

## CASE REPORT

# Police Department Personnel Stress Resilience Training: An Institutional Case Study

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## ABSTRACT

The objective of this case study was to test the impact in law enforcement personnel of an innovative self-regulation and resilience building program delivered via an iPad (Apple Inc, Cupertino, California) app and personal mentoring. The Stress Resilience Training System (SRTS) app includes training on stress and its effects, HRV coherence biofeedback, a series of HeartMath self-regulation techniques (The Institute of HeartMath, Boulder Creek, California), and HRV-controlled games. The stressful nature of law enforcement work is well established, and the need for meaningful and effective stress resilience training programs is becoming better understood, as it has been in the military. Law enforcement and military service share many stress-related features including psychological stressors connected with the mission, extended duty cycles, and exposure to horrific scenes of death and injury. San Diego (California) Police Department personnel who participated in the study were 12 sworn officers and 2 dispatchers, 10 men and 4 women. The SRTS intervention comprised an introductory 2-hour training session, 6 weeks of individualized learning and practice with the SRTS app, and four 1-hour telephone mentoring sessions by experienced HeartMath mentors spread over a four week period. Outcome measures were the Personal and Organizational Quality Assessment (POQA) survey, the mentors' reports of their observations, and records of participants' comments from the mentoring sessions. The POQA results were overwhelmingly positive: All four main scales showed improvement; Emotional Vitality improved by 25% ( $P=.05$ ) and Physical Stress improved by 24% ( $P=.01$ ). Eight of the nine subscales showed improvement, with the Stress subscale, perhaps the key measure of the study, improving by approximately 40% ( $P=.06$ ). Participant responses were also uniformly positive and enthusiastic. Individual participants praised the program and related improvements in both on-the-job performance and personal and familial situations. The results support the efficacy of the program to achieve its goal of building stress resilience and improving officer wellness by providing practical self-regulation skills for better management of emotional energy. We conclude that the SRTS program for building resilience and improving psychological wellness can be as effective for law enforcement as it is for military personnel.

## INTRODUCTION

The stressful nature of police work is well established, and the need for meaningful and effective stress resilience training programs is becoming better understood, as it has been in the military. Police work and military service share many stress-related features: Psychological stressors connected with the mission, such as extended duty cycles and exposure to horrific scenes of death and injury, are common to both cases.<sup>1</sup> Anger-management issues, family relationship issues, and substance abuse as the results of stress are also common to both military and police. And suicides in both the police and military now exceed deaths in the line of duty. Dr Daniel Goldfarb, a respected psychologist specializing in police stress, states that a failure to get help is a major contributor to police suicide and other stress effects.<sup>2</sup>

The US military today recognizes that unregulated response to stress can not only result in decreased operational performance, but can also increase risk for a wide range of adverse health outcomes, psychological and emotional injury, and family breakdown. As a result, all branches of the US military have moved to include self-regulation and resilience trainings in their operations.

It has long been accepted that people in risky situations, parachutists as well as soldiers, adapt to situational stress after the first few experiences, and that

training can help duplicate this process, with studies showing that experienced personnel are able to control and even use stress productively.<sup>3</sup> An important part of what experienced personnel learn is self-awareness of their stress state and self-regulation of stress energy. Accordingly, the current Department of Defense definition of resilience is "the ability to withstand, recover, and grow in the face of stressors and changing demands." The Stress Resilience Training System (SRTS) is completely consistent with this definition of resilience and its associated objectives.

The Stress Resilience Training System (SRTS) was developed by a team at Perceptronics Solutions, Inc (Sherman Oaks, California), including Ease Interactive, Inc (San Diego, California), and the Institute of HeartMath (Boulder Valley, California), as a Small Business Innovative Research (SBIR) project sponsored by the Defense Advanced Research Projects Agency (DARPA) and the Office of Naval Research (ONR). The goal was to meet the need for a self-contained, mobile, comprehensive stress resilience training program that can be used by both military and civilian populations. Usability evaluation at George Mason University (Fairfax County, Virginia)<sup>4</sup> and initial evaluations of the SRTS by US Navy, Air Force, and Army groups have been highly positive.<sup>5</sup> Consequently, we believed US police forces would be likewise amenable to a low-cost,

validated program that could bring stress resilience training to their personnel in an easy-to-use format that is both engaging and overcomes the still-existing stigma of visits to a clinician, therapist, or counselor.

