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## Article 12

# **S.A.G.E. – An Exploratory Investigation of the Effectiveness of a Program for Learners with Trauma and Academic Challenges**

Paper based on a program presented at the 2011 American Counseling Association Conference and Exposition, March 23-27, 2011, New Orleans, LA.

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## **Introduction**

A college education is considered to be a good predictor of economic success (Zhang, 2008). For returning veterans (American Council on Education, 2010), low income high school students (Kahlenberg, 2008), and recent immigrants (Conway, 2010), post-secondary education offers a brighter future. However, such individuals often enter school with post-traumatic symptoms related to previous life experiences and demographic profiles (Abel, 2009). These can include: being foreign-born, being an English Language Learner or ESL (Feinberg & Morencia, 1998), having immigrant status, having experienced difficulties in emigration, spending time in war zones or refugee camps, and growing up in poverty or gang controlled neighborhoods (Cohen, Garcia, Apfel, & Master, 2006; Martin & Poorman, 1991; Purnell, 1999).

These students are at at risk for experiencing post-traumatic symptoms when exposed to the normal challenges and stresses of undergraduate education. More than simple test-taking anxiety, these students have described having PTSD-like symptoms during exams, including hyper-vigilance or persistent symptoms of increased arousal, difficulty concentrating, numbing of general responsiveness, avoidance, flashbacks, and

the propensity to freeze in response to perceived inescapable danger (American Psychiatric Association [APA], 2000; Gray, 1988). The authors defined test anxiety that is accompanied by these symptoms as Incapacitating Test Anxiety (ITA).

The SAGE program (Skills and Approaches to Grade Excellence) was developed in order to address the unique needs of these students. It has three components: 1) test-taking techniques, 2) cognitive restructuring, and 3) mind-body-spirit practices that integrate intellectual, emotional, and physiological responses and generalize the benefits to other stressful times (e.g., working with hospital patients) as well as during test-taking situations. The program is conducted across five meetings, and has a training manual for faculty, supporting materials for students, and structured activities for each session. This paper summarizes the preliminary research on the effectiveness of the SAGE Program in treating 79 nursing students from 2005 to 2007 who exhibited symptoms of ITA.

## **Methods**

### **Research Design**

A simple pre-test/post-test design was conducted, using students who volunteered to participate from January 2005 to December 2009. The Revised Test Anxiety Scale (RTAS; Benson & El-Zahhar, 1994; McIlroy, Bunting, & Adamson, 2000) was used to measure students' anxiety pre-intervention and post-intervention. While there was no formal control group, a small group of students who did not participate in the training took the pre-test instrument along with the intervention group in the Winter 2007 semester. This type of design is weak regarding the ability to minimize threats to internal validity. Further, the self-selection of participants to create the sample admittedly resulted in weak external validity as well.

### **Target Population and Sample**

The site for the study was a private Midwestern University, offering degrees from Associate to Doctoral. The target population consisted of students from the Associate (two-year program) and Bachelor of Science (four-year) programs in Nursing, residing on two different campuses. The nursing programs were selected since the student body is diverse, and the program of study prepares students for the NCLEX, the national licensing exam for nurses. On average, there are about 70 two-year students and 84 four-year students, attending classes on the two campuses. Over the 5 years (two semesters per year), 84 two-year students and 40 four-year students were recruited. These students responded to announcements in their nursing classes about the intervention. In this study all but one of the participants was female. There was some attrition, usually after the first session. Of the original 84 two-year students, 57 completed (32% dropout rate), and of the 40 four-year students, 22 completed (45% dropout rate). This resulted in a final sample of 79 students that completed the SAGE program and completed both pre-test and post-test measures. It should be noted that the dropout rate from the SAGE program is slightly better than the overall dropout rate from nursing school (>50%).

In addition, a nursing class of 40 students who did not volunteer for the program were asked to fill out the RTAS at the same time SAGE program participants completed their pre-test forms.

