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Alternative Psychological Methods for Reduction of Student Test Anxiety

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Abstract

The growth of standardized testing and global competition has resulted in a dramatic rise in student test anxiety. High performance on these tests is demanded by both local and national policymakers, causing stress for students already subject to cultural and familial pressures. Many different psychological methods have been used to deal with the greater topic of anxiety disorders, and a number of them have been successful when incorporated into the educational setting to reduce student anxiety centered around the topic of testing. Educational researchers have found the established method of Cognitive Behavioral Therapy to be effective in reducing student test anxiety; however, they have also tested the alternative psychological methods of Emotional Freedom Technique, Wholistic Hybrid Derived from EMDR & EFT, and Eye Movement Desensitization and Reprocessing. Researchers have found each of these additional methods to be effective in reducing student test anxiety. All methods could benefit school programs that choose to implement them; however, schools should ensure the program that is implemented fits the culture of the school and the needs of the student population.

Keywords: Cognitive Somatic Energy Practices, Energy Psychology, Education, Test Anxiety, High School.

Introduction

Exam phobia has become a serious issue within student populations as it traditionally negatively impacts student outcomes on high-stakes tests. Some causes of exam phobia are cultural/societal expectations, parent/teacher pressure, lack of studying, OCD, poor motivation, poor health, and inadequate sleep (Sindhu, 2015, p. 88). Each of these causes can create increased student test anxiety and negative academic outcomes. Anxiety disorders are identified by the National Institute of Mental Health (2016) as "excessive anxiety or worry for months" which presents symptoms such as restlessness, mind blanking, irritability, muscle tension, difficulty controlling worry, or sleep problems (p. 1).

Anxiety disorders are more than just temporary worry about a specific event, but a constant attitude of worry or anxiety that can interfere with a student's job, school, or relationships (NIMH, 2016). The use of high stakes testing as an indicator for academic success/growth contributes to the growth of anxiety disorders in minors as students are repeatedly told that if they do not achieve a certain level of mastery on the test then they will not progress and their academic or occupational futures are at risk (Sindhu, 2015, p. 89). This has created a culture of student self-esteem based on the outcome of these tests and rankings, which has bred a school culture of "smart vs. dumb" students. This then leads to students' negative assumptions that simply because of a score on a test they are unable to succeed in certain classes such as Honors or Advanced Placement (AP) (Sindhu, 2015, p. 89).

The pressure being placed on students from their parents today increases their anxiety level as well. In the face of an ever-changing global marketplace, it is only natural that parents want their children to be successful, which means being competitive in the marketplace. However, this pressure placed on student performance creates not only student anxiety, but students' lowered confidence and increased tension in families (Sindhu, 2015, p. 89). Teachers/schools also play a part in the creation of student test anxiety as they consistently reinforce the importance of testing outcomes and the time constraints given to students. These constant reminders produce a fear response for students before, during, and after the test (Sindhu, 2015, p. 89).

Mandler and Sarason (1952) evaluated the effects of not just the levels of student test anxiety, but also how that anxiety negatively affected student performance on exams (p. 166). Mandler & Sarason found that specific drives behind a student's test anxiety were a crucial part of determining whether that anxiety was going to be a positive or a negative for a student's exam performance (pp. 169-172). The meta-analysis of student test anxiety completed by Hembree (1988) compiled the results from 562 individual studies to "show the nature, effects, and treatment of academic test anxiety" (p. 47). This meta-analysis identified two distinct types of anxiety: facilitating and debilitating anxiety. While the study did recognize that some students respond well to testing anxiety (facilitating), creating a push to better their grade, overwhelmingly students respond negatively (debilitating) (Hembree, 1988, p. 48). Hembree described the negative impact of test anxiety as "disturbing the recall of prior learning and thus degrading [student] performance" (p. 48).

