners and school staff. This led to an equally multifaceted question: How does dysregulation of one or multiple individuals impact the overall classroom climate, the acquisition of learning for regulated students, and development of all social interactions?

In order to fully understand the reaching effects of dysregulation, research into the causes of dysregulation was necessary. Then came the impacts on their regulated peers, which includes, but isn't limited to, loss of learning time, detrimental modeling of behaviors, and lowered feelings of safety and security. Finally, positive opportunities for social emotional learning arose, using dysregulation episodes as teachable moments, developing social interactions between all students, and teaching the acceptance of disabilities. Hopefully, educators will glean professional knowledge of what dysregulation truly stems from and its impactful presence in classrooms and practical application resources to add to their toolkits. I have developed a children's book directed at students in elementary grades and invite teachers to use, modify, and discuss dysregulation in child-friendly terms.

CHAPTER II: LITERATURE REVIEW

In searching for data surrounding dysregulation in elementary students, ERIC, EBSCO Host, and JSTOR were utilized to find publications from 2000-2021. The research focus was to acquire published, peer reviewed, and empirical articles in the categories of psychology, education and pedagogy, child development, and educational policy that also followed the guiding questions. The key words and phrases used to search were, "dysregulation in elementary students," "impacts of dysregulation," "classroom inclusion," "causes for dysregulation," and "social emotional learning." The purpose of this chapter is to discuss the research surrounding three main topics: Causes of Dysregulation, Impacts of Dysregulation on Regulated Peers, and Positive Impacts of Social Emotional Learning.

Causes of Dysregulation

Before delving into the depths of dysregulation, it is important to establish the meaning of regulation. Eisenberg et al. assert that there are two main forms of regulation: emotion and behavioral (2000). Emotion regulation can be thought of as the internal aspects of controlling effusion, whereas behavior regulation manages the external responses to the internal state (ie: tantrums, yelling, crying, etc… [Eisenberg et al., 2000]). Therefore, emotion-related behavioral regulation is the goal; to be able to not only communicate feelings, mitigate problem behavioral outbursts, and choose prosocial actions (Eisenberg et al., 2000). Regulation is learned from infancy as consequences and reactions to all forms of behavior are internalized (Eisenberg et al., 2000). To test the above regulation norms, not only were parents and teachers interviewed for behavior traits of the participants, the study also followed over 160 students in first, second, and third grades and gave children regulation tasks such as puzzle boxes (Eisenberg et al., 2000). It was found that students who were rated as having heightened behaviors at home and at school

also showed problem behaviors in test settings, leading to dysregulation, and those who were rated as having regulation strategies were able to use them in different environments (Eisenberg et al., 2000). However, as Eisenberg et al. caution, the overall trend of dysregulatory behaviors is on the rise, and the instance of emotion-related behavior regulation is dwindling in today's schools (2000). Hence, the topic of dysregulation and its impacts on all aspects of schooling is essential to all future educational endeavors.

Dysregulation can be thought of as a recurring time in which a student loses control of their emotions, be it internalizing (anxious thoughts, depressive attitude, negative self-talk) or externalizing (violent, aggressive, physical) behaviors. A primary contributor to dysregulation is home life, and authors Abry et al. discuss why students may exhibit internalizing or externalizing behavior (2017). Classroom level adversity (CLA) is a term used to describe students that enter schools already at a disadvantage and whose home environment can cause negative behaviors at school (Abry et al., 2017). They report that some factors which can cause CLA are poor home and family life, poor academic and social readiness, inadequate nutrition, and student mobility, just to name a few (Abry et al., 2017). During the multi-year study, 1,364 children chosen from multiple states and various socioeconomic levels were followed from first to third to fifth grades. Mothers and teachers completed surveys on externalizing and internalizing behaviors present at the beginning and ends of those respective years (Abry et. al, 2017). From this data, they found that the highest risk factor for CLA was low income to high needs, meaning not enough resources for the needs in the household. High levels of CLA usually resulted in externalizing behaviors, not internalizing (Abry et al., 2017). The authors offer a few explanations for this high occurrence of externalizing behaviors with CLA factors present, namely that a lot of their frustration is unsolvable, meaning they cannot fix the fact that there is no money for food or

clothing, or the fact that there isn't enough attention for the children, so they don't attempt to problem-solve anything as they have learned from little on that it is out of their control (Abry et al., 2017). In fact, one student struggling with dysregulation can undermine the social learning of another student struggling to control their own dysregulation, effectively creating a series of dominoes that triggers the next (Abry et al., 2017). Traditionally, low socioeconomic families tend to get zoned to go to the same schools, causing high levels of CLA across students (Abry et al., 2017). In the subsequent section on detrimental modeling, the domino effect created by these high concentrations of CLA will be discussed.

Another reason for dysregulation includes neurobiological brain changes due to home dysfunction. Research done by Evans and Kim shows that households with pollutants, crowding, and toxins, not to mention psychological stressors like consistent arguing and verbal or physical abuse can lead to elevated levels of cortisol (a stress hormone) and blood pressure in students (2007). They followed over two hundred children, half of whom were listed as living below the federal poverty line, and explored the effects of chronic stress on their systems via urine samples and blood pressure readings (Evans & Kim, 2007). If the heightened levels of blood pressure and cortisol stay for prolonged periods of time, it lessens the body's ability to handle environmental demands, such as anger management and noise (Evans & Kim, 2007). This will directly impact student's ability to handle any classroom inconveniences, leading to dysregulation. Additionally, Hudley and Novac (2007) explore previous research on why aggressive behaviors manifest. The authors first agree with Abry et. al in their conclusion that dysregulation can be caused by dysfunctional environments, or home lives that are often tumultuous due to lack of resources, violence, or even parental neglect (Hudley & Novac, 2007). Hudley and Novac go on to discuss *hostile attributional bias*, or youth thinking that ill-will is intended in peaceful situations (2007).

This leads to aggressive outbursts that are justified in their minds due to the conditioning of their environments (Hudley & Novak, 2007). Children who have experienced physical abuse often have neurobiological brain imbalances due to the stress hormones secreted; namely, a chemical called tryptophan, which regulates physical or violent impulses, is produced less and less as stress hormones increase (Hudley & Novac, 2007). This will heighten their biased reactions with peers and teachers alike as their brain has elevated stress hormones present and less tryptophan to process the interaction. Attachment Theory advocates for this line of thinking, stating that early interactions with caregivers and parents are a primary model for future social engagements (Hudley & Novac, 2007). Of course, there are instances where children will react aggressively even when parents have been emotionally supportive and non hostile, leading to the next reason for dysregulation: peer and community influence.

The environment a child experiences is not just in their homes. Abry et. al stated that peer instigated behavior could create a domino effect (2017). Hudley and Novac agree, extending the neurobiological deficits to peer hostility. Children that experience consistent peer aggression (bullying and victimization) can suffer from a lack of serotonin and norepinephrine, which can lead to apathy when seeing others suffer and increase their hostility to all peers (Hudley & Novac, 2007). The same conclusion can be made with communities in distress. Children will experience hypervigilance in those neighborhoods, leading to brain circuitry being wrought with fight-or-flight stress hormones consistently present (Hudley & Novac, 2007). Studies done throughout the years have shown that children who are violent in elementary school tend to stay that way as adults and produce family units that are also aggressive (Hudley & Novac, 2007). In summation, parents, peers, and communities can provide trauma that will lead to hostile attributional bias in minor alterations or peaceful situations.

Diagnosed disorders are hugely important to consider when looking at dysregulation episodes and tendencies. Likewise, the instruction and support they receive at school due to their diagnosed disabilities makes a large impact on the severity and duration of dysregulatory episodes. Where Abry et al. and Hudley and Novac studied home life, Sullivan et al. (2012) investigated how students with high incidence disabilities handle peer response situations in a school setting. Students with diagnosed learning disabilities or emotional behavioral disorders have a higher chance of being victimized due to their externalizing (violent and/or visible) or internalizing (withdrawn and/or dissociative) behaviors (Sullivan et al., 2012). There is a shocking statistic that 75% of students with any learning disability score lower than their peers on social and emotional skills (Sullivan et al., 2012). Sullivan et al. conducted a study aimed at finding out how and/or when students with disabilities would use nonviolent normative reactions versus dysregulatory responses with their peers (2012). To do this, they recruited students who had a diagnosed disorder (71% learning disability, 15% intellectual disability, and 14% emotionally behaviorally disturbed [Sullivan et al., 2012].) The results emphasized self-efficacy, or the belief in one's own abilities to control impulses, which decidedly made a difference in their nonaggressive responses (Sullivan et al., 2012). Students that mentioned they had positive self confidence (only 26% of participants, all of whom were diagnosed with a learning disability, not behavioral disability) notably showed more effort to control themselves and had higher levels of nonviolent reactions to peer situations (Sullivan et al., 2012). Those who had mentioned having difficulty managing anxiety or anger often chose more aggressive responses in comparison (Sullivan et al., 2012). The role of consequences played a large role in scenarios; students who knew parents had expectations, or that they would be disciplined in school largely chose to avoid aggressive interludes, whereas students who had a certain 'tough' status or image

to keep up or who had low confidence in the scenario working out as planned tended to have

more dysregulated social situations (Sullivan et al., 2012). Peers made an impact: those who

friends or who were loyal to one another often used prosocial forms of communication, but peers

that had multiple incidents of low trust often received antisocial communication (Sullivan et al.,

2012). Sullivan et al. emphasized school staff support, stating that students who had good

relationships with teachers, or who had seen teachers model how to work through problems

tended to use strategies, whereas teachers who ignored problems or resorted to immediate anger

when problems arose were often triggers for students (2012).

Where diagnosed disorders are often recognizable, a lack of executive functioning can be

a hidden cause for dysregulation. Executive functioning is a culmination of neurocognitive

processes including memory, inhibition (control of impulses), attention, and cognitive flexibility

(Tamm et al., 2021). Since inhibition is required to resist temptations, and cognitive flexibility is

needed to adapt to your surroundings and make new choices when necessary, executive

functioning is pertinent to the issue of dysregulation (Tamm et al., 2021). In the study, 153

students ages five through twelve were given performative tasks in the area of executive

functioning; age didn't appear to have an impact, but in students with lower executive

functioning findings, there also was higher levels of school social impairment and academic

difficulties as well (Tamm et al., 2021). Tamm et al. states that executive function is necessary

for all social interactions, decision making instances, and rule following (2021). While executive

dysfunction is most common with students diagnosed with ADHD, it is also extremely common

with students who show disruptive, externalizing behaviors, those who have trouble cooperating,

and children showing antisocial behavior (Tamm et al., 2021). In fact, the lower a student's

executive functioning, the more a student struggles academically, socially, and behaviorally both

at home and in school (Tamm et al., 2021). In essence, executive dysfunction can be a root cause for behavioral dysfunction.