A key premise of our SRTS development has been that in addition to reducing the adverse effects of stress, a scientifically based self-regulation and resilience building program can actually enhance service members health and performance. A study conducted by Institute of HeartMath researchers showed that this can be true in police and correctional officers as well.<sup>6</sup> The San Diego Police Department (SDPD), including its newly formed Wellness Unit headed by Captain Sarah Creighton, agreed to a multi-participant case study with 14 police personnel representing a wide range of departments. With the chief's approval, we obtained the cooperation of the Wellness Unit in performing the case study reported here, including recruiting participants, arranging for training facilities, and assisting in data collection.

#### CLINICAL FINDINGS: PARTICIPANT DEMOGRAPHICS AND INITIAL EMOTIONAL LEVELS

Participants were 10 male and 4 female SDPD personnel from several police specialties; 12 were police officers and 2 were police dispatchers. The participants appeared highly motivated and interested in the general implications of the study as well as in the potential benefits of the program on their health as well as professional and personal life.

All 14 participants completed the pre-study 52-item Personal and Organizational Quality Assessment (POQA) questionnaire; of these, 11 completed the post-study survey; and of the 11 post-study surveys, 10 could be reliably matched with their pre-study counterparts. Accordingly, we conducted two types of analysis: one used the entire pre and post participant data, which was used to calculate group means for the scales and subscales; the second used the matched pairs in a paired *t*-test analysis of the scales and subscales. The matched-pairs analysis shows that our case study group had the following characteristics:

1. **Marital Status**, well distributed among single, married, and divorced
2. **Age Range**, from early 20s to late 40s, with 50% in the 31-to-40-year age range
3. **Employment Status**, 86% were working officers, and 14% were dispatchers
4. **Education**, 80% reported "some college" or bachelor's degrees, and 20% had master's degrees
5. **Hours Worked Per Week**, 60% reported 41 to 50, with about 40% working 51 to 59 or more
6. **Years at Organization**, 20% reported 2 to 5, 30% reported 5 to 10, and 50% reported 10 to 20
7. **Years at Current Job**, almost evenly distributed from 0 to 6 months to 10+ years

In addition, the initial POQA data showed that as a group, these police personnel were above average in all four of the main scales—Emotional Vitality,

Organizational Stress, Emotional Stress, and Physical Stress—and above average or substantially above average on all but one of the subscales. Accordingly, our case study group could be characterized as mature, emotionally stable representatives of police personnel. Nevertheless, when this group was asked at the introductory training session what stressed them, their responses reflected virtually every factor mentioned in the literature: problems with management, on-the-job dangers, lack of public appreciation, non-understanding family members, etc. It was obvious from their answers and their participation in the study that even these relatively well adjusted people desired help in dealing with stress.

#### TIMELINE

We launched the case study in May 2013 with an initial 2-hour workshop training session at SDPD headquarters. The initial training included an overview of the overall program and its objectives, the neurophysiological basis of the self-regulation techniques taught in the Coherence Advantage, the application of the learned tools to some real-life situations, and the features and operation of the SRTS app itself. The participants retained the SRTS app and iPads (Apple Inc, Cupertino, California) for 6 weeks, after which they were collected and the post-trial POQA administered. For the first 4 weeks, 1 hour of telephone mentoring in the resilience-building skills was made available to each participant.

#### ASSESSMENT

##### POQA Survey

The POQA is a 52-item validated questionnaire that factors into four major constructs that directly affect health and job performance; each major scale has been subdivided into subscales, using the same statistical techniques, to provide a finer-grained picture of the components. The four POQA scales and their subscales are as follows:

1. **Emotional Vitality scale:** the positive emotional energy that enriches life experience and enhances health and well-being. This scale is an overall measure of the degree to which employees feel a positive and emotional energy, enabling an optimistic and fulfilling life experience. Low scores on this scale suggest employees may have limited emotional energy available to invest. Subscales are Emotional Buoyancy and Emotional Contentment.
2. **Organizational Stress scale:** organizational impediments and relational discord that impair work performance, reduce job satisfaction, and increase employee turnover. This scale is an overall measure of the degree to which employees feel negatively pressured by stressors and conflicts at work and in their personal lives that not only detract them from work performance but may also lead them to want to quit their job. High scores on this scale signify likely stressors and tensions employees feel they are experiencing that impede work performance and

may also signal an intention to quit. Subscales are Pressures of Life, Relational Tension, and Stress.