Tobias (1979) also credits test anxiety with contributing to the 20% dropout rate for highly anxious students compared to the 6% dropout rate of low anxious students (p. 573). He also noted that academic anxiety research began in the late 1950s to early 1960s as a "concern for the underachieving child" and has since grown from there. This research focused on the debilitating nature of anxiety and studied both its behavioral and cognitive implications (Tobias, 1979, p. 573). Psychological methods can be used to reduce the mental impact of anxiety by equipping students to directly handle the stress in productive and positive ways.

History of the Problem

Since the inaction of the No Child Left Behind (NCLB) Educational Act in 2002, the increase in the use of standardized testing as the lynchpin of student evaluation has grown exponentially. The belief by policymakers was that the implementation of high stakes testing would "improve student motivation and raise student achievement" (Amrein & Berliner, 2003, p. 32). However, the focus of schools has shifted to the results of these standardized state and national exams, instead of focusing on the level of student learning. The ranking system created by the NCLB policies for schools based on their student scores has created not only a level of anxiety within the administration and staff to perform, but also anxiety that is trickling down to students as well (von der Embse & Hasson, 2012, p. 180). The strictest part of the policy that places the most anxiety/stress on schools is the threat of a government takeover of schools if they fail to reach a level of proficiency through students' scores. This threat creates a frenzied atmosphere in schools as administration puts pressure on staff to achieve these scores and staff in turn put that same pressure upon their students to produce required results (von der Embse, & Hasson, 2012, p. 181).

The pressures of testing extend far beyond the end of secondary school. Many parts of American life require the passing of a test of some kind to achieve success, whether it is the Armed Services Vocational Aptitude Battery test (ASVAB) to enter the military, the driver's test to get a license, or the SAT/ACT to enter college. Approximately 16-20% of students report having high levels of test anxiety, which according to the American Test Anxieties Association is "the most prevalent scholastic impairment in our schools today" (n.d., p. 1). The spirit of testing and the anxiety that comes with it, for some students, will not end after high school is over, but will continue to carry on throughout their lives as they reach these various "testable" milestones in their adult lives (Amrein & Berliner, 2003, p. 32).

Reduction of Test Anxiety Methods Research

Early research incorporating reduction methods

Tobias (1979) identified that test anxiety research was lacking in its scope of the topic. It mostly focused on "at risk" students or interaction with instructional methods, as well as the lack of study about anxiety reduction programs (p. 573). Sticking to previous research trends, Tobias examined the various stages of

instructional methods (input, processing for storage or retrieval, and output) and theorized that it was at the processing stage that anxiety interfered with students' performance on tests. Anxiety interfered with their ability to process difficult tasks, rely on their memories, or organize a task (Tobias, 1979, p. 575). At this point Tobias strayed from previous research and introduced various anxiety reduction methods to the participants. The four methods were focused on relaxation techniques, visualization techniques, rehearsing stress triggers before the day, and desensitization techniques (Tobias, 1979, p. 578). Tobias found that 58% of his participants reported reduced anxiety after using one of the four reduction techniques (p. 578-579).

Taking a detour from the traditional study of test anxiety, Elliot & McGregor (1999) looked at the motivations and goals behind student test performance and whether those reasons produce higher or lower levels of test anxiety (p. 628). The researchers separated test anxiety (TA) into two categories, state TA (anxiety only present during testing) and trait TA (ongoing anxiety despite the testing conditions) (Elliot & McGregor, 1999, p. 628). The study was divided into two studies; one examined performance approach goals in relation to state TA and the other looked at performance avoidance goals in relation to trait TA. These goals are both student-created goals, with the difference being that the approach goals were directly related to achieving high scores on exams, while the avoidance goals were related to ignoring the exam (Elliot & McGregor, 1999, p. 629). Elliot & McGregor hypothesized that students who engage in performance avoidance goals were the only ones who create test anxiety leading up to the exam (p. 630). Participants in the first study were first year psychology students who completed a five-week process focused on examining state TA in relationship to both goals. Study one found that performance approach goals caused an increase in state TA due to the student's desire to perform higher on the test. It found that performance avoidance goals had relatively no effect on state TA because those students were not as focused on the final test performance (Elliot & McGregor, 1999, p. 633).