The reasons for dysregulation included home life instances, brain chemical imbalances due to home life trauma or diagnosed disorders, executive functioning, and peer, teacher, and/or community impacts. Now that the causes have been illuminated, the next area to explore is the impact of dysregulation on others, especially regulated peers in a classroom setting.

Impacts of Dysregulation on Regulated Peers

When looking at student behavior and emotion control, concerns abound about how much one student's behavior is impacting the learning, social interactions, and classroom climate of their peers. The anticipated loss of learning time, detrimental modeling of behaviors, and lowered feelings of safety and security will be explored in this section.

Loss of Learning Time

A common fear of parents and educators alike is the loss of learning time due to dysregulatory behavior from students. Behar-Hortenstein, Isaac, Seabert, and Davis explore instructional time and the barriers to utilizing it fully (2006). They mention expected obstacles such as special events, fun rewards, and doing work more slowly than desired as instructional time wasters (Behar-Hortenstein et al., 2006). Increasingly, teachers have reported disruptive behaviors as the top instructional time barrier, leading researchers to find that out of the average 180 school days, only about 90 days worth of time is spent on actual grade-level learning (Behar-Hortenstein et al., 2006). They analyzed what is truly causing the loss of instructional hours by shadowing teachers and marking down when disruptions happened and what kind of disruption it was. When quantifying the data, researchers sorted disruptions into teacher initiated versus student initiated and found that teachers disrupted the class 3% more of the time than

students did. However, when students disrupted the class, 72% of those disruptions were negative behaviors (Behar-Hortenstein et al., 2006). Interestingly, disruptions rarely escalated to open defiance or violence, but when they did, 100% of instances were recorded with female teachers (Behar-Hortenstein et al., 2006). There was no explanation for why this happened, but researchers speculated that the culture of the school lent more authority to male teachers. Observers noted that the longer it took to establish control and attention, the more student disruptions there were (Behar-Hortenstein et al., 2006). When student initiated non-instructional time was recorded, low teacher management instances also occurred, like unsupervised work in a different area of the school, or teacher humiliation of a student (Behar-Hortenstein et al., 2006). Since teachers disrupt learning time slightly more often than students, and that student initiated disruptions were often caused by lack of management, researchers speculated that if classroom management systems or tools were utilized, there would be fewer disruptions overall (Behar-Hortenstein et al., 2006). While the loss of learning time was investigated, most of the data didn't center around students who suffer from emotional disturbances.

To glean more information on the instances of severe misbehavior and how this impacts peers' learning time, author, Dr. Fletcher researched past experiences with these types of students and conducted new research. Fletcher claims that students classified as Emotionally, Behaviorally Disturbed (EBD) are understudied (2009). To rectify this, he sought to understand how complete inclusion, or that where students with serious emotional dysregulation receive main instruction in the classroom with minimal pullout services, affects the peers (Fletcher, 2009). Fletcher included a history of how EBD students would have been handled throughout the United States' recent history, starting in 1948 when the population was at 1.2% (2009). By 1968, the population grew to 4.5%, and by 1976 it had doubled (Fletcher, 2009). At this point, students

with behavioral needs were completely separated from the general education students and were kept that way until the Individuals with Disabilities Education Act (IDEA) was passed in 1990 and demanded that students be educated in the least restrictive environment (Fletcher, 2009). So it is fairly recent in education's history that we would need to consider how dysregulated individuals impact their peers, either positively or negatively. In the study (2009) Fletcher gave mathematics and reading tests to students with known peers to have EBD disorders at the beginning and end of each school year in first, third, fifth, and eighth grades; after receiving those samples, he compared the relative score to that of their Kindergarten intake score. Fletcher found that nondisabled students with peers who had serious emotional needs showed decreasing performance on mathematics and reading tests (2009). The outcome emphasizes the worry that EBD students disrupt learning time and pull the teacher's attention away from instruction. There could be several other reasons for this outcome, limiting the study. One could be that students who are zoned to go to certain schools have higher levels of marginalization, lack of resources, and overcrowding, coupled with the fact that those school districts tend to have inexperienced teachers. Another limitation is that disabilities during the study encompassed speech, specific learning disabilities, and EBD as a lump unit, so seeing the effects of just externalizing behavior is conjecture.

To conclude, students who have misbehaviors in the classroom can impact peers negatively, however, the data is far from conclusive. Recent research (Behar-Horenstein, 2006 and Fletcher, 2009) indicates a further need to study the true loss of learning time and learning outcomes just due to externalizing behaviors of classmates.

Detrimental Modeling of Behaviors

As mentioned earlier, peers can deeply impact each others' social awareness and interactions. According to Abry et al., if a student has Classroom Level Adversity (CLA) in two or more risk areas, they are likely to exacerbate behaviors of students that aren't as at risk, but still show behavior needs (2017). In fact, one student struggling with dysregulation can undermine the social learning of another student struggling to control their own dysregulation, effectively creating a series of dominoes which triggers the next (Abry et. al, 2017). Another factor to students' continued dysregulation throughout the years is the social influence of the classroom. Typically, low socioeconomic families get zoned to go to the same schools, causing high levels of CLA across students. Basically, they see misbehavior modeled frequently in underserved and understaffed classrooms, and it creates a norm for that space (Abry et. al, 2017). Lopes et al. (2012) explain that emotions can be viewed as "contagious," and can be prosocial or antisocial depending on the way emotions are handled. For example, if a student manages the emotion of anger, it can dissipate the tension in the room, but if that same student allows their anger to progress, it will instigate other large emotions like fear and recursive hostility in other children. Lopes et al. describe these events as chain reactions, both the positive emotion management and the negative dysregulation (2012).

Due to the contagious nature of emotions, Michael Gottfried addresses the impacts for peers in the classroom. In 2014 when the study was conducted, about 14% of students who were in the mainstream classroom for 80% of the school day had specialized education plans due to a disorder or a disability (Gottfried, 2014). This study utilized the longitudinal data set developed by the National Center for Educational Statistics, which collected data on disabilities, test scores, and more which Gottfried used to cross reference disabilities with noncognitive outcomes

(2014). Gottfried concluded that there are several positive outcomes to having inclusive classrooms, including the fact that students would be exposed to diverse students and interactions, therefore increasing their social awareness and understanding (2014). Another bonus is the resources available to all students. Basically, when one student requires resources due to an Individualized Education Plan (IEP), that resource can positively affect all students in the shared classroom, like technology or paraprofessional support (Gottfried, 2014). Gottfried also acknowledged the challenges students with disabilities pose to classrooms running smoothly, namely disruptive dysregulation episodes (2014). Gottfried's data aligns with Abry et al. (2017) and Lopes et al. (2012), going on to explain that students with externalizing behaviors can induce disruptive behavior from peers, stop the learning of other students, and hyperfocus the teacher's attention on just one student for prolonged periods of time (Gottfried, 2014). The results from the study showed that regulated students who interact with peers who have dysregulatory episodes had increased externalizing and internalizing behaviors and lowered self control (Gottfried, 2014). Gottfried explains that disruptive behaviors induce other dyregulations through social learning (2014). Also, the teacher's attention is diverted, so there are more opportunities for students to get off task and externalize, though it is noted that experienced teachers have fewer instances as compared to inexperienced teachers (Gottfried, 2014).

The results from three separate but recent (2012, 2014, 2017) studies suggest that students who experience dysregulatory episodes can negatively impact their peers' behaviors. This can be caused by the marginalization of certain students and a lack of resources for schools and families alike. Detrimental modeling of behaviors continues to be a large concern amongst educators, but also worries about safety arise.

Lowered Feelings of Safety and Security

Berg and Aber (2015) covered the impacts of dysregulation on peers, specifically fear and school climate. This study's first purpose was to determine what factors trigger the feeling of fear at school in elementary students. The second was to distinguish which characteristics of the school climate make a child feel that their environment is negative (Berg & Aber, 2015). The sample used in the study came from 83 different elementary schools and 311 different classrooms, there were 4,016 fourth grade students involved, 51% were female, 49% male. Children in the fall were asked to assess themselves on a questionnaire in the categories of behavior, academics, and peer relationships. Additionally, they were asked about their teacher's competence and school climate, plus interpersonal relationships. Teachers and parents completed the same questions regarding the students in the fall. The same questionnaires were given in the spring (Berg & Aber, 2015). Berg and Aber found that girls, in general, feel more afraid at school than boys; they also found that those of lower academic ability felt more fear (2015). Unsurprisingly, if the student had been previously victimized, they too had higher levels of fear (Berg & Aber, 2015). It was proven that students that showed higher levels of empathy and social competence tended to feel less afraid and have higher interpersonal and positive school climates (Berg & Aber, 2015). Overall, engaged students rated their school climate higher, whereas, in schools with a low level of teacher and student engagement, the climate was rated more negatively (Berg & Aber, 2015). This could be due to student misbehavior negatively impacting peers by social learning, meaning they saw misbehavior, that misbehavior wasn't properly managed, and others decided to try the same behavior (Abry et al., 2017). In schools with a high level of teacher and student engagement, the climate was rated positively only by students who were engaged; the disengaged students rated these climates most severely, probably

because it emphasized how different they were in comparison (Berg & Aber, 2015). Due to the above conclusion, the authors emphasize the need to promote school climate reform, but with the caution of looking into the contextualization of students, their backgrounds, and safety. Notably, the connection between teachers and students is highly important towards both feelings of safety and a positive school climate (Berg & Aber, 2015).