3. **Emotional Stress scale:** emotional discord that reduces the quality of life experience and jeopardizes health and well-being. This scale is an overall measure of the degree to which employees report negative emotions that they have difficulty controlling and that they feel impair the quality and effectiveness of their life experience. High scores on this scale indicate it is likely that the employees are feeling emotionally stressed, overwhelmed, and/or frustrated by the present circumstances of their lives. Subscales are Anxiety/Depression and Anger/Resentment.
4. **Physical Stress scale:** physical symptoms of fatigue and poor health that reflect the overall stress an employee is experiencing. This scale is an overall measure of the level of physical symptoms of stress among employees. High scores on this scale indicate the employees may have low levels of physical and emotional energy and may also be experiencing precursors of significant health issues and problems. Subscales are Fatigue and Health Symptoms.

We administered the POQA survey at the beginning of the introductory training session and again 6 weeks later, after the participants had practiced using the SRTS and had completed the personal mentoring sessions.

### Mentor Reports

In addition to the POQA results, assessment of the case study efficacy was based on the observations of the mentors who provided individualized assistance to the participants in achieving the program's goals. The mentors tracked the length and number of completed mentoring sessions, the participants' statements about their main stressors or challenges, which of the techniques and practices taught in the program were most helpful, and how they helped them in various situations both at work and in their home lives. The mentors also rated how engaged the participants were in using the SRTS and the self-regulation techniques in daily life. The latter reports included quotations of relevant responses from the individual participants.

### INTERVENTION PROGRAM

#### Stress Resilience Training System (SRTS)

The intervention in this case study was centered on participants' use of the SRTS to learn about resilience and its effects and the HeartMath self-regulation techniques and to practice sustaining a physiologically coherent state. The SRTS is a self-contained, mobile training course—presently available as an iPad app—that combines (1) information about the physiology of stress and resilience, (2) engaging training in a series of evidence-based energy self-regulation techniques, and (3) the use of heart rate variability (HRV) coherence biofeedback to control a series of progressively more challenging games that are designed to increase the use and sustainment of the resil-

ience-building skills.<sup>7,8</sup> The current version of the SRTS app has a Navy orientation because the Navy's Operational Stress Control (OSC) Program has been the major transition and evaluation partner. But the program's objectives and approach are equally applicable to any highly stressed personnel such as first responders and individuals working in institutional and corporate environments.

The key features that differentiate the program from other resilience building and stress control approaches are as follows:

- adopting portable technology in a scientifically validated stress resilience training approach that incorporates both cognitive learning and HRV coherence biofeedback;
- minimizing the adverse effects of stress and enhancing its productive effects to help improve immediate performance as well as prevent the occurrence of psychological injuries;
- using a state-of-the-art mobile device such as the iPad or other tablet to greatly enhance training effectiveness by enabling refreshment training and practice during and after deployment; and
- embedding the training methods in a set of casual and serious games to provide a framework for learning to control and use stress productively in a form acceptable to today's young military population<sup>9</sup> and other age groups as well.

The iPad app provides access to four main components, as shown in Figure 1.

