

## Universal Prevention and Addressing Gender Inequality in Classrooms

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### Abstract

*This study examines the changes in perceptions of diversity and specifically gender inequality by graduate pre-service special education teacher candidates after receiving trauma-informed universal prevention training in the form of the PAX Good Behavior Game as a part of their behavioral management curriculum. Previous studies have detailed proximal and longitudinal outcomes for children exposed to adults trained in PAX Good Behavior Game including increased instructional time, academic performance, and graduation rates, as well as decreased problematic behavior, AOD use, and criminal behavior. Additionally, the intervention has shown to increase teacher efficacy in pre-service and in-service teachers. This study found that graduate pre-service teacher candidates showed an increased perception of gender inequality after training in the intervention.*

**Keywords:** PAX Good Behavior Game, classroom management, gender inequality, masculinity, femininity, LGBTQ.

### Introduction

Over the last several decades, research has revealed social practices that distinguish roles and characteristics attributed specifically to men and women. For men, the characteristics include aggressiveness and task-oriented leadership abilities (Jogulu & Wood, 2006). Expected traits of women in the workplace include the belief that women will be modest, quiet, selfless, and nurturing (Eagly & Carl, 2003). Clearly, these roles and traits are not stated explicitly as a part of new-hire orientation or company handbook. Employees bring their already-established understanding of gender roles to their first job. These gender roles may perpetuate sexist or discriminatory beliefs through an accumulation of subtle acts. On the surface, these acts may seem innocuous, but in their totality can greatly impact the career of both women and men.

For example, women faculty members report feeling expected to perform the “glue work” of the academic department by participating at greater rates than their male counterparts in service activities that often keep departments and universities functioning. These include such as providing extra advising to students, organizing events, or meeting with prospective students (Eveline, 2004). If this time takes away from their scholarship, service, and teaching, they will find themselves at a competitive disadvantage for promotion and tenure. This perpetuates the ideal that in order to ascend, one must demonstrate masculine traits (Tedrow & Rhoades, 1999). These trends seem to be pervasive in the schools as well. According to a study, women make up about 72% of K-12 teachers and only about 15% of K-12 superintendents (National Center for Education Statistics, 2008). This disproportionate representation itself can send subtle messaging about gender roles to students and young faculty members in the schools. These messages and modeled behaviors have even shown to impact student performance. Teachers may inadvertently perpetuate gendered expectations onto their students through their teaching. For example, math anxiety is a fairly common trait that alone predicts lower standardized math test scores, even without demonstrable gaps in math knowledge. This is supported by the increase in test scores derived from interventions emphasizing the control of negative emotional responses to math, even without actual additional math instruction (Lyons & Beilock, 2012).

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Interestingly, math anxiety in women elementary teachers predicts poorer math achievement for female students but not male students (Gresham, 2007). Thus, the teachers' skill sets can disproportionately impact one gender over the other. These skillsets and traits also impact beliefs about achievement in the classroom. Female students learning from math anxious women teachers are more likely to endorse the stereotype that "boys are good at math, and girls are good at reading." Also, girls who accepted this belief performed significantly worse overall on math achievement tests compared to boys or compared to girls who did not accept this belief (Gresham, 2007).

Teachers' gender beliefs extend beyond academic content areas and achievement to include behavior. Teachers have demonstrated distinct expectations of boys' behavior compared to girls' behavior (Bennett, Gottesman, Rock, & Cerullo 2001). Perceiving boys' behavior as generally troublesome can lead teachers to expecting and accepting higher levels of problematic behavior in the classroom. Stereotypes of boys' behaviors can create a predatory environment that can impact the long-term achievements for young men as well as the young women they go to school with (Ferguson, 2000). Ultimately, the gender ideals that teachers convey in the classroom are vital in that students are exposed to these beliefs, traits, and skillsets for nearly 16,000 hours during their schooling. They indelibly impact students' understanding of gender and represent the ideals students are most likely to embrace, as they observe behaviors and attitudes they believe to be gender appropriate (Perry & Bussey, 1979).