As mentioned, victimization lowers feelings of safety and security. It is well known that students with disabilities tend to be participants in some way with bullying, whether it be victim or perpetrator (Rose & Espelage, 2012). However, there is contradictory information on how these situations play out; some people claim that students with disabilities are more likely to be the victims, whereas others believe that they are the perpetrators (Rose & Espelage, 2012). Rose and Espelage include recent research saying that bullying isn't black and white, bully and victim, but instead that students can move between roles depending on the situation (2012). Regardless of how bullying plays out, students with disabilities represent a large portion of the students involved in bullying cycles; in fact, students with disabilities engage in bullying twice as much as students without disabilities (Rose & Espelage, 2012). This could be due to the fact that students with disabilities may have observable differences, lower functional level, or be pulled from peer social interactions to receive services, making them feel less a part of the group and more like an outcast (Rose & Espelage, 2012). Additionally, Rose and Espelage point out that for students who have an Emotional Behavioral Disorder (EBD), they have lower social skills, higher levels of reactive emotions, and can accidentally attribute hostile characteristics to their peers' non threatening behaviors, becoming the aggressor (2012). As far as becoming the victim, students with disabilities can have lower social cognitive levels and not understand that they need to navigate away from a potentially threatening situation or unknowingly become

repeatedly involved without the problem solving skills to get out (Rose & Espelage, 2012). Rose and Espelage studied the issue of bullying by using 163 middle school students, half with identified disabilities and half without (2012). To collect data on bullying, teachers and students were given surveys to complete and researchers analyzed the data to find bullying and subset outcomes (Rose & Espelage, 2012). The study aimed to find out if students with disabilities engaged in higher levels of bullying (victim versus aggressor), and when those disabilities were broken down into subsets, where did students with EBD disorders fall (Rose & Espelage, 2012). Rose and Espelage found that indeed students with EBD disorders have higher instances of being the aggressor and perpetrating bullying behaviors, whereas other disabilities tended to be victims (2012). Interestingly, the study found that often many students with disabilities (including EBD, learning disabilities, speech deficits, etc.) engage in bullying behavior to avoid being victimized again, as a protection to themselves (Rose & Espelage, 2012). Rose and Espelage speculate that students with EBD or disabilities that lower social awareness may be labeled with bullying behaviors, but are in actuality reacting to stimulus that was unobserved, also known as reactive aggression (2012). In fact, students with disabilities reported feeling high levels of rejection and fear of being victimized (Rose & Espelage, 2012). The study at hand lends itself to the idea that more direct instruction on social interactions and more classroom acceptance of disabilities is needed.

In summary, the safety and security of students with disabilities and students without, both of whom are at risk, are incredibly important to the makeup of the classroom community. Teacher engagement and school climate is also a variable to students' perceptions of security, which leads to the idea of using dysregulation and disabilities to promote positive social interactions.

Positive Opportunities for Social Emotional Learning:

To combat the above noted issues surrounding educating all students, it is important to seize resources available. Namely, using dysregulation episodes as teachable moments, developing social interactions between all students, and teaching to and accepting disabilities.

Using Dysregulation Episodes as Teachable Moments

As noted earlier, the relationships between teachers and students are highly important. Milsom advises on how to include and embed students with significant disabilities into the mainstream classroom (2006). While she doesn't conduct original research, her research driven insights into positive strategic inclusion are powerful and relevant. Students with disabilities are traditionally viewed more negatively than their regular education peers, and emotionally or behaviorally disabled students receive the brunt, both from teachers and classmates (Milsom, 2006). This is due to the fact that they tend to intervene with the learning of other students in a visual and audible way (Milsom, 2006). Negative staff attitudes tend to lead to lowered academic expectations and higher behavioral incidents (Milsom, 2006). As for classmates, students with behavioral and emotional disabilities receive higher levels of exclusion and bullying; basically, peers see dysregulation and don't want to have anything to do with it, so try to 'escape' the situation by victimization or by isolation (Milsom, 2006). In a culmination of all these struggles, Milsom advises education for all members of the school community. Interestingly, school staff who have higher levels of training for disordered behavior have overall more positive attitudes toward difficult students and are more willing to work closely with those children (Milsom, 2006). This includes professional development on coordinating social interactions between students identified as disabled and regular education peers (Milsom, 2006). In order to help peers understand their diverse classmates, collaborative groupings are advised when the student is

regulated to form bonds and positive connections (Milsom, 2006). When the student has a dysregulated episode, it is recommended to have students generate ideas of why that student might be acting that way instead of ignoring the behavior (Milsom, 2006). On top of that, having students watch a teacher engage and interact with that student empathetically will develop social cues for later when an adult may not be readily available (Milsom, 2006). Also, assuring all regulated and dysregulated students that the behavior is not acceptable will establish high expectations and reduce mimicry (Milsom, 2006).

Besides teacher modeling and collaborative groupings, Davis and Levine promoted two key ways to handle strong emotions for both regulated and dysregulated individuals. When faced with strong emotions, children will more likely gravitate to their strong negative feelings than toward neutral information like mathematics, so learning coping mechanisms is extremely important to education (Davis & Levine, 2013). Prior research has proven that children naturally start developing coping strategies at the age of five to thirteen, usually using distraction to get away from negative emotive thoughts (David & Levine, 2013). In Davis and Levine's study, they focused on the strong emotion of sadness or grief and intended to find out which strategy increased educational memory the most after a sad incident (Davis & Levine, 2013). Reappraisal and rumination are the two strategies Davis and Levine measured for effectiveness at enhancing memory after sadness (2013). Children instructed to ruminate, or think deeply, on a video they viewed had high memory connections; however they also had heightened feelings of sadness and less ability to move on afterward (Davis & Levine, 2013). Those asked to reappraise the sad parts of the video, or look at it in a new light or different lens, showed high levels of memory and lower feelings of sadness. They also showed high levels of engagement from students with low emotion regulation, which may prove to be an effective strategy moving forward (Davis &

Levine, 2013). The control group, who was given no instruction on how to process the film, showed the lowest ability to remember and average levels of sadness (Davis & Levine, 2013). These findings point to reappraisal, or reframing of a high emotional moment, as highly useful to a student's ability to minimize negative emotions and be able to learn and remember after. Of course, there are limitations, namely the use of the negative emotion sadness - fear, anger, and aggression are the focus dysregulatory emotions. However, this reappraisal strategy lends itself towards helping students find a healthy way to reestablish control of wayward emotions.

Another circumstance of teaching to dysregulation is teacher acceptance of students who suffer from dysregulatory episodes. In fact, students that don't meet expected behavior criteria have reduced teacher relationships and lowered academic performance (Meier et al., 2006). Teacher expectations morph and change throughout elementary school, but overall it was found that teachers expect (but do not necessarily teach to) cooperation and self control in all grade levels, advancing in upper grades to the ideation that all students should also possess the ability to follow all teacher requests and control anger (Meier et al., 2006). This leads to detrimental interactions in academics and in building relationships. It was found that throughout the entire year, the high behavior expectations remained whether or not a teacher actively taught to those expectations; meaning when it wasn't directly taught there was a heightened feeling of stress in the classroom when the student didn't exhibit new regulation skills (Meier et al., 2006). Assertiveness was found to be a less valuable personality trait, as it tended to signify independence and challenge from students (Meier et al., 2006). In fact, 80% of teachers interviewed by Meier et al. ranked following directions and controlling temper as top priority, which dysregulation challenges (2006). To prevent students from having reduced teacher

relationships and lowered academic performance, dysregulation must be viewed with a compassionate eye and interacted with directly.

Ignoring dysregulatory episodes is not helpful to the students experiencing high emotions or the students witnessing the scene progress. Students need to see empathetic modeling, have intentional collaboration when regulated, hear inclusive language, and potentially use reappraisal strategies after the event concludes. Another area to explore is how to purposefully develop social interactions between all students so that these outcomes become possible.

Developing Social Interactions Between All Students

Lately, a trend in education has been to focus on Social Emotional Learning, referred to as SEL. SEL is how a student (or person) uses social and self-awareness, self-management, relationship skills, and decision making in their daily lives (McKown, 2017). Of course, different systems of SEL can include various other components, but three major branches of SEL exist: thinking, behavior, and self-control. In his research, McKown used SEL assessments on children and found that social-emotional awareness heightens with age, that general education students perform more highly than clinically diagnosed children, and that social emotional thinking or comprehension is directly linked to behavior (2017). For example, a student that is highly aggressive with peers will also not understand that his/her behavior could be the cause of having fewer friends, whereas students that are more moderated in behavior tend to understand those complex relationships (McKown, 2017). Lopes, Mestre, Guil, Kremenitzer, and Salovey also explore social interactions between students and the impacts on school (2012). Teachers interviewed stated that anywhere from 30-90% of their entire job stress and subsequent teacher exodus could be caused by dysregulated students and their inability to control their emotions

(Lopes et al., 2012). Clearly, emotional regulation is important to ensuring both teacher and student success in school.

Emotional regulation has its positive outcomes: high motivation, longer attention span, high levels of learning, and expected social interactions, just to name a few (Lopes et al., 2012). Emotional dysregulation has equal, if not more, negative side effects: unsatisfactory decision making, low cognitive retention, stifled processing, and poor social interactions (Lopes et al., 2012). This enhances the need for positive teaching and social interactions between all students. Lopes et al. emphasize that as youth grow older, their bouts of dysregulation ultimately lead to more and more poor social competencies and antisocial behaviors (2012). Hostile attributional bias, also mentioned by Hudley and Novac (2007), comes into play here as well. Students may interpret something seemingly innocent as aggressive and react too strongly (Lopes et al., 2012). Lopes et al. conducted three related studies using 150-204 high school students, one on predicted situational emotional management, another on classroom situations and managing emotions, and the third on managing emotions in various, unprecedented situations (2012). It was found, unsurprisingly, that students who rated highly on managing emotions also were ranked favorably by teachers, girls especially (Lopes et al., 2012). As expected, instances of disruptive behavior also correlated with lower levels of emotion management skills (Lopes et al., 2012). Overall, the consistent findings were that emotional intelligence corresponds with successful peer and teacher interaction. As evidenced by the data, prosocial behavior (as is taught in elementary school) leads to more emotion regulation and fewer behavior incidents in later life and is a predictor for longitudinal success. Additionally, Rose and Espelage claim that proper classroom acceptance, meaning independence for students with disabilities, peer relationships, and positive self talk

have proven to lessen victimization (2012). Developing appropriate classroom etiquette towards all social interactions shapes a student's way of acting in the future.

The long term positive effects of SEL are far reaching. A recent study (2021) done by Tur-Procar et al., showed that schools that implemented regimented SEL curricula experienced higher engagement from students, increased academic performance, and most importantly, curbed aggressive and antisocial tendencies in identified students. The benefits extend into teenage years and adulthood as well, showing a reduction in crime association, school dropout, and drug use (Tur-Procar et al., 2021). The study used 555 students ages seven through twelve and their teacher. Some teachers were trained in the SEL curriculum and explicitly taught half of the students involved, whereas the other half of students and untrained teachers were the control group (Tur-Procar, 2021). How SEL targets the brain is astonishing; students that have high cognitive ability tend to have more control over executive functions, leading to more regulation of the prefrontal cortex, where decision making happens (Tur-Procar et al., 2021). When schools consistently implement SEL, learning and behavior expectations are communicated and enforced, creating a more calm learning environment. This naturally emphasizes inhibitory control through social learning, which activates higher levels of executive function, thus leading to more students moderating their actions through their prefrontal cortex (Tur-Procar, et al., 2021). Dysregulation, of course, can still occur but it happens less, which is the ultimate goal of any SEL program.