- **KNOW HOW.** Provides the user with necessary knowledge in the form of an Introduction and specific information on Resilience; Stress; Putting Stress in Perspective; and Preparing for,

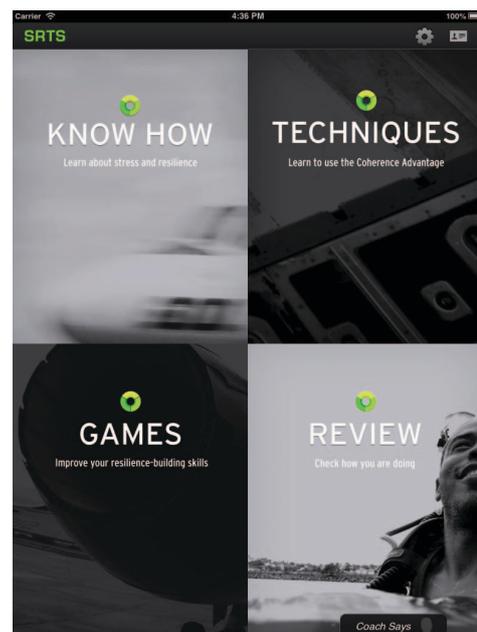
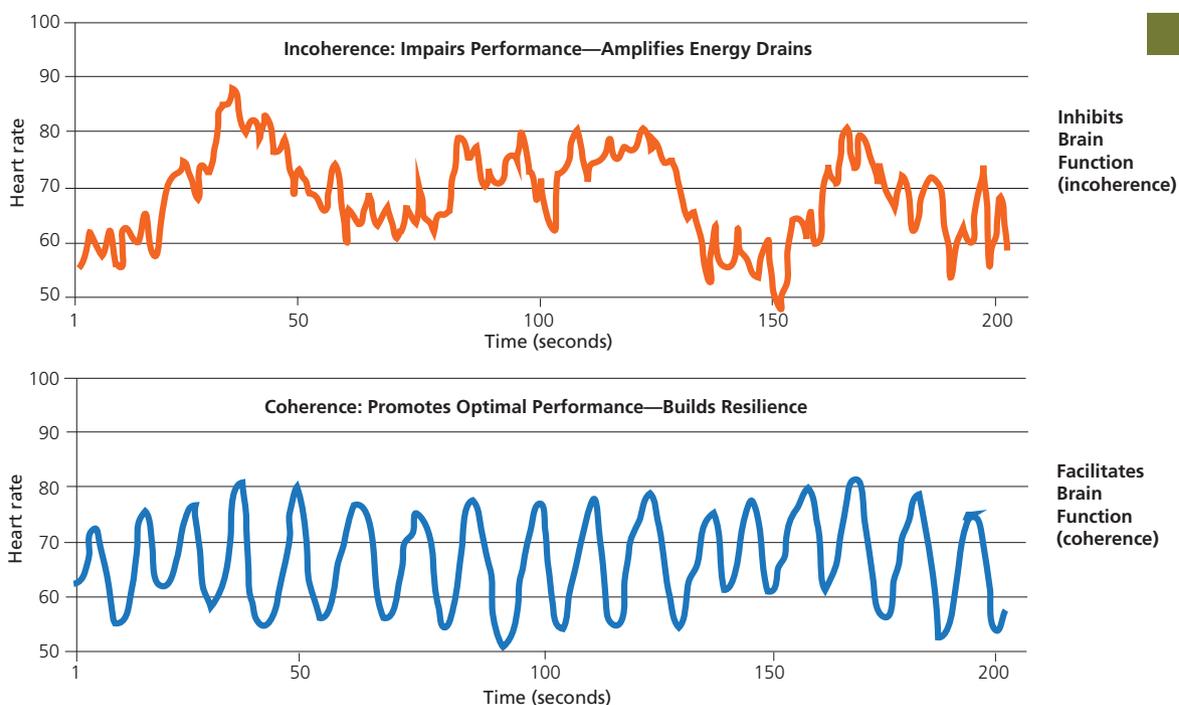


Figure 1 iPad displaying the app's four main components.



**Figure 2** The heart rate variability associated with incoherence (top) and coherence (bottom).

Performing in, and Recovering from operations.

- **TECHNIQUES.** Teaches the HeartMath HRV Coherence Advantage technique including self-regulation of HRV and shifting from negative to positive emotions.
- **GAMES.** Provides a set of entertaining games during which the user can practice maintaining HRV coherence while playing in increasingly challenging environments
- **REVIEW.** Allows the user to review his or her progress in learning and Coherence skills.

Each component has been human factored for ease of use and professionally designed and produced to high iPad app standards.