### ***PAX GBG and Student Outcomes***

The PAX Good Behavior Game (PAX GBG) is a classroom-based universal preventive intervention that appears on the Substance Abuse and Mental Health Services Administration's National Registry of Evidence-based Programs and Practices (NREPP, 2016). PAX GBG also appears in the 2009 Institute of Medicine Report on Mental, Emotional and Behavioral Disorders as one of the most effective prevention programs available (IOM, 2009). PAX GBG originated as the Good Behavior Game out of the University of Kansas in the late 1960s as a way to decrease problematic, off-task behaviors in a 4<sup>th</sup> grade classroom. In this first iteration of the intervention, "behaving" was turned into a team competition within the classroom with rewards for the team that was able to accomplish the activity without misbehavior. The result was a classroom with dramatically reduced problematic behaviors. This led to increased student productivity and sense of safety as well as decreased teacher stress. Most importantly, it laid the groundwork for a protective intervention in which the children themselves made the changes that promoted their success (Barrish, Saunders, & Wolf, 1969).

Today, the intervention has been revised, developed, and augmented with a number of additional academic and prevention strategies to increase the performance and health of children in every classroom. The outcomes for multiple cohorts of students have been tracked into adulthood to demonstrate the usefulness of the intervention as an academic tool and in building lifetime protective factors (Embry, 2002). One of the immediately noticeable outcomes in a classroom receiving the PAX GBG intervention is a 75% decrease in problematic, disturbing, or inattentive behaviors that disrupt the teacher as well as the learning of other students throughout the day (Embry, 2002, & Poduska, et al., 2008). These reduced behaviors may include fidgeting, distracting others, failing to follow directions, or anything that distracts the student or his peers from the educational activities occurring in the classroom.

However, these behaviors can lead to more severe behaviors and conflict among students and adults. PAX GBG has demonstrated to reduce these as well as more serious aggressive behaviors such as bullying, juvenile delinquency, and more serious incidents that result in violent injuries, from the point of intervention all the way through middle school (Kellam, et al., 1994, Kellam, et al., 1998, Ialongo, et al., 1999, Embry, Flannery, Vazsonyi, Powell, & Atha, 1996, Kellam, Reid, & Balster, 2008, Krug, Brener, Dahlberg, & Powell, 1997). This reduction in conduct problems persisted even after leaving the classroom that utilized the intervention allowing students to retain this protective impact (Ialongo, et al., 1999, Santos, Mayer, & Boyd 2013, Petras, Masyn, & Ialongo, 2011). The intervention has also shown to increase pro-social behavior among students (Ialongo, et al., 1999, Smith, Osgood, Caldwell, Hynes, & Perkins, 2013).

This increase in pro-social behaviors as well as reduction in problematic or disruptive behaviors has led to an increase in reported friendships at school (Ialongo, et al, 1999, Santos, Mayer, & Boyd, 2013). Interestingly, use of this classroom-based intervention has also shown to improve family interactions for the students involved (Ialongo, Poduska, Werthamer. & Kellam, 2001).

Not surprisingly, these decreases in negative outcomes and increases in positive outcomes have revealed an improvement in academic performance on a district and regional level when this classroom-based intervention is utilized (Fruth, 2014, Weis, Osborne, and Dean, 2015). This increased academic achievement even included a decrease in identification rates for special education services (Bradshaw, Zmuda, Kellam, & Ialongo, 2009).

However, the most intriguing outcomes for students exposed to at least one year of PAX GBG during their school years occur long after their primary school experience where they received the intervention. These outcomes have led to the recommendation of PAX GBG by NREPP, the Institute of Medicine, and even the Washington State Institute for Public Policy after finding a return on investment of 54:1 for communities implementing PAX GBG (Aos, et al., 2011). Students exposed to the intervention showed higher graduation rates as well as higher college entrance rates (Bradshaw, Zmuda, Kellam, & Ialongo, 2009). The intervention is also associated with a reduction in adult criminal activity including violent crime (Kellam, et al., 2008, Petras, et al, 2008). Students exposed to the PAX GBG saw reductions in tobacco, alcohol, and illicit drug use at adulthood (Kellam, et al., 2014, Furr-Holden, Ialongo, Anthony, Petras, & Kellam, 2004). Students receiving the intervention during their schooling also went on to experience fewer psychiatric disorders, take part in fewer risky sexual behaviors, and experience less suicide ideation and fewer attempts (Wang, et al., 2009, Kellam, et al., 2012, Wilcox, et al., 2008, Katz, et al., 2013).