To ensure that students who experience dysregulation have positive social emotional learning, teachers need to develop ways to grow students socially. It starts when they are young and in elementary school by using targeted SEL, and it will continue to benefit them late into adulthood. Teachers, too, will benefit from less burnout and job exodus, which is a troubling

societal phenomenon. Onward into the world of teaching and accepting students with disabilities into the inclusive classroom.

Teaching and Acceptance of Disabilities

To promote high levels of socialization, educators need to teach acceptance of the varied disabilities students will encounter. Berry explored how teachers can use specific language choices and inclusive practices to not only positively impact students with disabilities, but to also embed empathy with regular education students (2006). She particularly emphasizes how inclusion is thought of; inclusion can just be sticking all the same aged students in a room together, but better yet, it can be engaging and reaching all the kids in that space (Berry, 2006). Classrooms should be thought of as engaging, safe, loving, learning, and nurturing spaces, but sadly, classrooms can accidentally call attention to certain disabilities and make students feel less than their peers or highlight how different they are (Berry, 2006). To address this, Berry's study reconnoiters community building and participation between all classroom subsets of students (2006). Berry used discourse analysis in a multi-age classroom, where she listened intently to recurring conversation items and analyzed the outcomes; these recurring phrases resulted in conversational norms for students and teachers (2006). It was found that during whole group instruction, students with disabilities who may have been marginalized accidentally, flourished and gained confidence in an inclusion-centered classroom where teachers used inclusive language and modeled acceptance (Berry, 2006). However, once small groups started, and the teacher's presence wasn't felt as strongly, normative students started excluding even with the modeling done in the whole group setting (Berry, 2006). Berry hypothesized that the societal stigmas around disabilities might be to blame, but there is no definitive answer (2006). There needs to be direct instruction on acceptance of disabilities, as in-the-moment modeling and

inclusive language isn't enough to carry over into small group settings, enhancing the need for the application portion of this thesis. Another point to note is that participation isn't a signal of engagement. Berry noted that students with disabilities showed bare minimum participation in situations where they felt excluded, so to a casual eye, would appear to be engaged but actually weren't (2006). The study's conclusion that explicit teaching on disabilities is needed, not just positive teacher modeling.

Blair et al. talk about how students develop socially and interact with peers, which may shed light on why modeling alone does not work (2016). Namely, they discuss how the start of the school year can impact the number of friends, number of peer disputes, and the likelihood of being included for the whole year (Blair et al., 2016). To do so, they recruited 338 children to participate in their 7 year old check in and 10 year old assessments (Blair et al., 2016). Mothers would fill out questionnaires about their children and teachers and peers would do the same. Students that were identified as showing aggressive behaviors tended to experience more peer rejection, and those that showed emotional regulation were accepted by peers, as expected (Blair et al., 2016). The authors state that students who show aggression and conflict are less likely to have strong peer bonds at the end of the school year unlike peers who show prosocial behaviors (Blair et al., 2016). A different study conducted by Tur-Procar et al. shows that students may initially be aggressive because it has become ingrained as a way to relate to others due to their early-life experiences (2021). Sadly, these students haven't had enough prosocial experiences to learn how to relate in a non hostile way, and may keep them up to maintain their status (Tur-Procar et al., 2021). Interestingly, when researching students' emotional responses and how that influences peer relationships, any emotional regulation mishaps, positive or negative, would cause peers to reject them. So whether it be extreme excitement or extreme anger, it would defer

potential peer friendships (Blair et al., 2016).   This study was designed to bring to light what key

emotional regulation or dysregulation would cause peer rejection or inclusion. Students that

were identified as showing aggressive behaviors tended to experience more peer rejection, and

those that showed emotional regulation were accepted by peers, as expected (Blair et al., 2016).

The implication of this research means that we need to teach students directly how to control

their emotions and strategies for regulation, plus repair any peer misconceptions about behavior.

The social fabric of classrooms is built quickly and impressions can be lasting and either

detrimental to students or restorative.

This immediate impression making a lasting archetype brings up the issue of

mainstreaming students and if it is beneficial to both the students with disabilities and their peers.

Hanushek et al. explore the benefits of mainstreaming special education students, including those

who are classified as Emotionally Behaviorally Disturbed (EBD) (2002). Opening with a

shocking statistic that educational spending roughly gives one-fifth of the budget to inclusive

special education programs, the authors created a study to find out the benefits for the expense

(Hanushek et al., 2002).   Hanushek et al. created a panel data set that followed specific students

with disabilities across their years of school, plus the programs they entered into, and analyzed

the resulting test scores and behavior trends (2002). For special education students, the results

were extremely positive for those labeled as Learning Disabled (LD) or EBD. The average math

scores went up and classroom performance and behavior also improved (Hanushek et al., 2002).

For their regular education peers, there was no evidence saying that having their disabled peers

mainstreamed detracted from their learning or performance (Hanushek et al., 2002). This does

contradict the later research done by Gottfried (2014), which states that students show lower non

cognitive performance and by Fletcher (2009), who found that cognitively students regress when

in inclusive classrooms of high needs. Interestingly, teacher performance accelerated; Hanushek, Kain, and Rivkin have some theories for this including the co teaching and collaboration required for including special education students (2002). Another idea is that to teach higher needs students, teachers grew their toolkit and adopted more and varied means of instruction (Hanushek et al., 2002). The net positive results from mainstreaming suggest that it is highly valuable.

Inclusive practices were once scrutinized, and indeed students with disabilities were once kept separated from their peers. The time for that has ended. Teachers and students need to learn to accept their peers, which in turn means they need to learn about their fellow humans and associated disabilities. The issue of speaking about disabilities should no longer remain taboo, but instead be embraced into the folds of classrooms, reappraised to add value, and lovingly included in classroom discourse.

CHAPTER III: APPLICATION OF THE RESEARCH

Rationale

Regulation, or the ability to manage and choose appropriate emotional responses is supposed to be the norm (Eisenberg et al., 2000). However, trends of dysregulatory behavior are on the rise in most schools across the United States of America, leading to the quandary of how to best handle these unpredictable situations (Eisenberg et al., 2000). One such resource could be a children's book explaining what dysregulation is and what can cause dysregulation. The research backs the idea of reading a children's book to elementary aged students.

Inclusive practices are extremely beneficial to students receiving special needs services; their math and reading abilities improve, their social awareness heightens, and their behavior gets a boost (Hanushek et al., 2002). However, the impact on regulated peers is not always so benevolent. Parent and educator concern around dysregulatory behavior is founded since regulated students feel fear and uncertainty, ranking the school climate lower (Berg & Aber, 2015). On top of that, poorly managed misbehavior can create detrimental modeling leading to more students acting inappropriately and wasting learning time (Abry et al., 2017). Teachers can hyperfocus on one child or a small group of misbehaving students, leaving regulated peers to self-teach or find other things to occupy their time (Gottfried, 2014). On top of feelings of safety and poor behavior choices, students can also suffer academically. Where their peers receiving special education services excel with inclusive practice, regular education students showed receding math and reading scores comparatively (Fletcher, 2009). This could be due to classroom climates or mismanaged case loads, however it is far from conclusive. To prevent the regression of regulated peers, and increase feelings of safety, security, and behavior performance, teachers need resources. This book addresses the need to feel safe, giving students an example of

what dysregulation looks like and laying out the reasons for dysregulation in a child-friendly way. Due to confidentiality, teachers normally cannot discuss why dysregulation happens. The book would serve as a replacement, giving examples without discussing specific students. This would reduce feelings of fear, as they would know the causes and have some notion of how to handle the situation. Once students feel secure and safe, and teachers are given resources, researchers believe that the loss of learning time and overall adherence to academic times would be resolved, hopefully improving math and reading scores (Behar-Hortenstein et al., 2006). The book would reassure children and give them much needed answers instead of just general confusion, provide more learning time, and it would also build their empathy and resilience when dealing with peers who don't always act predictably.

We shouldn't just consider regulated students, but also the children suffering from dysregulatory episodes. Students showing dysregulation can be suffering from classroom level adversity, meaning their home lives already provide struggle (Abry et al., 2017). Then, they enter classrooms with high amounts of cortisol and a lower tolerance for environmental obstacles (Evans & Kim, 2007). Sadly, this can lead students to believe that ill-will is intended in peaceful situations and react aggressively, also known as hostile attribution bias (Hudley & Novac, 2007). Not only does this make peers fearful, but it can increase their chances of becoming victimized (Sullivan et al., 2012). Students with diagnosed disabilities tend to perform lower than their peers in social and emotional areas, leading to low self-confidence and self-efficacy (Sullivan et al., 2012). On top of that, they can also have poor executive functioning, which lowers their inhibition control, memory, and cognitive flexibility, all of which are needed for peer interactions (Tamm et al., 2021). Due to all of these obstacles, students with disabilities tend to engage in the bullying cycle more often than regular education peers, usually first as a victim, then as a bully

(Rose & Espelage, 2012). One of the targets of the children's book is to humanize students with disabilities, as often children stereotype quickly. In fact, students make decisions quickly and can exclude or include certain peers for the entire school year based on a single incident (Blair et al., 2016). In the book, students would get to see the "behind the scenes" of the student with dysregulation; the embarrassment, regret, and obstacles hindering their good intentions. Often, children are removed from the space and the child having the externalizing behavior, so they do not see the after-effects and the shame, but instead only see the anger or defiance, leading to their quick character assessments. This book not only shows that, but a different than usual home life, and reasons why the student may be misbehaving. This hopefully will lead to empathetic thoughts surrounding their dysregulated peer, instead of fear and resistance.