An essential part of the SRTS app is Coherence Advantage training using techniques and processes developed and validated by the Institute of HeartMath.<sup>6,10</sup> Coherence Advantage incorporates the use of HRV coherence (HRVC) biofeedback to facilitate skill acquisition of the self-regulation techniques that allow users to recognize and shift the mental and emotional responses associated with counterproductive stress reactions. The iPad SRTS employs an ear sensor to detect the pulse, which is used to determine heart rate, and HRV coherence measurement algorithms developed by HeartMath for iOS platforms.

The top graph of Figure 2 shows the edgy, jerky HRV pattern associated with incoherence. Incoherence means the higher brain systems and the sympathetic and parasympathetic nervous systems are out of synch; it represents the neurophysiology of poor mental and physical performance. The bottom graph shows the

more even HRV pattern associated with coherence, when the sympathetic and parasympathetic nervous systems are in synch. It represents the neurophysiology of optimal function, when everything seems easy and cognitive performance is enhanced.

To our knowledge, SRTS is unique in its comprehensive delivery of generalized stress knowledge, evidence-based HRVC feedback, and game-based practice in an adaptable eLearning framework supported on a mobile tablet. It provides a new capability for broad delivery and on-site sustainment training.

### Personal Resilience Mentoring

Following the initial training session and during his or her use of the SRTS app, each participant had four 1-hour telephone sessions with one of two HeartMath-certified Personal Resilience mentors. The mentoring portion of the program has several unique aspects:

1. Mentoring has significant potential to increase the sustainability of the techniques taught in the SRTS app, which have been shown to reduce a wide range of stress-related symptoms such as a feeling of being overwhelmed, fatigue, sleep issues, emotional drama, and the incidence of more serious conditions;
2. The phone-based delivery mechanism
  - Is easily replicable and scalable, up or down;
  - Eliminated concerns related to stigmatization; and
  - Eliminated most travel and logistic issues as the phone appointments were scheduled to accommodate the schedules of the participants.
3. The approach has been proven to be cost-effective, and to lower health care costs.

The mentors focused on understanding the unique and specific challenges of each participant and encouraged them to use appropriate self-regulation and coherence-building skills to build and sustain their own health and resilience.

## RESULTS

### POQA Primary Scales

Figure 3 (top) shows the officers' scores on the Primary Scales as assessments against a normative data base and as changes from pre- to post-intervention. The statistical results are from the matched-pairs analysis and shown in the Table.

The distribution of scores on each scale for the normative sample has been rescaled to a statistical scale with a maximum value of 100. Scores of 25 and below are considered low. For example, if an organization has a score of 23, this means that that score is lower than 23% of the individuals in the normative sample. Conversely, scores of 75 and above are considered high. Thus, if an organization has a score of 79, then that score is higher than 79% of the individuals in the normative sample.

In addition, the Organizational, Emotional, and Physical Stress scales have been "reverse coded" so that decreases in stress are shown as increases on the diagram, ie, moving toward the "Commendable" 100% top of the scale. Finally, scales that show a statistically significant improvement from pre- to post-trial (ie, Probability  $\leq .05$ ) have been marked with an asterisk.

Stress is measured on a different scale than the other items and so is not shown in Figure 3, but the Stress measure moved from a low-average score of 17 to an extremely low score of 5. As seen, several of the subscales in addition to Stress also achieve significance, either based on the conventional value of a  $^{10.05}$  probability or based on probabilities below or near 0.10, a level that is frequently accepted as significant for small samples such as this.

### Mentor Reports

Participants reported that they found the initial training helpful in setting the stage for working with the SRTS app. Many reported that it was beneficial to learn about the physiology of coherence and optimal functioning, which supported their understanding of resilience and the program as an energy management, self-regulation approach. All participants reported that the mentoring helped to deepen their understanding of how to use their newly gained skills in everyday situations, making it a more practical and effective overall program.

In turn, the mentors felt that every officer was genuine in the feedback he or she gave throughout the mentoring process. The mentors also appreciated the effort the participants put into the mentoring sessions and in practicing on-the-go what they had learned. The mentors said that it was a pleasure and a privilege working with each of them.