Elliot & McGregor's (1999) second study was done with another first-year psychology class where students completed a four-week process (p. 633). This study had students complete an anxiety self-evaluation in week one, the official anxiety questionnaire and their goals in week two, and then take the exam in week four (Elliot & McGregor, 1999, p. 633). The results showed that worry, not emotionality, was the primary indicator of whether students would lean towards performance, avoidance, or achievement goals. The worry established how students experienced anxiety (either state or trait). This study supported the previous findings that those students with performance achievement goals had higher levels of state TA (Elliot & McGregor, 1999, p. 639). Both studies established that there is a direct connection between a student's desired achievement level, the type of test anxiety they experience, and how that anxiety translates into exam performance (Elliot & McGregor, 1999, p. 640).

Continuing research

In their study of medical students at Dow University, Afzal, Afzal, Siddique, & Naqvi (2012) evaluated the level of student test anxiety and the need for the introduction of anxiety reducing techniques to be taught in school (p. 1). Afzal et al. found that 69.8% of the participants "believed that exam anxiety reduced their exam performance" and displayed several student-created relaxation methods for their anxiety (prayers, sleep, watching TV, listening to music, and calling friends) (p. 6). The research found that "the greater the anxiety level, [the] greater the changes of decrease in educational performance" (Afzal et al., 2012, p. 6). While this study did not directly evaluate any anxiety reduction methods, it highlighted the need for anxiety reduction methods to be present in educational programs of all levels.

Reiss, Warnecke, Tolgou, Krampen, Luka-Krausgill, & Rohrmann (2016) completed a study implementing group CBT interventions with German university students who suffer from test anxiety (p. 1). The students were split into three groups for three different interventions: CBT with relaxation techniques, CBT with imagery rescripting, and a therapist guided self-help group. The student groups met weekly for three hours each time for five weeks after their initial anxiety assessment and were evaluated after a six-month period of training and individual practice (p. 2-4). After the six-month period, the student groups were reevaluated and each intervention group was found to have a reduction in test anxiety, with no one method presenting a significantly larger margin of reduction over any other (p. 5). Reiss et al.'s study focused on the reduction of test anxiety using various CBT and psychological methods, but they were not focused on proving the superiority of CBT over other methods (p. 1). This focus on the overall topic of reduction of test anxiety over the promotion of one specific method has created the introduction of multiple methods for programs to implement.

Established Methods of Anxiety Reduction Methods:

CBT - What is this method?

Cognitive Behavioral Therapy (CBT) is a psychotherapy method that explores "relationships [between] a person's thoughts, feelings, and behaviors" (NAMI, n.d). This method utilizes the belief that the mind can operate in the same fashion as the body when it comes to healing by applying the same principle to negative or unhealthy mental patterns. The unhealthy thoughts are identified, isolated, and the replaced with positive thoughts: "I am stupid" is replaced with "I am capable of learning anything" (NAMI, n.d.). While this process was not specifically created to treat test anxiety, researchers have discovered it works with test anxiety just as well as with other anxiety disorders.

Research

Wood (2006) takes a different approach to studying CBT anxiety reduction techniques by looking at the overall success of this method in reducing elementary school students' anxiety level in relation to their school performance and social adjustment (p. 345). Wood's study theorized that student's high anxiety levels in elementary school negatively affect their scholastic performance both at this level and in future levels of schooling (Wood, 2006, p. 345-346). The participants were separated into two groups using either a child-focused CBT session or a family-focused CBT session. During the CBT sessions the biggest difference was that while both groups were taught the same interventions and self-use reduction techniques, the family group taught both the students and parents the methods. Students were given four evaluations before, during and, after interventions. The parents were given two evaluations to complete about their child's anxiety levels in the same period (Wood, 2006, p. 346). Wood found that the reduction in students' anxiety from using CBT techniques had helped increase student school performance and positive parental perceptions of student performance (p. 348).