### ***PAX GBG and Teachers***

Longitudinal outcomes involving dramatic academic improvements for classrooms employing PAX GBG have prompted further study into possible effects involving the teacher and changes in classroom topography and instruction when the intervention is present (Fruth, 2014, Weis, Osborne, and Dean, 2015, Bradshaw, Zmuda, Kellam, & Ialongo, 2009). Recent studies examined practicing teachers' sense of efficacy before and after training in PAX GBG. These in-service teachers demonstrated significantly higher overall efficacy scores as well as significantly higher efficacy scores in the area of student engagement after PAX GBG training regardless of years of service (Huber, Fruth, Avila-John, and Rodriguez, 2016). When PAX GBG was implemented into a pre-service teacher training program, both early childhood and middle childhood teacher candidates demonstrated significantly higher overall teacher efficacy as well as significantly higher teacher efficacy in the areas of student engagement, instructional strategies, and classroom management than their non-trained peers.

These candidates also demonstrated significantly higher overall efficacy and efficacy in each of the sub-areas after PAX GBG training than before (Fruth & Huber, 2015, Fruth, Huber, Avila-John, 2016). The effects of the intervention on teacher efficacy are vital in that teacher efficacy is such a direct predictor of teacher retention, teacher performance, and student outcomes (Brill & McCartney 2008, Patterson, Reid, & Dishion, 1992). Huber, et al., (2016) describe a transactional exchange between the teacher and the student that is positively impacted when teacher efficacy increases through professional development or pre-service training in interventions with proven success like PAX GBG. Thus, determining other factors and variables that can be mediated by using classroom-based interventions like PAX GBG is vital to improving classroom instruction, professional performance, and ultimately, lifetime outcomes for young people. Further understanding of such mediations like teachers' sense of efficacy and transactional models of exchange between adults and young people will also lend themselves to the continual revision and development of interventions for the contemporary needs of society.

### ***Hypothesis***

PAX GBG has shown to effect proximal and longitudinal outcomes for young people in randomized control trials over multiple cohorts of students for decades (Kellam, et al. 2011). PAX GBG has also shown to have a dramatic effect on teachers' considerations of their own teaching (Fruth & Huber, 2015). This research indicates that pre-service teachers receiving training in PAX GBG as a part of their behavior management curriculum should have an increased perception of diversity issues and specifically gender inequality in education.

### ***Methods***

#### **Participants**

The participants in this research study were graduate pre-service teacher education candidates in a Master's degree and state licensure Intervention Specialist program. Graduates from this program go on to teach in special education and inclusive environments in the Pre-Kindergarten through 12<sup>th</sup> grade levels.

This program is a part of the Teacher Education Department within the College of Education and Human Services at a public Midwestern University housing around 18,000 students just outside of a metropolitan area and serving a number of inner city, suburban, and rural communities. The graduate Intervention Specialist program requires candidates to take a 15-week course in behavior management. Typically, candidates in this course examine topics such as operant conditioning, functional behavior assessments, and case study writing. For this study, candidates received a modified curriculum based on the trauma-informed preventive intervention, PAX GBG. This 2015-2016 cohort contained 28 members. By the end of the study, 20 members completed the entire course as well as the pre and post questionnaire, while eight members did not meet the full criteria for inclusion into the final study for common circumstances such as dropping the course or an incomplete pre or post questionnaire. The data from these eight members was not entered into the final results.

### Design

This study utilized a quasi-experimental one-group pretest-posttest design. This involved assigning the treatment group of participants to receive PAX GBG training as a part of their behavior management curriculum in the pre-service teacher education program. This treatment group was administered a pretest, took the 15-week behavior management course featuring training in PAX GBG, and took a posttest. This design lacks a control or “business-as-usual” group and is often used in educational studies where such a group is impossible or inappropriate as in this case where programming was implemented to meet licensure and accreditation requirements for the candidates involved. Causal inferences can be derived from the results of this design when outside effects can be controlled as in this case where candidates receive identical coursework and experience throughout the semester when the course is taken. Causal inferences derived from studies using this design indicate a need for further study in the area.