Some participants suggested that it would be helpful if the mentoring sessions were limited to 30 min-

utes as it was difficult to set aside a full hour when their schedules are already full, although others appreciated the longer sessions. The mentors felt that shortening the sessions would not materially decrease the effectiveness of the mentoring and that they could always go longer if needed. At times the mentors did shorter sessions because they had covered what needed to be covered at that stage of learning and practice.

The mentors recognized that this was a mature group, with many of them having years of experience either in law enforcement or previously in the military. The mentors heard from each person in the group the love they have for the work they do as public servants. As seasoned officers and dispatchers, they are all very aware of the array of challenges they face each day and of the long-term toll that these can take. With that, they are also well aware of the psychological needs currently not being met that the SRTS program was able to effectively address.

### Participant Comments

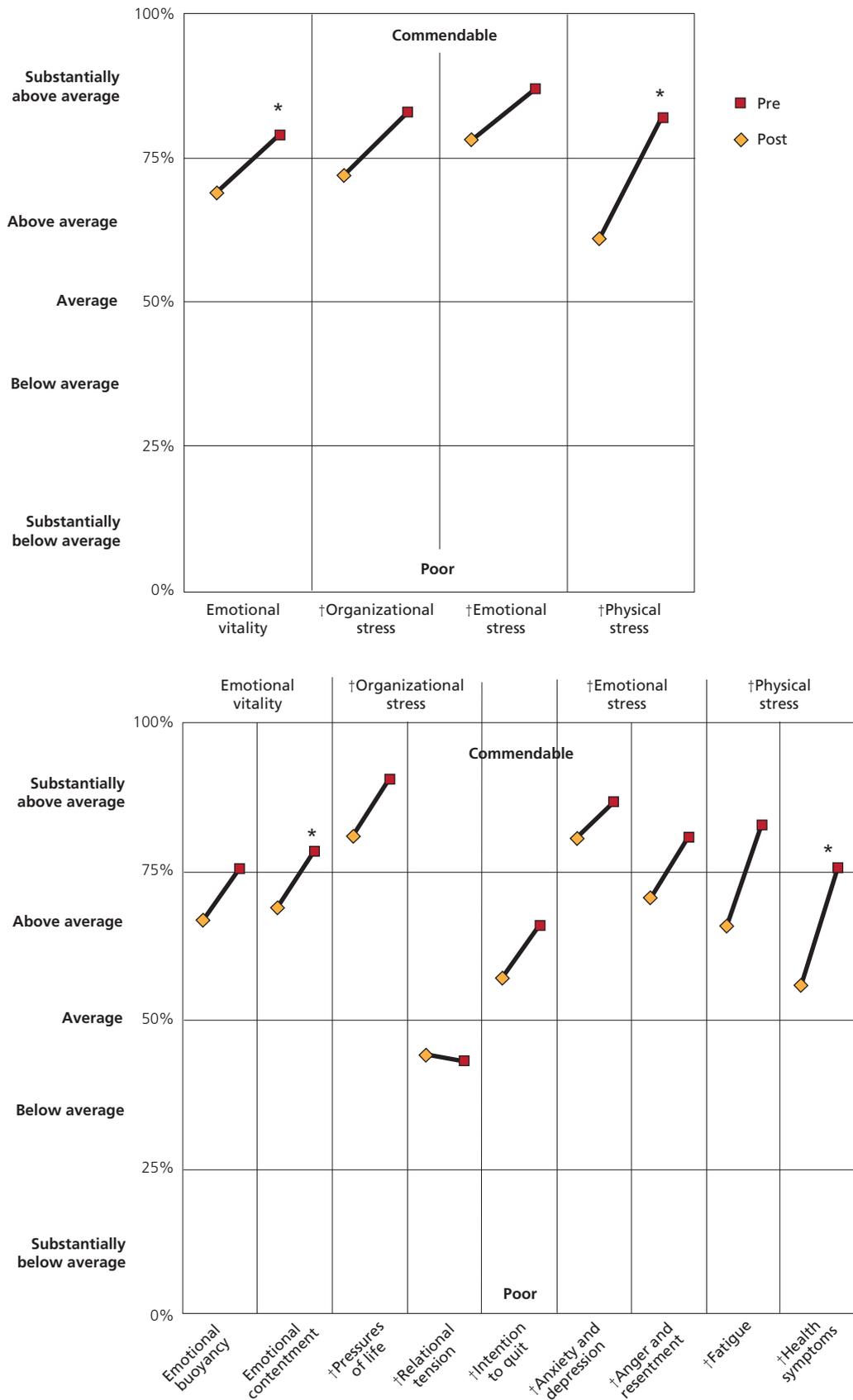
The comments as reported by the mentors were universally positive. Participants reported that they were able to learn the Coherence Advantage technique and to progress in the games from the simpler to the more challenging. More important, they were able to apply the technique in real-life situations, including one actual confrontation with a suspect. They related improvements in both on-the-job performance and personal and familial situations and generally praised the program. The following presents several typical comments under five response topics.