Fathi-Ashtiani, Salimi, & Emamgholivand (2006) created a comparison study of CBT and systematic desensitization in Iranian female secondary students (p. 200). Once selected for the study, students were given an anxiety evaluation questionnaire. They were then placed into three randomly assigned groups (CBT, desensitization, or control) (Fathi-Ashtiani et al., 2006, p. 201). Each of the intervention groups participated in one twelve-minute group meeting/training and participants were encouraged to practice the methods individually (Fathi-Ashtiani et al., 2006, p. 202). Participants were then re-evaluated using the original questionnaire and those data were compared. The findings showed that while there was a significant difference in the anxiety levels of the intervention versus control groups, there was no statistical difference between the two intervention methods to support one as being more effective (Fathi-Ashtiani et al., 2006, p. 202-203). Fathi-Ashtiani et al. were not seeking to validate the success of one type of intervention; they simply desired to show that the introduction of anxiety reduction methods does in fact have a positive impact on students' anxiety, which they suspect will lead to better academic performance for those students.

Alternative Methods of Anxiety Reduction Methods:

EFT/WHEE - What is this method?

The recent rise in the exploration and practice of energy psychology has led to an increased interest in the use of methods such as acupuncture to affect an individual's anxiety level. This increase had led to the development of a more "user-friendly" technique called Emotional Freedom Techniques (EFT). This method was developed as a system of tapping and positive affirmations which, after simple training, the user can complete individually and apply to virtually any area of their life they choose.

Wholistic Hybrid Derived from Eye Movement Desensitization and Reprocessing and Emotional Freedom Technique (WHEE) is a method developed by psychotherapist Dr. Daniel Benor as a simpler method for reducing anxiety and pain in users. During an interview, Dr. Benor expressed that his desire to create this method came from his discussions with people who were frustrated with EFT or EMDR. The main frustrations people expressed were the lack of remembering the exact steps to the process and being embarrassed to complete this process in public (D. Benor, personal communication, November 18, 2016). Due to these issues, Dr. Benor created the WHEE method which consists of a client tapping anywhere on their body and listing their negative statements followed by a positive affirmation: Dr. Benor's example of a positive affirmation was "But I am amazing and loved and I can do anything I set my mind to." This method is designed to be customizable to the person's needs and their situations. The concern about being in public means someone could tap their feet under the table while reciting the statements to themselves in their head (D. Benor, personal communication, November 18, 2016). This method was directly developed to help reduce anxiety or pain in the user's life and easily applies to the treatment of test anxiety.

Early research

Research on the use of EFT, WHEE and other energy psychology techniques has been on the rise in recent years. One of the foundational studies of this topic is the "Pilot Study of Emotional Freedom Techniques, Wholistic Hybrid Derived from Eye Movement Desensitization and Reprocessing and Emotional Freedom Technique, and Cognitive Behavioral Therapy for Treatment of Test Anxiety in University Students" completed by Benor, Ledger, Toussaint, Hett, and Zaccaro (2009). The study was designed to compare the traditional psychology method of CBT against the newer energy psychology methods of EFT and WHEE (Benor et al., 2009, p. 327). This study consisted of 15 participants enrolled in university, who had no prior knowledge of these techniques and were individually assigned to one of three groups. The quantitative data identified that the EFT and WHEE methods provided a noticeable difference in students' anxiety over the CBT method (Benor et al., 2009, p. 328). The qualitative data revealed that all three methods contributed to the reduction of student test anxiety, but the authors noted that students who were trained in EFT and WHEE methods were more likely to use this method in other parts of their life (Benor et al., 2009). The other major contribution of this study to the topic is the realization that despite all the presented methods working to alleviate student test anxiety, the EFT and WHEE methods could be mastered in just two sessions as opposed to the five sessions it took for the mastery of CBT (Benor et al., 2009, pp. 328-329). While this does not speak to the anxiety level of students, it provides a greater chance for the implementation of this method into the classroom, as the training process will be quicker. While this study is a small sampling of the greater movement to incorporate new methods of anxiety management for students, it provides a good

foundation for future larger studies to follow. Benor et al. (2009) acknowledged that their study's small sample size was a weakness and that it limited "the generalizing of the results of this pilot study" (p. 329).