### Materials and Procedures

Until recently, PAX GBG has been delivered as professional development training for in-service teachers as a part of a 1-day workshop. In this workshop style training, teachers demonstrated an increase in efficacy (Huber, et al., 2016). However, recently, a push has been made to replicate the results found in in-service training at the pre-service level. This has included implementing PAX GBG training into both early and middle childhood pre-service teacher education programs at the undergraduate level. In both of these cases, pre-service candidates demonstrated increases in efficacy (Fruth & Huber, 2015, Fruth, Huber, & Avila-John, 2016). This study expands upon these efforts and provides PAX GBG training while tracking the effects in a graduate pre-service intervention specialist program. The developer of the course is an Associate Professor of Education with 15 years of public school and higher education experience. The course developer worked closely with the developer of the intervention to embed PAX GBG effectively into pre-service intervention specialist instruction. The course included in-person and online learning, individual research projects, and single-subject case studies.

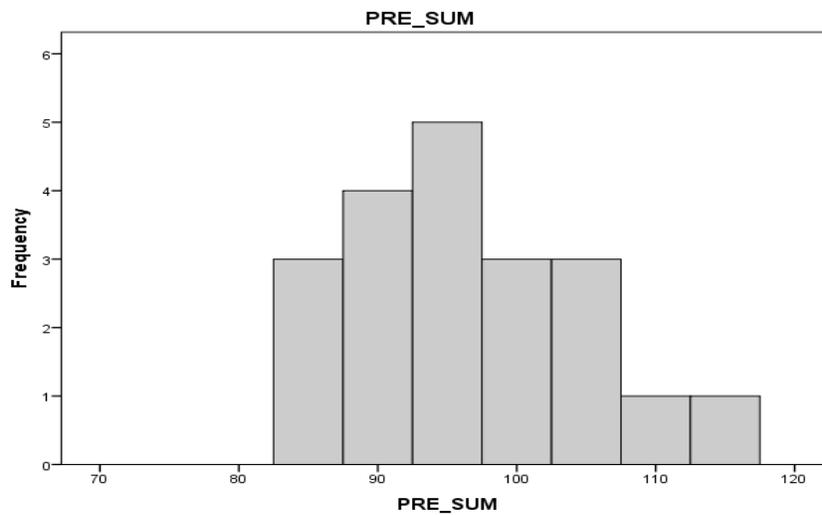
### Measures

The Professional Beliefs about Diversity Scale is a 25-item Likert-style questionnaire that assesses an individual's beliefs about diversity as they apply to a professional setting. The instrument includes items relating to diversity issues including race and ethnicity, gender, social class, sexual orientation, disabilities, language, and religion (Brown, 2004). Each item proposes a statement such as: *All students should be encouraged to become fluent in a second language*. Then, the instrument gives the user five possible responses including (1) Strongly Disagree, (2) Disagree, (3) Undecided, (4) Agree, and (5) Strongly Agree. Each item is scored according to its corresponding numerical value with some items having reversed scoring. This scoring system was used to get an overall sum and average score for each participant as well as each item. These item averages made it possible to track students' feelings of gender inequality from pre to post test. This instrument has undergone multiple revisions and has correlated positively with its Personal Beliefs about Diversity counterpart with pre-service teachers ( $r = .77, p = .01$ ). The measure has also demonstrated reliability with alpha coefficients ranging between .78 to .90 (Pohan & Aguilar, 2001).

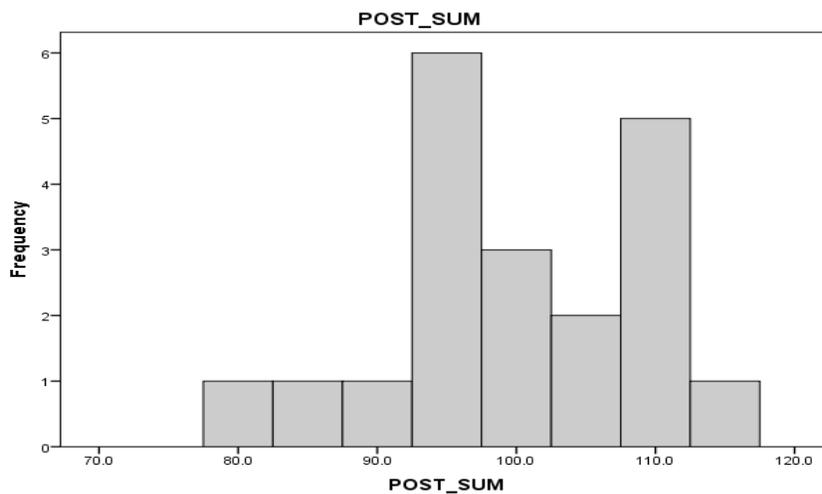
**Results**

Participants took the Professional Beliefs about Diversity Scale before and after receiving training in PAX GBG as a part of their behavioral management requirement in their graduate Intervention Specialist pre-service teacher program. Table 1 and Table 2 show the frequency distributions for their pre and post scores on the scale.