#### i. General Response to the SRTS Intervention

*I absolutely love it! The content is relevant and the videos are very well produced. They are engaging and have a very high production quality. I think it's important that they are short for most people's attention spans. I have enjoyed using the games . . . except the slingshot game, which makes me dizzy when the car goes into space! So I use the asteroid game and have had good success with it.*

*This training went fabulously well! I first started using the program during slow times at work when I wasn't dispatching, and found that my coherence level went to 100% after about 3 breaths. Then I started a basic training segment while dispatching and noticed that my coherence level dropped significantly to 50% or less. Now I use techniques I learned in SRTS to self-regulate during stressful calls, and I'm leaving work feeling much less stressed. I have been sharing the program with the other people in my department, and they all want it.*

*As a leader, I've been through many different psychology-based stress relief programs, but I've found this one to be far more effective. I use it in my job every day because the physiology basis of the techniques took it out of the realm of ideas and made it tangible.*



†Reverse coded to show the degree of improvement over time.  
 Paired t test significance; \*P<.05.

**Figure 3** Personal and Organizational Quality Assessment matched-pair results for scales (top) and subscales (bottom).

Table Personal and Organizational Quality Assessment Scores and Results

	Pre (N=10)			Post (N=10)			Paired Differences					t	df	P <
	Mean	SD	SEM	Mean	SD	SEM	Mean	SD	SEM	Lower 95% CI	Upper 95% CI			
<b>Organizational stress<sup>a</sup></b>	3.38	1.55	0.49	2.97	1.18	0.37	-0.41	0.96	0.30	-1.10	0.27	-1.36	9	NS
Pressures of life <sup>b</sup>	2.88	1.70	0.54	2.30	1.04	0.33	-0.58	1.08	0.34	-1.35	0.19	-1.70	9	NS
Relational tension <sup>b</sup>	4.47	2.12	0.67	4.53	1.94	0.61	0.07	1.83	0.58	-1.24	1.38	0.12	9	NS
Stress <sup>b</sup>	6.00	3.32	1.11	3.67	1.73	0.58	-2.33	3.16	1.05	-4.76	0.10	-2.21	8	NS
<b>Emotional vitality<sup>a</sup></b>	5.29	1.21	0.38	5.66	0.93	0.29	0.37	0.51	0.16	0.01	0.74	2.30	9	.05
Emotional buoyancy <sup>b</sup>	5.41	1.23	0.39	5.75	0.87	0.28	0.34	0.60	0.19	-0.09	0.77	1.78	9	NS
Emotional contentment <sup>b</sup>	5.13	1.27	0.40	5.55	1.17	0.37	0.42	0.53	0.17	0.04	0.79	2.49	9	.05
<b>Emotional stress<sup>a</sup></b>	1.90	0.62	0.20	1.67	0.34	0.11	-0.23	0.66	0.21	-0.71	0.24	-1.12	9	NS
Anxiety and depression <sup>b</sup>	1.74	0.74	0.23	1.61	0.39	0.12	-0.13	0.64	0.20	-0.58	0.33	-0.64	9	NS
Anger and resentment <sup>b</sup>	2.04	0.76	0.24	1.71	0.42	0.13	-0.33	0.85	0.27	-0.93	0.28	-1.21	9	NS
<b>Physical stress<sup>a</sup></b>	2.79	0.78	0.25	2.11	0.59	0.19	-0.68	0.69	0.22	-1.18	-0.19	-3.12	9	.05
Fatigue <sup>b</sup>	3.10	1.37	0.43	2.28	0.71	0.23	-0.83	1.27	0.40	-1.73	0.08	-2.05	9	NS
Health symptoms <sup>b</sup>	2.58	0.70	0.22	1.98	0.68	0.21	-0.60	0.62	0.20	-1.05	-0.16	-3.06	9	.05
<b>Intention to quit</b>	2.15	1.89	0.60	1.50	0.94	0.30	-0.65	1.20	0.38	-1.51	0.21	-1.71	9	NS