Gaesser and Karan (2016) sought to expand upon the previous research completed by Benor et al. (2016). This larger study incorporated 63 participants who were randomly assigned to three intervention groups where each group had a different anxiety management technique to use: CBT, EFT, or the waitlist control group (Gaesser & Karan, 2016, p. 2). This study was designed to evaluate the anxiety level of student's pre and post examination scores after the implementation of these management methods over the course of five months (Gaesser & Karan, 2016, pp. 2-3). The results of this study demonstrated that statistically those students who were taught EFT had a lower score on the anxiety measurement test over those students from the other two intervention groups.

The biggest strength of the Gaesser and Karan (2016) study in comparison to the Benor et al. (2009) study is the size of their participant group and the randomization of their group assignments; however, both studies provided the same findings despite the difference in participant size. While the authors are quick to praise the results, they also realize the weakness of their study as they pointed out that the participants were "limited to high-ability students from the northwestern United States" (Gaesser & Karan, 2016, p. 4). While this weakness could certainly cause a difference in test scores, it is highly unlikely that this affected the ability of the students to master and implement these management methods (Gaesser & Karan, 2016, p. 4-5

Continuing studies

Turkish researchers Sezgin & Ozcan (2009) completed a study that examined the effects of EFT and Progressive Muscular Relaxation (PMR) on reducing student test anxiety about the official Turkey university admissions exam called OSS (p. 23-24). This study included a sample of 70 participants in "intensive training for the OSS university entrance examination" that scored above a 50 on the test anxiety inventory. The students were evaluated prior to intervention using the Subjective Units of Distress (SUD) scale, the Test Anxiety Inventory (TAI), and a practice OSS exam (Sezgin & Ozcan, 2009, p. 24). The students were randomly separated into two intervention groups and given extensive instructions on how to complete their assigned intervention. They were then instructed to complete their interventions individually three times a week for two months. At the end of the two-month period students were given the TAI and another practice OSS exam; then the two sets of data were compared and analyzed (Sezgin & Ozcan, 2009, pp. 24-26). While both methods provided a statistical reduction of student test anxiety, Sezgin & Ozcan found that EFT had a greater statistical reduction of student test anxiety over PMR (p. 26). However, Sezgin & Ozcan were quick to realize that the results of their study were limited by the high number of participants who dropped out, the "novelty" of the EFT

method in Turkey, the difference in materials given for intervention (written instructions versus a CD to take home), and the inability to determine participants' compliance with intervention homework assignments (p. 28). This study provided a foundation for more EFT research studies.

Another comparison study was conducted by Jain & Rubino (2012) where they compared the results of EFT and diaphragmatic breathing on the reduction of student test anxiety (p. 18). In this study the 40 participants were from three Pacific Northwest universities consisting of 90% Caucasian, 14 men, 26 women, and 90% from 18 to 30 years old (Jain & Rubino, 2012, p. 17). The researchers used the five-item Likert scale, Sarason Reactions to Tests (RTT) inventory, 40-item Likert-style instruments, the Symptom Assessment-45 Questionnaire (SA-45) and post-test questionnaires as data collection methods. The participants were pre and post tested with each of the assessments after taking an assigned classroom test. While this study encompassed the whole semester, it was broken up into two distinct phases: eight weeks of interventions and assessments and then eight weeks of no interventions or assessments (Jain & Rubino, 2012, p.17-18). Throughout this process the researchers found through the quantitative and qualitative data that both methods of interventions successfully reduced student test anxiety (Jain & Rubino, 2012, p. 19). While this study provided some much-needed variety in the sampling population, Jain & Rubino recognized that their study was limited by the small sampling size and the follow-up with students for training sessions on each technique (p. 22).