## **Description of the Intervention**

Initially the SAGE program was conducted across 10 meetings, but after the first year the number of meetings was reduced – first to eight, then six and then five. Exploratory analyses revealed no significant differences between amount of exposure and anxiety on all anxiety measures (described below).

Each meeting focused on a specific set of goals and key concepts as described in the SAGE Training Manual for Faculty and Professional Staff (Abel, 2009). Supporting materials (student workbook) and structured activities were presented in an atmosphere of “intentional caring” throughout the program to teach the various test-taking techniques, nurture the learning and application of each SAGE practice, and provide individualized care within the group setting (Abel, 2009).

The goal of the first SAGE meeting is to establish trust and the perception of safety as well as to teach concrete test-taking tips. The goal of the second SAGE meeting is to teach participants cognitive principles (e.g., cognitive restructuring and evidence-based realistic self-appraisal).

Sessions Three, Four, and Five share three goals. The first is to teach practices that foster a sense of safety during an exam. The second is to identify the spiritual aspects of being a nurse/healer. Students are encouraged to recognize the spiritual dimension and significance of becoming a healer, and to use that awareness to foster self-worth, confidence, and calm. The third is to imbue each student with confidence about her/his knowledge base as beginning nurses.

The core focus of Session Three is to teach the "The Sacred Pause," a meditation practice developed by Tara Brach (2003). Brach developed the "Sacred Pause" for women with highly critical inner voices. In the SAGE program, the Sacred Pause is used to teach the students to create a deep sense of self-acceptance, self-love, and calm when they “shut down” during an exam. The essential component of this practice is to accept oneself exactly as she/he is in the present moment. One begins by acknowledging any difficult or painful emotions such as dread or fear of failure, and goes on to feel calm and focused.

The core focus of Session Four is to help students claim their knowledge of basic nursing with confidence. This can be difficult because so many have self-doubt, and this often compels test-takers to change correct answers to incorrect ones, or “go blank” at the first question they are unsure of. The “gift” of sharing nursing knowledge is also presented. In this context, nurses are seen as healers, and are recognized for their knowledge of healing in all religious and spiritual traditions. Nurses attain this knowledge as part of their training, and students are asked to recognize the significance, value, and ethics of becoming a healer. Each student is encouraged to make this connection for her or himself, and to commemorate it, especially when self-doubt sets in during an exam. The goal of Session Five is to review SAGE practices and techniques and to create individualized "Test Taking Rituals." An example would include self-affirmations of being a “healer” and celebration of the spiritual aspect of healing.

## **Instrumentation**

The Revised Test Anxiety Scale (RTAS; Benson & El-Zahhar, 1994; McIlroy et al., 2000) was used to measure students’ anxiety pre-intervention and post-intervention. The RTAS consists of 20 items and has a 7-point response scale from 1 (strongly agree)

to 7 (strongly disagree). Analyses of the RTAS show that there are four main factors measured: Worry, Tension, Bodily Symptoms and Test-Irrelevant Thoughts (Benson & El-Zahhar, 1994). The range of scores on the RTAS is 20-140 with higher scores corresponding to lower reported anxiety. For this sample, Cronbach alphas across the four pre-test factors ranged from .672 to .870. Cronbach alphas across the four post-test factors ranged from .782 to .866. Both ranges indicate adequate internal consistency.

## **Procedures**

### **Access and Permission**

Approval to conduct the study was given by the University's IRB. The informed consent letter was distributed and collected at the first session, prior to completing the RTAS Pre-Test.

### **Data Collection**

Once students agreed to participate, they met weekly in a classroom for the two-year students or the learning center on the four-year campus. Food and beverages were served as part of the "caring" atmosphere of the program. The same facilitator conducted all five sessions. Each session lasted 90 minutes. Facilitators were teaching faculty or professional counseling staff. In addition to the sessions, students were also sent follow-up emails to reinforce the work done during that session. The pre-test RTAS was given before the first session began. The post-test RTAS was given at the end of the last session.