**Table 1: Total score distribution for pretest**



**Table 2: Total score distribution for posttest**



For opinion questionnaires such as the Professional Beliefs about Diversity Scale, a normal distribution of scores is typically assumed. Perhaps because of the relatively small sample, the results in this case suggest that the distribution of the scores is not actually normal. Assuming the distribution is not normal, the Wilcoxon sign-rank test was used as a non-parametric test that does not require a normal distribution for results to be accurate. This test determines whether the rank of each individual total score changed between the pre-test and the post-test. This test returned a p-value of .197 reflecting the increase in scores on the full scale from pre to post, but still outside the level for statistical significance. Table 3 shows the descriptive statistics for the pre and post scores on the full scale.

**Table 3: Descriptive statistics for pre and posttest scores**

Professional Beliefs Scale	Pre-test	Post-test
N	20	20
Mean	96.70	99.40
Standard deviation	8.221	9.439
Standard error of the mean	1.838	2.111
Median	96.5	99.0
Lowest score	85	80
Highest score	114	117

Given the assumption of a normal distribution of scores as is typical of a scale or questionnaire, a paired-samples *t*-test was administered to determine the change in participants' beliefs about diversity given the full scale. The mean scores increased by 2.7 from pre to post (96.7 vs. 99.4), which was consistent with the hypothesis. However, with a *p*-value of .131 on the paired-samples *t*-test, this score approaches significance but still lies outside statistical significance.

For the items relating to gender inequality on the scale, the means increased consistent with the hypothesis as well. Attention by gender (3.30 vs. 3.90), Content area by gender (3.10 vs. 3.65), and Gender in school administration (3.10 vs. 3.70) all moved significantly in a direction consistent with greater perception of gender inequality on the posttest than pretest and consistent with the hypothesis. With individual *p*-values of .019, .024, and .030 respectively, each item related to gender in the study revealed statistically significant increases. Table 4 shows means and standard deviations for the full diversity scale as well as the items relating to gender.

**Table 4: Diversity scale means and standard deviations**

Variables	Pre Score (N=20)		Post Score (N=20)	
	SD	Mean	SD	Mean
Mean				
Total score	96.7	8.22	99.4	9.44
Attention by gender	3.30	.979	3.90**	.968
Content area by gender	3.10	1.071	3.65**	.813
Gender in school admin.	3.10	.852	3.70**	.865

Note: The higher the score, the greater the perception of diversity. \*\**p*<.05.

### **Discussion**

Gender-based beliefs and expectations of teachers provide significantly different opportunities for girls and boys that can initiate gender inequities maintained throughout education and adulthood (Gresham, 2007). Attention to early childhood education is especially important because gender beliefs are acquired and adopted at a young age (Egan & Perry, 2001). The same environments that nurture learning and positive relationships also nurture positive gender beliefs and can be used to promote gender equity. Classrooms free from gender stereotypes promote nurturing environment where students are free to develop their interests and abilities to their maximum potential.

### **Creating Nurturing Environments**

The current iteration of PAX GBG has undergone a number of revisions and augmentations to reflect new research in education and mental health in an effort to produce a nurturing environment. These include the addition of research-based strategies centered on prevention, developmental psychology, behaviorism, and cultural anthropology. The practices have been also been aligned with educational initiatives such as the National Board for Professional Teaching Standards, Response to Intervention, and Positive Behavioral Interventions and Supports. This iteration retains a version of the original Good Behavior Game as well. This aspect of the intervention uses soft team competition and interdependent group contingencies to reduce problematic behavior during instructional time.