In their study of university students at Staffordshire University, Boath, Stewart, & Carryer (2013) applied EFT to reduce student's presentation anxiety (p. 1). This study consisted of 46 female participants who were enrolled in a complimentary therapies research methods class in which they were assigned a culminating final presentation. The participants rated their anxiety using SUDs and Hospital Anxiety and Depression Scale (HADS). Participants were then given a brief introduction to EFT and completed an EFT training session with a certified EFT instructor/trainer. Participants were told "that they could continue to use EFT on themselves any time they wished during the intervening 8 weeks" prior to their assessment (Boath et al., 2013, p. 3). The students received one reminder email a week prior to their assessment, but no further reminders or mandates of action were given. After their presentation each participant completed the SUDs and HADS, as well as a one-on-one interview about their experience (Boath et al., 2013, p. 3). The results of the student self-evaluation (SUD & HADS), the scores on the assessment, and the students' one-on-one interviews all concluded that those participants who chose to use EFT frequently prior to their assessment showed a noticeable decrease in anxiety level and a noticeable increase in their overall assessment scores (Boath et al., 2013, pp. 4-5). Despite the positive results of the study, the researchers discussed the various limitations to their study which included small student sampling size, lack of student data (gender, age, etc.), female only sampling, convenience sampling vs. random sampling, lack of tracking student EFT use, lack of check-in sessions with students during the 8

weeks and use of students already inclined to try new methods of anxiety reduction (Boath et al., 2013, pp. 7-9). This study provided foundational qualitative data about the use of EFT in anxiety reduction.

Alternative Methods of Anxiety Reduction Methods:

EMDR - What is this method?

Eye Movement Desensitization and Reprocessing is the psychotherapy process of healing "the symptoms and emotional distress that are the result of disturbing life experiences" (EMDR Institute, n.d., p. 1). By using an eight-step session program, people are encouraged to use their mind to heal themselves just as their body would with a physical wound. In the sessions the clients were told to recall the traumatic event that brings the symptoms to light. Focus was placed on the memories that caused trauma; however, present traumas and establishing "positive future actions" were also a part of the treatment process to ensure that clients' success continued beyond their eight sessions (EMDR Institute, n.d.). While this method was not originally created to be used for test anxiety treatment, researchers have been completing studies on the efficacy of using this method for that issue (Stevens & Florell, 1999; Enright et al., 2000).

Early research

Stevens & Florell (1999) piloted the incorporation of EMDR in the use of test anxiety reduction in their study of undergraduate students at Illinois State University (p. 285). While the study participants were not randomly selected, the study still provided valuable insight into the use of this method towards test anxiety. The participants were selected after completing several pre-study anxiety evaluations, with researchers choosing only the students who exhibited higher levels of test anxiety (Stevens & Florell, 1999, p. 287). Subjects were given their first-class exam and then were broken up into three groups for treatments, either EMDR, rational emotive therapy (RET), or nothing. The participants completed one session of training with a licensed and trained therapist; they were then encouraged to complete the methods individually as much as they desired, and then were given both another anxiety evaluation and a class test (Stevens & Florell, 1999, pp. 291-292). The statistical data reflected that all students maintained the same pre-test level of anxiety (probably due to their selection process); however, the post-treatment anxiety test scores were significantly higher than those of the students who were in the EMDR group who showed a slightly higher level of reduction in the test anxiety of students (Stevens & Florell, 1999, p. 293). While Stevens & Florell were quick to admit that the results of the test did not completely support that EMDR was the most successful method of test anxiety reduction, they did establish the foundation for later EMDR research studies.