Finally, it would benefit teachers and build their toolkit. Teacher expectation and attitudes have a tremendous effect on students, their behavior, and their achievements (Meier et al., 2006). Notably, teachers with higher levels of education and resources form deeper bonds, feel better about their jobs, and generally have more success in their classroom (Milsom, 2006). However, teachers are struggling with misbehavior and defiance in classrooms, and name that as a top reason for wanting to find new employment (Lopes et al., 2012). It has been proven that higher emotional intelligence lowers dysregulatory tendencies, improving both teacher and student success in classrooms (Lopes et al., 2012). To do this, social emotional learning and teaching needs to be prioritized (McKown, 2017). Classrooms that used inclusive language and literature showed high student growth and acceptance (Berry, 2006). Not only that, but teachers who intentionally use reappraisal strategies increased their students' educational memory, leading to higher test scores and student ability (Davis & Levine, 2013). Reappraisal is when you take a stressful situation and look at it in a different lens, or think of it in a different way

(Davis & Levine, 2013). This book is a reappraisal strategy. It takes the stressful situation of dysregulation, and applies new characters, but the same principals to the situation, allowing students to ask questions, deeply discuss the issue without fear of hurting feelings, and ruminate on what they just learned.

Explanation of Project

The project is quite simply a children's book; a children's book with the expected colorful illustrations, deep prose narration, and double-spread layout. But what is unexpected is the content it covers, specifically the discussion questions intended to elicit student responses surrounding the instance of dysregulation. As mentioned in the earlier Rationale section, reappraisal is a strong strategy encouraged by authors Davis and Levine to help students overcome strong emotions (2013). The book was designed to allow students to think back to recent or past experiences with dysregulation and reframe it in their minds. Milsom reminds educators that children are prone to thinking of fellow students with externalizing behaviors in negative ways (2006). The book was written with the express purpose of humanizing externalizing behaviors and giving the reader insight into what is unseen in others' lives. The hope is that students gain empathy surrounding their classmates' bouts of dysregulatory behavior.

The storyline follows Justin, a boy who has a dysregulatory episode, Amira, a girl who is regulated most of the time and feels confusion over Justin's reaction, and their teacher Ms. Jones. It cuts into a student-friendly definition of dysregulation and gives bite-sized reasons of why students may act in dysregulated ways. The next page gently tells the emotional impact dysregulation has on students and possible social outcomes. Then it comes back to the storyline and follows the children and teacher home, giving insight into the different ways 'home' can look. Finally, it ends with Amira inviting Justin to play and Ms. Jones holding What's

Dys(regulation)?, this book, in her hands giving credence to the idea that the class read the book and understood more about their classmate, Justin. Each double-page spread contains at least one, but most of the time two, discussion questions that encourage students to think deeply about their own experiences with dysregulation.

Please see Appendix A for the full children's book, titled What's Dys(regulation)? Its illustrations are the original work of Haley Anderson.

Audience

For teachers, this book may serve as a planned social emotional lesson, where you have an intended class discussion around what dysregulation is and that it might happen during the school year. Otherwise, it may be used as an impromptu lesson after a student has had a large dysregulatory episode, perhaps one that required the class to evacuate, and the children are confused. Either way, the intended use is for teachers to have a hassle and planning free resource that comes with discussion questions embedded and addresses a tough issue.

For students, this book will do one of two things. Either it will reassure students with dysregulation that their behavior happens to others, too. While dysregulation needs to be addressed and given resources, it also is extremely common. The other perspective is for regulated students, to reassure and give them tangible reasons for and examples of dysregulation. Often these students are told to ignore 'bad' behaviors and are never given an explanation of why they are happening. This will serve as a reflection tool and give them answers to tough questions without disclosing any confidential information on specific students.

Likely, this book will not be a family or parent resource as it addresses a school need and was designed for school use. However, it is possible that parents with multiple children, one of

whom has externalizing behaviors, may find comfort in this book as it would show all their children that dysregulation happens to others, not just within their immediate family.

Resources

For people wanting to utilize the application portion of this thesis, they will simply need to purchase the children's book. The time needed is equivalent to a read aloud or character education session of the school day, and it can be broken into smaller readings if necessary. All in all, with discussion, it should take around thirty minutes to fully read and explore this book. Educators, school staff, students, parents, counselors, social workers and more can utilize this book either by reading it aloud or to self.

Sustainability

Once this book is purchased, it can be used repeatedly in classrooms or homes. Whether it be a well-loved read aloud that the class revisits multiple times in one year, or once in a special lesson time, this book does not have an expiration date. The hope is that this will become one of those books that teachers treasure throughout their entire careers, that when they open the wizened pages with small tears and well-loved corners, they get a sense of comfort and familiarity. Another dream is that children, once they become adults, will find an old copy of this picture book and get excited at the memories of having it read aloud to them as little kids. Books don't go bad, rather they find niches and little homes in classrooms, on shelves, in libraries, and most importantly in the hearts of readers.

CHAPTER IV: DISCUSSION AND CONCLUSION

Summary of Research

Dysregulation is one of the top concerns of educators, peers, and parents alike. It can manifest in many ways: externalizing (tantrums, aggression, verbal outbursts…) or internalizing (anxiety, depressive episodes, negative self-talk…). As Eisenberg et al. state, the numbers of students that suffer from frequent dysregulatory episodes are on the rise (2000). There are many reasons for this, including classroom level adversity or situations in which students are already disadvantaged before even arriving at school and respond to school-related stressors in dysregulated ways (Abry et al., 2017). A top impetus includes high needs to low resources in households; poverty and low socioeconomic status combined with disadvantaged schools can lead to high levels of CLA (Abry et al., 2017). These home level stressors combined with neglect or parental abuse can lead to neurobiological brain imbalances (Hudley & Novac, 2007). As children's brains are conditioned with high levels of cortisol and other stress hormones, they will produce less tryptophan which regulates anger and violent impulses leading to higher instances of externalizing behaviors (Hudley & Novac, 2007). Additionally, these same stress hormones can heighten blood pressure and induce chronic stress instincts, which will lower tolerance for environmental triggers (Evans & Kim, 2007). On top of home life, students can be victimized at school by peers and experience hostile attribution bias or the belief that all peer altercations have harmful intent (Hudley & Novac, 2007). Sullivan et al. insist that students with diagnosed disabilities have higher levels of peer aggression due to hostile attribution bias and prior victimization (2012). Sadly, diagnosed disabilities account for lower social functioning and heightened levels of peer rejection without intentional adult support (Sullivan et al., 2012). This could be due to poor levels of executive functioning, which is required for inhibition control,

memory, and cognitive flexibility (Tamm et al., 2021). Besides parents, peers, and disorders, Hudley and Novac caution that their community influences can also be negative, causing hypervigilance and low levels of feeling safe (2007). In summation, dysregulation is complex and stigmatized with a variety of causes. Its complexity does not just impact the student himself but extends to peers.

Dysregulation has been shown to impact peers in classroom settings. With the advent of inclusion in 1990 after IDEA passed, there has been speculation around the loss of learning time due to externalizing behavior incidents (Fletcher, 2009). Behar-Hortenstein et al. found that about half of instructional time is interrupted and researched the causes (2006). They found that teachers interrupt class time the most, but dysregulated students are a secondary cause (Behar-Hortenstein et al., 2006). Sadly, it was found in a different study that students in inclusive classrooms with EBD peers had lowered reading and mathematics scores, leading to worry that dysregulated students are detrimental to conducive learning (Fletcher, 2009). Part of the reason dysregulation is felt strongly in classrooms is the idea of social learning and mimicry, also known as detrimental modeling of behaviors (Abry et al., 2017). Students will see another student misbehaving and try a similar behavior, effectively creating a domino effect (Abry et al., 2017). This same concept can be applied in positive situations such as anger management or empathy; students rely on the social nature of behavior heavily in younger years and mimic or attempt similar behaviors (Lopes et al., 2012). Gottfried reminds educators that there are many positives to inclusion, such as more resources, technology, and adult support, but ultimately agrees with the detrimental effect dysregulation has on peers (2014). Likewise, dysregulation can cause lowered feelings of safety and security. It was found that students of low academic ability, students that had been previously victimized, and female students felt more fear at school

(Berg & Aber, 2015). Rose and Espelage found that students with identified disabilities tended to be involved in bullying far more often than regular education peers; there is speculation for that including hostile attribution bias, previous victimization, and status upkeep (2012). These findings directly correlated with Berg and Aber's (2015) results of students with disabilities feeling more fear at school, creating a need for positive social emotional learning.

Social emotional learning is on the upward trend in most schools. Milsom states that teachers with higher levels of education around emotional and behavioral needs were more compassionate, had better relationships, and had more successes than teachers with lower amounts of education (2006). She also advises that teachers model expected discourse and reactions to dysregulation and provide opportunities for collaboration when all students are regulated (Milsom, 2006). Besides modeling and collaboration, authors Davis and Levine explored coping mechanisms for students either dealing with dysregulation themselves or experiencing a peer's dysregulatory episode and found that reappraising the situation, meaning to reflect and view it in different perspectives was extremely helpful to move past large emotions such as sadness or fearfulness (2013). All authors agree that teacher acceptance of students with disabilities is crucial to all pivotal learning. Meier et al. found that teachers who lower expectations for students with disabilities see more behavioral outbursts and lower academic performance (2006). Social Emotional Learning (SEL) lessons on emotional intelligence, especially the three main branches of thinking, behavior, and self control can vastly improve classroom climate (McKown, 2017). McKown found that students naturally grow their social intelligence, but that direct instruction on SEL tenets improved their behavior (2017). Lopes et al. echo that thought, stating that students with unchecked dysregulation will experience more and more bouts of behavior incidents, but with direct instruction the latter lessens (2012). Rose

and Espelage also note that prosocial behavior prevents future victimization and bullying (2012).

Teaching emotional intelligence works because it causes a change in the prefrontal cortex to

filter more information through the frontal lobe, or decision making center, of the brain

(Tur-Procar et al., 2021).   In summary, the more directly educators teach to dysregulatory

episodes and handling emotions, the higher students' success will be.

 Lessons aren't the only thing that should be considered, but also the inclusivity of the

classroom. Berry states that inclusion isn't just sticking the same aged children into a room

together, but instead purposefully engaging and creating relationships with those students (2006).

She found that students understand the stigmas associated with their disability, so teachers need

to intentionally use inclusive language and be mindful of their own attitudes (Berry, 2006). Peer

rejection or inclusion happens quickly at the start of the year and has lasting effects (Blair et al.,

2016). Students with disabilities who flourish in a carefully cultivated inclusive environment

show high amounts of growth in reading and mathematics (Hanushek et al., 2002). Students

aren't the only ones who benefit, as Hanushek et al.'s study proved that teachers of highly

diverse classrooms showed increased skill sets and resilience (2002). The inclusive classroom

can benefit everyone if the proper education and emphasis on social emotional learning are

promoted.