## **Results**

Several preliminary analyses were conducted on the entire sample of students ( $n=164$ ) who took the RTAS Pre-test. A comparison of mean pre-test RTAS scores by semester (two semesters per year for the five semesters) was conducted. Although the small sample size per group is seriously at risk for Type II error, the means and standard deviations across all groups were sufficiently homogeneous to combine across semesters into one group. Similarly, mean differences in Total RTAS Pre-test scores comparing two-year vs. four-year students were non-significant,  $t(158) = 1.106$ ,  $p = .270$ . Finally, mean Pre-Test Total RTAS scores were compared across the three groups: Completers ( $n=79$ ); Dropouts ( $n=45$ ), and Non-Participants ( $n=40$ ), and no significant differences were found,  $F(2, 157) = .787$ ,  $p = .457$ . Thus, despite the temporal span for inclusion of participants, and the differences in type of program, the scores appear to be homogenous enough to treat as a group for the subsequent analyses.

### **Test of Research Questions**

Five dependent samples t-tests were conducted to compare changes from the pre-test to post-test RTAS scores on the four dimensions and total score. All differences were statistically significant at  $p < .001$  (see Table 1).

**Table 1**

*Dependent Samples Comparisons of RTAS Subscales and Total Score (n=79)*

Pre-Test Comparison	Post-Test Mean	SD	SEM	95% CI of the Difference		t	Sig. (2- df tailed)
				Lower	Upper		
Worry	-9.922	7.822	0.891	-11.697	-8.147	-11.131	76 <.001
Tension	-9.705	6.598	0.747	-11.193	-8.217	-12.991	77 <.001
Bodily Symptoms	-7.269	7.933	0.898	-9.058	-5.481	-8.093	77 <.001
Test Irrelevant Thoughts	-5.443	6.344	0.714	-6.864	-4.022	-7.626	78 <.001
Total	-32.24	21.446	2.476	-37.174	-27.306	-13.019	74 <.001

### Conclusions

The results of this study suggest that the SAGE Program may be an effective intervention for reducing nursing students' Incapacitating Test Anxiety. The mean reduction of 32.24 points in RTA total scores is a substantive difference, indicating that the combination of techniques, skills, and support can assist students in their academic pursuits. Significant reductions were also seen across all four sub-scales.

### Limitations

There are several limitations to the current research, and therefore these results should be considered as exploratory. The pre-test/post-test design is a weak design, subject to internal threats of attrition, regression to the mean, history, and selection bias. Attempts to examine risk of bias due to attrition and selection were made, and these analyses suggested that the participants were no different at pre-test than students who did not volunteer, and were no different at pre-test than those who dropped out after one session. Anecdotal evidence suggests that these dropouts were a result of time conflicts, transportation issues, and financial constraints, rather than due to the material or the course itself.

The other limitation is the proximity of the post-test to the end of the program. For a fully conceived study, a more distal assessment of anxiety would be helpful. Additionally, actual performance scores (classes or the National Exam) would give more credence to the impact of the program.

### Future Directions

Despite these methodological challenges, these exploratory results offer some encouragement to counselors and educators who work with students who are academically capable but fail because of ITA. As the demand for educational credentials by employers continues to grow, new and returning students will benefit from supportive programs that holistically address the physical, mental, and spiritual aspects of professional and personal development. Students in nursing, counseling, and other helping professions that include licensing exams as well as classroom performance

measures that use multiple choice exams will benefit from programs such as this that can reduce attrition and improve academic performance. Anecdotally, students also reported that the skills they learned in the SAGE Program have great transferability to the challenges of patient care.

More rigorous assessments of the SAGE program are underway in the nursing program. In addition, qualitative data of the participants' experiences are being examined to better understand how the experience influenced their self-perceptions. And, the researchers are exploring offering SAGE to struggling students in fields such as mathematics, chemistry, engineering, performances arts, and athletics. Counseling programs and learning/resource centers in academic institutions are the venues being considered.

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