Continuing studies

The small study of university students completed by Enright, Baldo, & Wykes (2000) continued the research into EMDR being used to reduce test anxiety in students (p. 37). The participants were selected from two western universities and were separated into two test groups for the study (Enright et al., 2000, p. 38). The study conducted a pre-evaluation of students' anxiety to establish their baseline and then separated the groups into experimental and delayed treatment control groups (Enright et al., 2000, p. 40). The experimental group was given two one-hour EMDR training sessions three weeks apart, while the other group was given nothing. Both groups were then given a post-test and were subsequently followed up with a mail-in survey one month after the completion of their final test (Enright et al., 2000, p. 40). The results of this study found that use of EMDR as an anxiety reduction method significantly reduced the participants' anxiety level. As the researchers expected, those students who were in the experimental group had greater reduction in their anxiety due to their prolonged exposure/experience with the method over the delayed treatment control group (Enright et al., 2000, p. 44).

Recommendations

Despite the reviewed methods of anxiety reduction producing a noticeable change in participant anxiety, only three methods have been directly studied in comparison to each other. CBT and EFT/WHEE were compared in the Benor et al. (2009) study of university students, which found that EFT/WHEE had a higher anxiety reduction rate than CBT. The first recommendation for this field of study would be to complete more studies directly comparing or evaluating these methods against one another as this would highlight a more effective method that schools could then implement with higher security of success rates. Another research recommendation would be the long-term study of the effects of test anxiety on students, perhaps following the students for several years to evaluate their lasting academic performance/career success.

Academic performance pressure has created increased test anxiety levels in students leading to poor performance on exams and possibly lasting future impacts that have yet to be investigated. A recommendation for this problem would be the implementation of a test anxiety reduction program into schools, starting at the elementary school level through university level schooling. While WHEE takes the shortest amount of training time for personal implementation and teaching, all methods can be taught in one-to-two-hour sessions (Benor et al., 2009; Sezgin & Ozcan, 2009; Wood, 2006). All test reduction methods would be suitable to be used in schools as they all are backed by studies that found success through their implementation. However, schools and administrators must carefully evaluate these methods to identify the best one for their school population as it is not a one-size-fits-all situation. Schools must first conclude that test anxiety is a corporate educational problem, not just a student-only problem, and address it as they would any large-scale issue, with study, reflection, and implementation of strategies. Only then will the problem of student test anxiety truly be addressed within the education system.

Conclusions

Test anxiety can manifest in cognitive, psychological, and emotional problems in students (Tryon, 1980, p. 343). Studies of these reduction methods started well before the introduction of the No Child Left Behind policy in the US in 2002; however, this high-stakes testing focused policy has led to an increase in the study of this topic (von der Embse & Hasson, 2012, p. 180). While the policy is relatively new, the pressure to perform on exams has been around since the moment education became formalized in a schoolhouse. This "keeping up with the Joneses" mentality American education has regarding our global competition has created a whole new pressure for students, as they are told they are not only fighting against their classmates for jobs, but also against all international students. The constant pressure to produce results to get to the next step in life has resulted in students either rising to the occasion, giving up, or experiencing rising anxiety levels. The apparent rigidness of the system and constant changes in education, which even veteran teachers struggle to stay updated on, create pressure which naturally leads to increased student anxiety.

Since the implementation of high-stakes testing, high school dropout rates have risen 25%, General Educational Development (GED) degrees have risen 40-70%, and advanced testing scores such as SAT or AP tests have seen no improvement. Some states have even seen decreased scores (Amrein & Berliner, 2003, p. 33-35). The anxiety created by these high-stakes tests is resulting in the opposite desired effect from that intended. Instead, testing is causing students to flee the "industrial" system aimed at producing the same students with the same scores. Test anxiety is not just found in at-risk or urban students but can extend the across the full spectrum of location, socioeconomic status, race, and achievement levels of students (Tobias, 1979; von der Embse & Hasson, 2012). The implementation of anxiety reduction methods should not be just limited to those areas or students. Just as test anxiety is personalized in how it affects all students, so too must schools take this approach with implementing reduction methods. While EFT/WHEE may work for one school, CBT or EMDR may be best for another school. Other methods not reviewed here should also be considered.

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