Limitations of the Research

The first limitation involves the impacts of inclusivity in general education classrooms

due to the mixture of student disabilities. In the research done by Sullivan et al. (2012), Rose and

Espelage (2012), and Fletcher (2009), all disabilities were grouped as a lump unit with no

differentiation of speech, learning disabilities, Autism, or emotionally behaviorally disturbed

categories. It was difficult to ascertain the impacts of externalizing behaviors on regular

education peers, specifically EBD students, due to researchers lumping any disability together. Likewise, in instances of seeing growth or positive impacts on students with disabilities, they were also grouped together as a unit, so it was hard to tell the specific impacts on students with EBD classifications.

Another limitation was the instance of students who are zoned to go to low income schools, thus increasing levels of CLA in classrooms of disadvantaged schools (Abry et al., 2017). It is a commonly known phenomenon in the education world that students who tend to have high needs to low resources also live in neighborhoods that are zoned to go to disadvantaged schools. These schools also tend to have teachers with lower education levels and experience, which directly interferes with Milsom's (2006), Hanushek et al.'s (2002), and Berry's (2006) research that proves higher teacher education, experience, and intentional training benefits both teachers and students. Increased levels of CLA in classrooms due to zoning and funding insufficiencies could directly impact research on dysregulation due to the domino effect mentioned in Abry et al.'s (2017) research, creating higher amounts of dysregulation in classrooms.

Finally, when researching, it was a disappointment not to find averages of instances of dysregulation in classrooms. The hope was to put a number on how often an average classroom has to stop learning to deal with a dysregulatory episode. Another missing puzzle piece was how many students suffer from dysregulation on a frequent basis. National averages of this kind would be interesting and helpful to glean, as the application portion is directed at these populations. The pool of research was limited because EBD students are chronically understudied, as Fletcher (2009) stated.

Implications for Future Research

As researchers and educators alike seek to better handle and understand dysregulation, its causes, and its impacts, there remain some unanswered questions. The first, mentioned in limitations, is to find out how many students on average suffer from dysregulatory episodes on a frequent basis? Determining a national average would be helpful. Because of these episodes, how often do general education classrooms have to stop teaching content? Furthermore, there has been significant research on how to teach SEL tenets and the benefits we see in classrooms. However, one has to admit that most causes of dysregulation stem from high needs to low resources and home life instances, which brings to mind a grassroots line of thinking. How do we address the underlying cause and support families in crisis or need? Intervention at school is an amazing goal, but the trauma that feeds dysregulation continues. How can we support families in need?

Conclusion

How does dysregulation of one or multiple individuals impact the overall classroom climate, the acquisition of learning for regulated students, and development of all social interactions? These questions guided the research of over twenty peer reviewed, academic journal entries to find the causes and impacts of, and how to teach to dysregulation. They also guided the writing of a children's book to help dysregulated individuals and their peers reappraise recent episodes in their classrooms.

The hope is that one day the causes of severe dysregulation are prevented altogether, but in this timeframe we need to collectively use the resources at our disposal. Teachers need to be sufficiently educated on how to handle emotionally behaviorally disturbed students and treat them with dignity and acceptance. Peers need empathy to learn alongside unique students. The

application portion of this thesis is intended to help both along the path toward ultimately understanding the diversity that is grown in schools today. As a classroom teacher, I want to do everything I can to make each and every student, regardless of disability, feel that they hold value and positively impact our classroom community.

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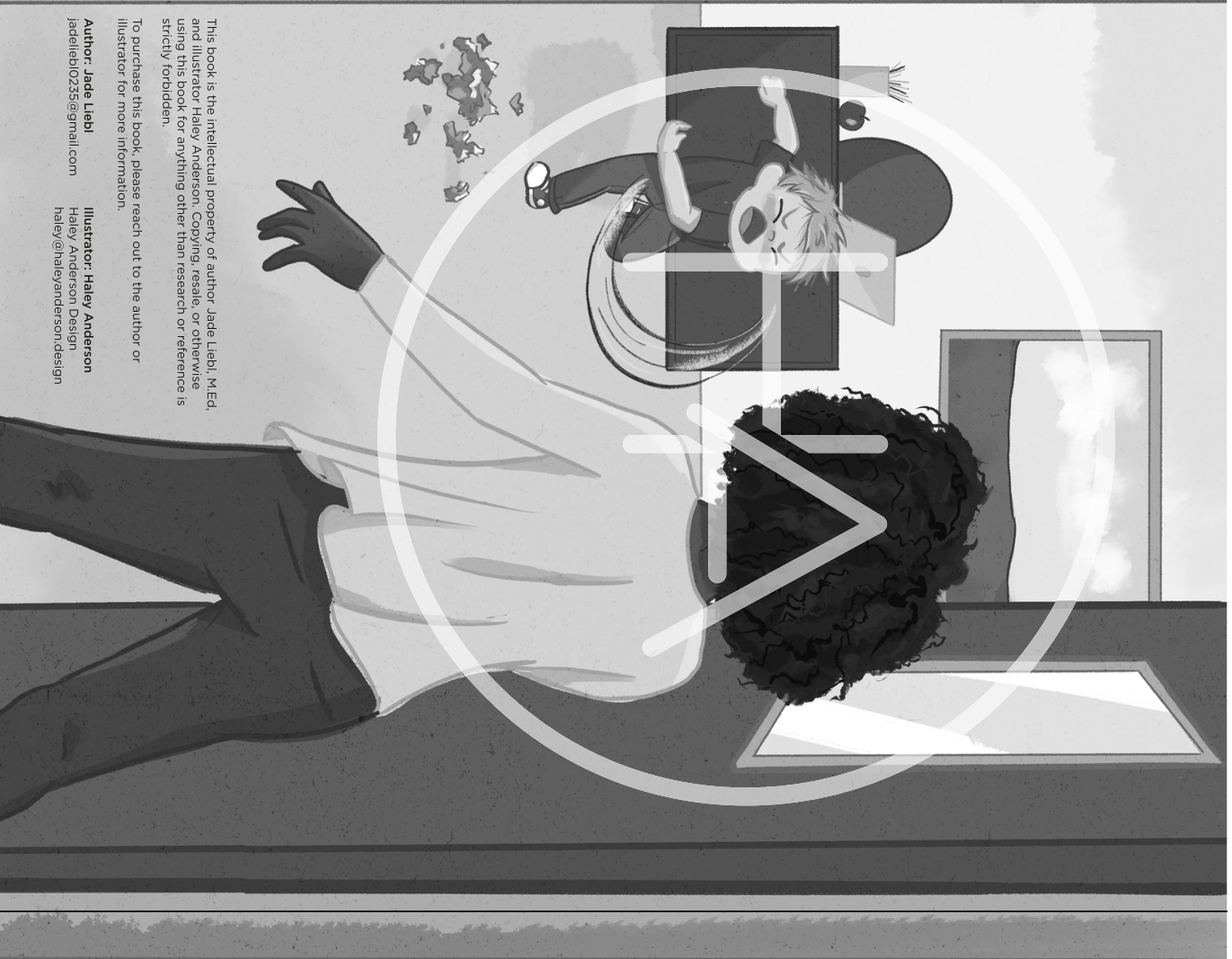
Today was a bad day.

Our teacher, Ms. Jones, had this super cool marine mammal presentation, but Justin wouldn't stop blurting and interrupting her. She asked him to stop blurting, and he totally lost it. He started screaming and throwing things for no reason and wouldn't stop! It was really scary. Ms. Jones finally told our class that we should give Justin privacy and brought us to the hallway. We just had to stand around until he calmed down. This isn't fair – no one else gets to act like this! Today was a really bad day.

Have you ever experienced a moment like this?
How do ALL the people in the situation feel?

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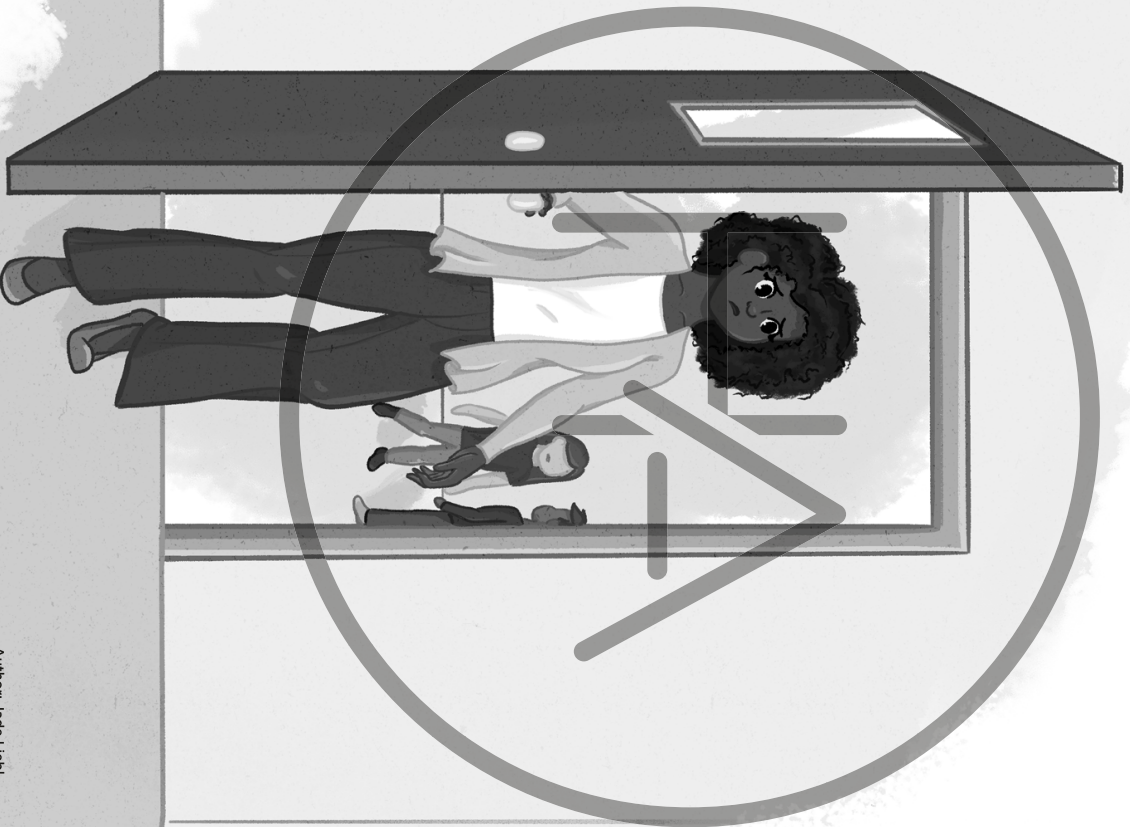
Today was a bad day.