For instance, before an upcoming educational activity in which a class will play the Good Behavior Game, the teacher leads the class in a discussion in which students predict potential pro-social behaviors they will look to employ and anti-social behaviors they will look to limit throughout the duration of the activity in order to establish clear class-wide expectations. Then, while the students execute the educational activity, the teacher monitors for infractions or anti-social behavior such as disturbing or distracting others. At the conclusion of the activity, tables or teams who met expectations for behavior receive a reinforcer while groups who did not meet expectations sit out and try again next time. These instances have shown that they extend students' ability to self-regulate and increase cooperation with each other and the teacher as well (Embry, et al., 2010).

The improved performance and harmony that comes from repeated use of this intervention relates to Biglan's (2015) nurturing environment framework for positive lifetime outcomes for youth. In the instance of PAX GBG, the teacher is making the classroom and the school a nurturing environment for the students. Meeting this framework has been associated with improvement in lifetime outcomes despite other negative predictors such as socioeconomic status or educational level of guardians. This framework professes a need for: 1.) Limits placed on problematic behavior like disturbing others or inattention 2.) Reinforcement for pro-social behaviors like following directions and helping others 3.) Reduced toxic influences such as abuse or bullying 4.) Improved psychological safety and flexibility by getting on the same page with others. When communities, environments, homes, or agencies meet these aspects of the framework, students and children have a high degree of adult success. When even one of these areas is severely lacking, children are at severe risk for failure despite the strength of other protections (Biglan, Flay, Embry, & Sandler, 2012).

### ***Kernels to Address Gender***

Beyond a revised version of the Good Behavior Game, PAX GBG contains numerous research-based strategies, or kernels, to help increase communication and understanding between students and teachers. These evidence-based kernels are the fundamental, irreducible unit of behavioral change. Kernels are strategies that are low cost, provide immediate benefits, are easily replicable, flexible for competing demands, easily marketable, and ultimately alter risk and protective factors (Embry, 2004). These kernels exist in many aspects of our lives. For instance, driving an automobile exposes us to many fundamental units of behavioral change. A door chime prompts us to put on a seat belt, lines on the road guide us to stay in our lane, speeding tickets keep us from driving unsafely, and car horns alert us to the possibility of danger. All these are consistent with Embry's definition of kernels and are used to make the driving experience a more nurturing and less predatory environment (Embry, & Biglan, 2008, Embry, 2011).

Evidence-based kernels operate as practicable strategies for meeting all four requirements of Biglan's nurturing environment framework. Kernels are perfectly suited to aid teachers in making their classrooms a more nurturing environment. Thus, PAX GBG is made up of many evidence-based kernels for use in the classroom to help new and even experienced teachers improve the behavioral and academic environment. The kernels embedded in PAX GBG are all research-based behavioral principles set to increase communication, understanding, cooperation and buy-in from students. Some of these kernels seem to also impact the traditional gender differences that can occur in the classroom. For instance, reduced allocated time is a principle that reduces dawdling and downtime to limit problematic behavior (Wurtele & Drabman, 1984).

The time between prompts and activities such as lining up or going to lockers can be opportunities for bullying or other micro-aggressions such as physical invasions of space. These disappear with reduced allocated time. The unified and non-verbal cues that are used in PAX GBG provide consistent requests and expectations with predictability and not merely error response (Rosenkoetter & Fowler, 1986). This allows all students to meet and understand unified expectations for voice levels, personal space, and safety. Random calling is a principle to encourage and engage shy students while soothing and calming hyperactive students as it pertains to student selection methods (Embry, Flannery, Vazonyi, Powell, & Atha, 1996, Rogers, 1997). This allows the teacher to more judiciously disseminate attention according to need instead of by responding to only expressive behaviors, which begin to disappear with the increased sense of fairness and predictability in the classroom. Shared relational frames allow students to get on the same page with the teacher and each other quickly about what they appreciate (pro-social) or do not appreciate (anti-social) (Hayes, 2001, Abramowitz, Cote, & Berry, 1987, Embry, et al., 1996). These relational frame kernels allow students to practice voicing their wants and needs as well as develop an understanding and empathy for the wants, needs, dislikes, and fears of those around them.

PAX GBG also uses teacher and peer praise notes to identify and reinforce pro-social behavior (Parsons, 1982, Kelley, 1990 & Skinner, Cashwell, & Skinner, 2000). This has shown to increase friendships networks, improve gratitude, and even protect against bullying and threats to status. PAX GBG utilizes randomized reinforces as intrinsic motivators to increase successful, desired behaviors (Murphy, Theodore, Alric-Edwards, & Hughes, 2007). These increase group cohesion and are certain to reinforce even low incident pro-social behavior through a sense of community for all students.