Ms. Jones had this great lesson on marine animals that I finally knew something about! My dad and I watched a show on it, so for once, I could answer questions. I got so excited I kept blurting, and then Ms. Jones got frustrated and called me out in front of the class – it was so embarrassing! All of a sudden, I got so mad, and it was like I lost control of my body. I was throwing things, crying, and yelling, and that was even more embarrassing, and it just kept going even though I wanted it to stop! They all left me alone. Today was a really bad day.

Did this page surprise you? What things were unexpected?
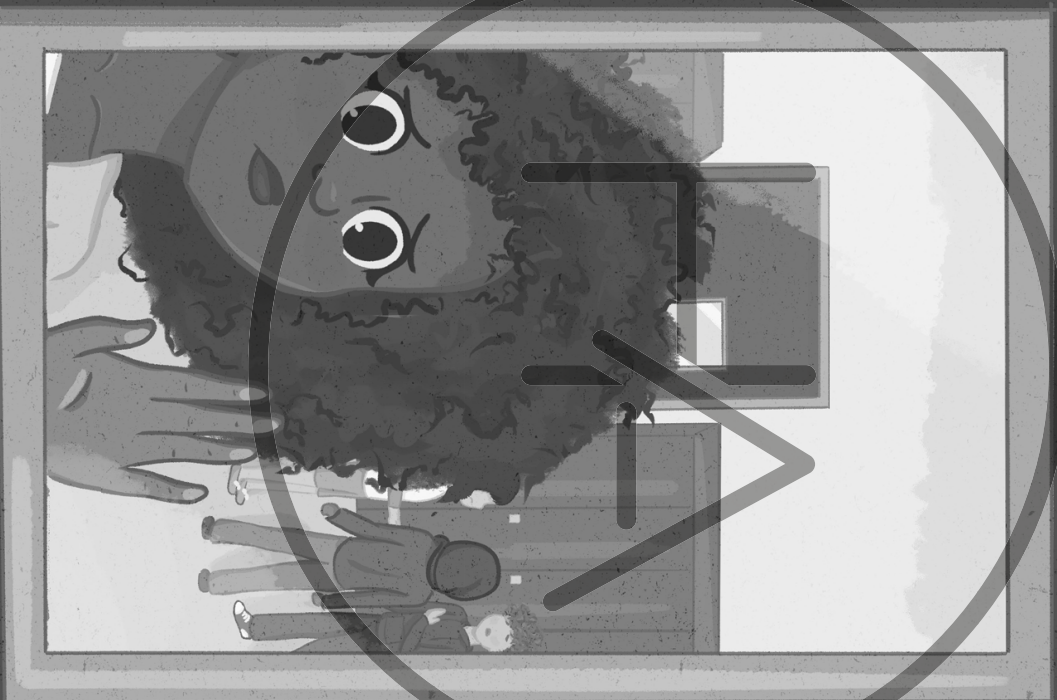
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Today was a bad day.

I was doing a science lesson when Justin started blurting. I could tell he was excited, but he was interrupting, so I told him to stop. I guess that was the wrong thing to say because he had an absolute meltdown, and nothing I did calmed him. Since he was throwing things, I finally had to leave him alone and take the rest of the students out into the hallway. I don't know how I could have prevented this or how to help him now.

Today was a really bad day.

Why is the teacher 'in the middle' in this illustration? Who should she pay attention to?

What's Dys(regulation)?

Well, dysregulation can look like what Justin just displayed because it is when kids lose control of their emotions. There are a lot of reasons for dysregulation.
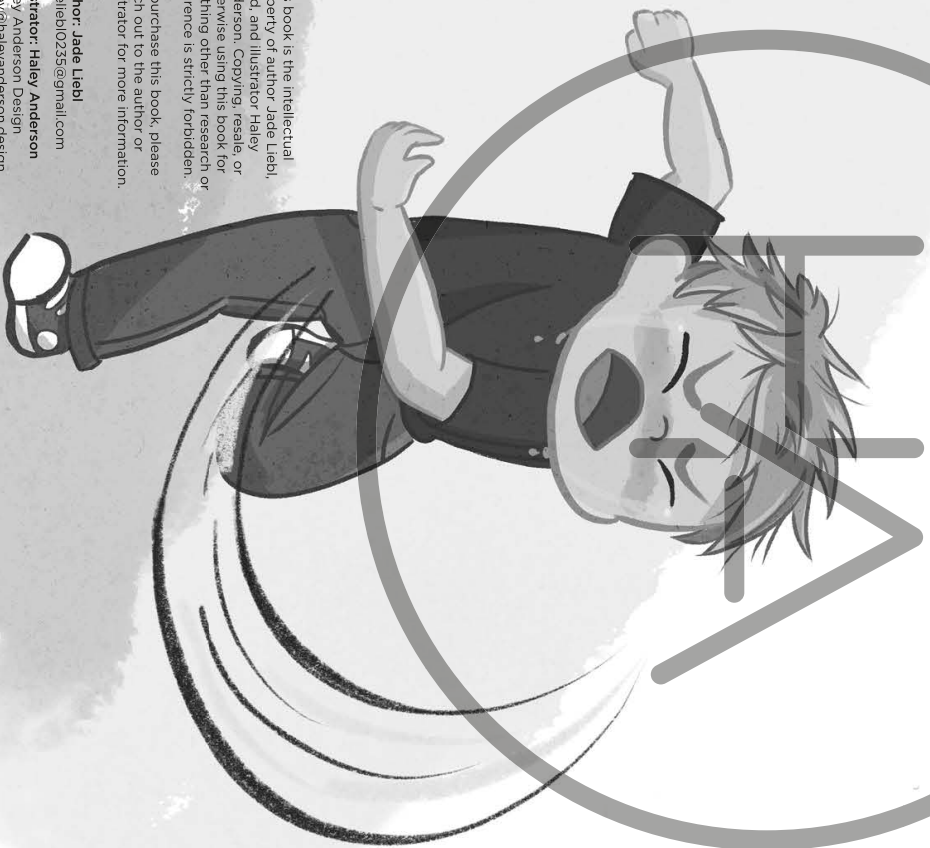
- The first can be because of tough circumstances outside of school: not enough food or resources, neglect or abuse from caregivers, or danger and feeling unsafe frequently.
- Because their home life is tumultuous, kids' brains can get the wrong signals and think they are unsafe in relatively harmless situations, like how Justin just reacted.
- Sometimes students need extra help or go to different teachers throughout the day, and when that happens, peers might point out how different they are. This might make them feel different and unsafe, leading to a big reaction.
- Other times, students have safe and predictable lives outside of school but have diagnosed disorders (You might have heard of ADHD or Autism) that can make the world seem more challenging. Every brain is unique and responds to stress in different ways, including yours!
- Finally, stress can be a big cause. Stress releases cortisol and adrenaline into your bloodstream, which isn't a big deal once in a while. But if there is a big life event (like a divorce or moving), sometimes those chemicals build up and can cause emotions to be too big.

Why might Justin be reacting this way? What hidden things are we not seeing?

Justin just had dysregulation in front of his whole class.

Most kids wouldn't want to hang out with someone who throws things and cries over a small problem. This is because kids make judgements really quickly about people, which makes sense! Kids want to feel safe!

- But did you know that students who have dysregulation tend to be victimized by bullies twice as much as other students? They also tend to have fewer friends than their peers. Remember, these kids also want to feel safe.
- You have a voice and a choice. If you feel unsafe because another student is showing dysregulation, just walk away and tell an adult. Give them time to cool off – they probably feel embarrassed about what just happened.
- Kindness is the top priority – you don't need to be their best friend, but you do need to show them respect. A great way to do this is through kind greetings, and gentle walking aways when they are dysregulated.

How can you handle it if you see dysregulation? What next steps would you take?

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Look closely. What is the illustrator telling you?

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After school today, I got home and played outside for a long time.

Finally, my mom came out and called us in for a delicious dinner with my favorite, Battata Harra, which are spicy, flavorful potatoes. After, it was homework, then bedtime where my dad tucked us in and told us stories. I fell asleep soundly after my busy day.

Does this feel familiar? What things remind you of home?
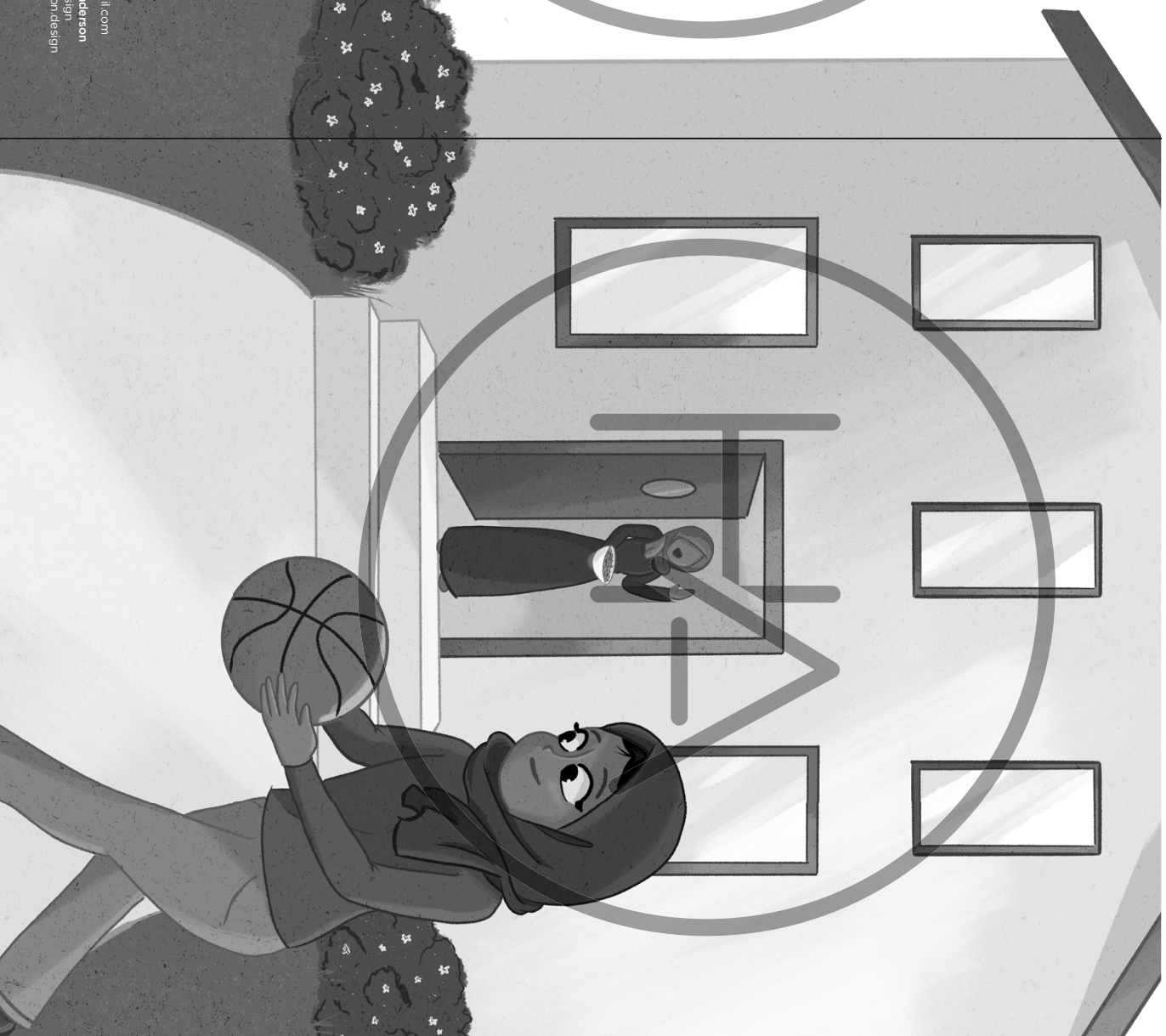
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After school today, I came home to an empty house.

A note on the fridge said that Dad had picked up an extra work shift and wouldn't be home until super late. I made sure my siblings were busy with their favorite TV show, then went rummaging for food for dinner. Success – I found a package of ramen. I tried to do homework, but the TV was too loud. I had to make sure they did their homework and brushed their teeth before bed, but my siblings aren't exactly cooperative. Finally I fell into bed, but I couldn't sleep. I kept thinking about how embarrassing today at school was...

I don't want to go back.

What extra responsibilities does this student have? How are they "invisible"?

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After school today, I kept trying to correct papers, but my mind was on Justin.

Did I speak too harshly? Why did he have such a large reaction to such a small problem? My mind was reeling. I couldn't fall asleep. I wanted to rewind the day and try again.
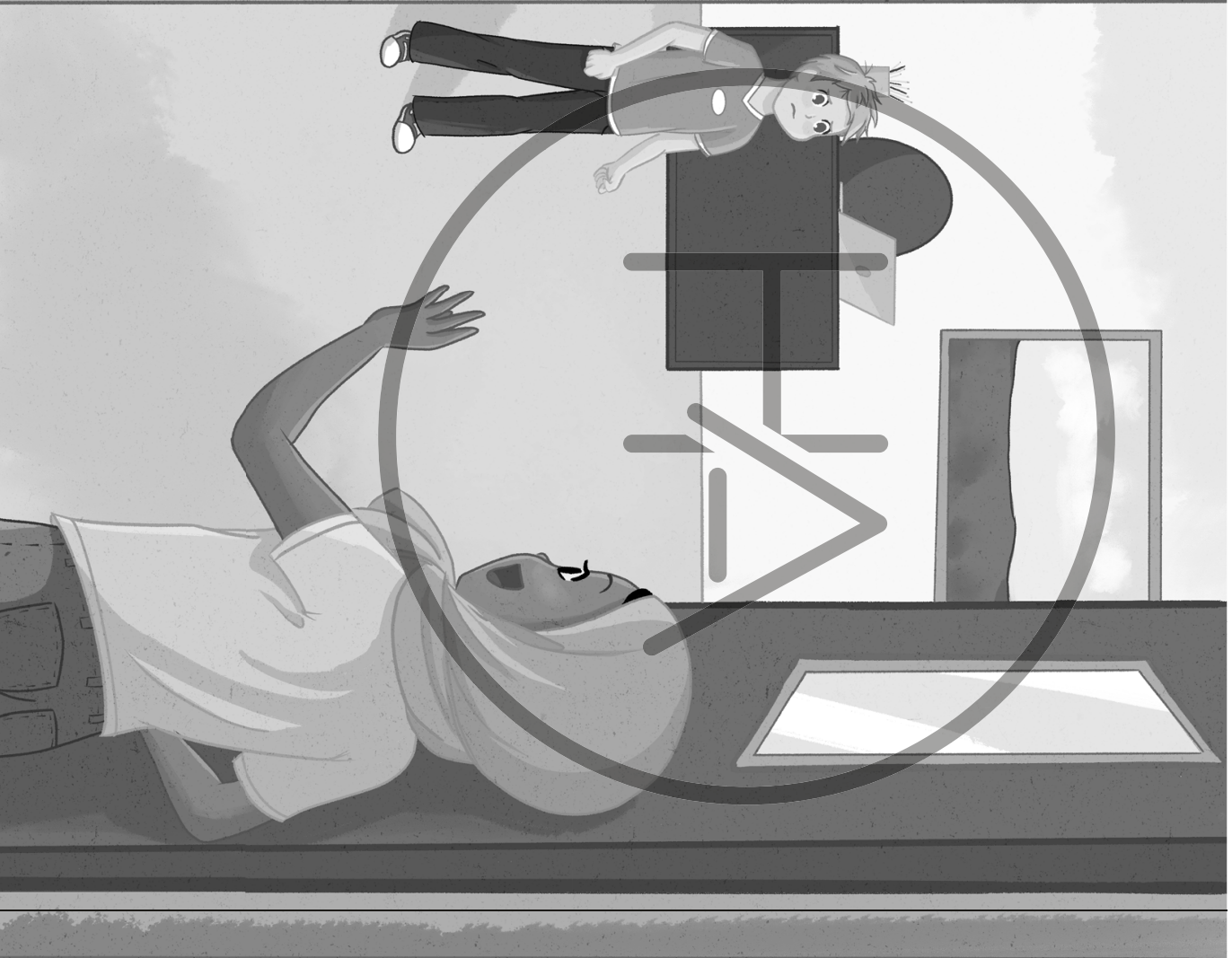
I felt like a failure as a teacher.

Why did the teacher lose sleep? What would you have done if you were the teacher?

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Today was a good day.

Ms. Jones read us a book about something called "dysregulation." I decided that Justin deserved a second chance and invited him to play with us. He was kind of reserved, but whatever, that's better than throwing things. He actually smiled once or twice, which was new.

Maybe today won't be so bad after all.

What has changed since the beginning of the story?

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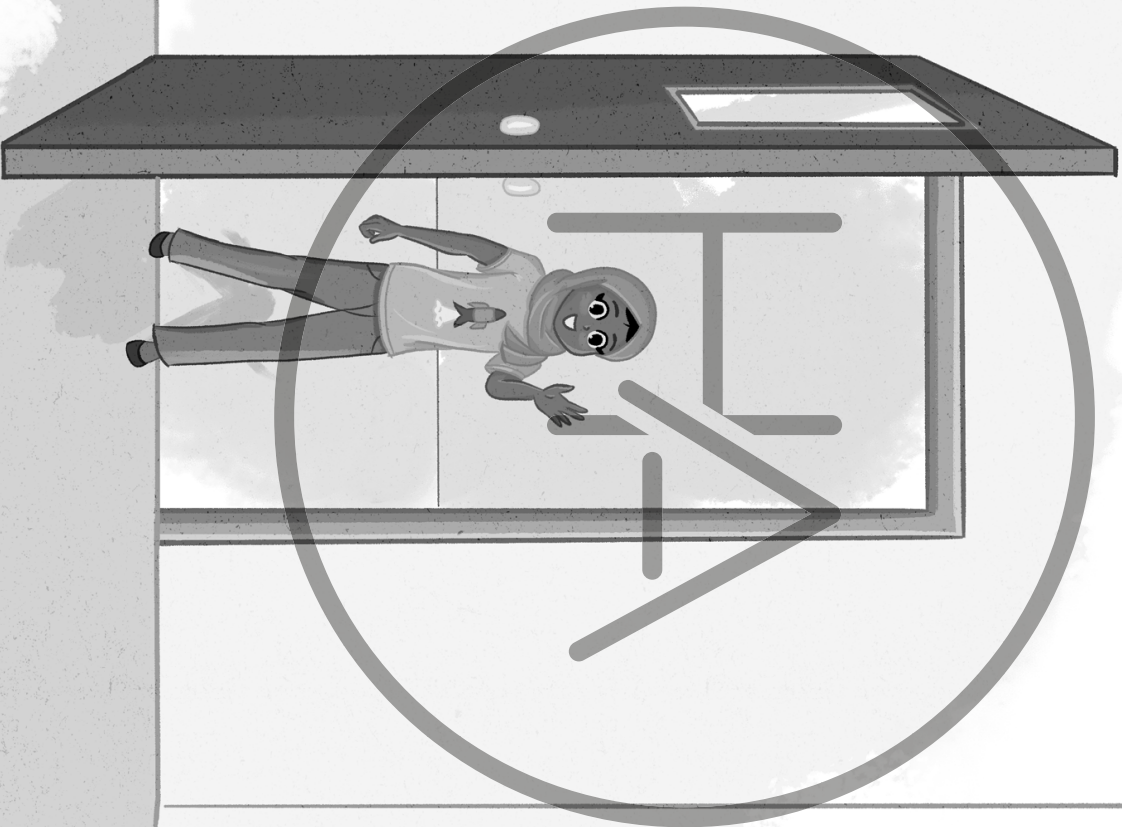
Today was a good day.

Ms. Jones read a book that sounded a lot like me, but didn't call me out. Amira invited me to play with her friends at recess. It was a little awkward at first, but they were actually really cool. I kept worrying that they would bring up what happened yesterday, but they didn't! I think I might play with them again tomorrow.

Maybe today won't be so bad after all.

What do you notice about the changes in the students?

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Today was a good day.

I read a new book to class, but at recess something magical happened. Amira asked Justin to play with her and her friends. He accepted, and when I checked on them, he was actually smiling! I don't remember the last time I saw that smile.

Maybe today won't be so bad after all.

What do you notice about the changes in the teacher?