By carrying out each of these principles in the form of evidence-based kernels, teachers guide a student-led effort to create a nurturing environment in their classroom community. Classrooms utilizing PAX GBG naturally increase pro-social behavior and decrease anti-social behavior from students and teachers alike. This study shows that this includes items specifically related to gender in the classroom. PAX GBG offers strategies that offset teacher and student behaviors that risk perpetuating stereotypical gender roles such as the attention boys and girls receive or the expectations boys and girls ought to have. This dramatically increases the respect and value that each student has for each other while learning to see the good in everyone. In a PAX GBG classroom, each student plays a necessary part in the success of the group. In doing so, this halts the archaic gender norms from being perpetuated. Students who identify as boys, girls, or members of the LGBTQ community are provided fair and nurturing treatment not through mindful awareness alone but through everyday practicable strategies. All students are allowed to learn in a safe, nurturing environment in a classroom utilizing PAX GBG.

The research is clear in that exposure to these strategies at a young age is creating a more productive classroom, but more importantly, embedding skills and mindsets that are lasting well into adulthood. The wealth of research on PAX GBG has demonstrated that it improves and extends self-regulation and social emotional scaffolding that lead to changes in electrical neurochemical, neural connectivity, and epigenetic make-up. PAX GBG is the only classroom-based strategy shown to cause the expression of brain derived neurotrophic factor (BDNF) genes that serve as adaptive protections for young people through adulthood and into future generations (Musci, et al., 2014). BDNF has been found to be central in contextual learning and even protection from depression and other later onset neuropsychiatric disorders by increasing neural plasticity. There is evidence that BDNF can be increased through extended exposure to Omega-3s, appropriate exercise, decreased sugar intake, and nurturing social environments (Hall, Thomas, & Everitt, 2000, Altar, 1999, Murer, Yan, & Raisman-Vozari, 2000). This gene expression difference in children exposed to PAX GBG and the nurturing environment it creates goes a long way in proposing an explanation for the extreme changes in their proximal and distal outcomes.

### ***Limitations***

Limitations in this study include the small sample size as well as the lack of a control group for comparison purposes. In this case, the sample size was limited due to the number of participants in the program at the time of this study. However, despite this small sample, the substantial increases in overall diversity perceptions as well as the statistically significant increases in gender inequality items demonstrate the dramatic shift in perceptions throughout the training. This study also did not contain a control group to compare the differences in perceptions over time to. The natural requirements of the program implementation made denying candidates access to the intervention in order to create a control group for research purposes inappropriate. Future studies should identify candidates in similar programs to use as members of a control group. These studies should also look to expand to larger samples.

### ***Future Study***

Future research should continue to seek measures that capture the understanding and shifts in perceptions gained by teachers throughout trauma-informed universal prevention training in PAX GBG and other interventions. This helps to inform practice, interventions, and boosts understanding of professional development and initial professional training. PAX GBG training provides a much different perspective on behavior and discipline than most candidates have had up until this time. By using numerous evidence-based kernels to create a nurturing environment in the classroom, teachers learn to teach behavior and self-regulation in students as an additional skill set. Teachers have great efficacy in teaching reading, math, and the other content areas as skill sets even without universal prevention training.

However, with the addition of PAX GBG to their teaching repertoire, they also gain the curriculum and methods for teaching students the behavioral skills they will need without shame, blame, harsh punishment, racial, cultural or gender bias, or any non-research-based strategy.

Possessing these skills to teach self-regulation and behavior as skill set has already shown that it increase teachers' sense of efficacy, and in this study, showed that it increases teachers' perceptions of gender inequality. It should be noted that despite substantial gains in overall diversity perceptions and statistically significant gains in gender inequality perceptions, there is perhaps more to learn about the effect of PAX GBG on diversity perceptions. Many participants scored near the extremes on many items on the pre-test version of the instrument. This left them with little chance of scoring "significantly higher" on the posttest. This makes the substantial but not statistically significant gains on other items all the more interesting. Additional instruments need to be used in the future to capture other changes in teachers through their initial and continued professional development.

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