Paired Samples Test

<sup>a</sup> Primary scale.<sup>b</sup> Sub-scale.

Abbreviations: CI, confidence interval; df, degrees of freedom; NS, not significant; SD, standard deviation; SEM, standard error of the mean.

## 2. Work-related Implications and Effects

*Last week I was in a situation in which a person squared off on me and started reaching in his jacket. I went to my breath and activated coherence and never felt anything but calm. As I noticed the sirens of my backup arriving, I realized my heart was beating slowly. Every other time that has happened, I basically screamed for backup and it took me a whole day to calm down. When my Captain got there, he said he thought I was kidding when I put out the call because I sounded so calm on the radio. He asked what I'd been doing differently. This stuff is for real.*

*My mentor helped me when I changed jobs within the Department. When I went for the interview, I used a technique to activate coherence and felt myself calming down. I nailed the interview and got the job—they said it was because I was confident and didn't seem nervous.*

## 3. Personal and Familial Implications and Effects

*I completed all the learning sections, the tests, and the games and I have to say I'm impressed! I am using the techniques at work and home and am very happy with this training because it is helping me with anxiety and stress. I have a family, bills, job stresses, and the list goes on and on. SRTS is helping me with job performance and everyday life. Thank you for selecting me.*

*Things have been excellent. I am more aware as to how I add to family drama, and I have made an effort to use Freeze Frame more and be more accountable for my words and actions.*

## 4. Psychological and Physical Effects

*I'm very happy with this training because I believe it is helping me with anxiety and stress. I don't know if it would have the same impact on me 5 years ago. Today I have a family, bills, job stresses, and the list goes on and on. Thank you for selecting me, but more importantly it is helping me with job performance and everyday life.*

## DISCUSSION AND CONCLUSIONS

The results of this case study were overwhelmingly positive: All four main scales within the POQA instrument showed improvement; Emotional Vitality improved by 25% ( $P=.05$ ) and Physical Stress improved by 24% ( $P=.01$ ). Eight of the nine subscales showed improvement, with the Stress subscale, perhaps the key measure of the study, improving approximately 40% ( $P=.06$ ). Participants' responses were also uniformly positive and enthusiastic. Participants were able to learn the Coherence Advantage technique and progress in the games; they praised the SRTS program overall and related improvements in both on-the-job performance and personal and familial relations. Most important, they were able to actually apply the technique in real-life situations.

The SRTS resilience training program evaluated by SDPD, which included classroom training and was sustained by telephone mentoring, is one of two similar programs we have conducted in 2013 with law enforcement personnel. The other one involved Air Force Security Forces personnel,<sup>11</sup> and while the duty requirements are not identical, there is enough similarity to learn from the results and draw some conclusions about

the effectiveness of SRTS programs in law enforcement populations. In both cases, the participants' responses as recorded by the mentors were enthusiastically positive. Both groups found the SRTS program to be highly worthwhile, well designed, and engaging; and they both felt that the expert telephone mentoring added significantly to the program. Even for the relatively short time they had with the SRTS iPads, participants saw positive effects in their on-the-job performance and in their home life and relationships. Finally, both police officers and Air Force Security Personnel said that SRTS should be part of essential training. Personnel in both groups recommended initiating self-regulation training at the boot camp or Academy level.

A vital perspective of stress resilience, which is strongly taught throughout SRTS program, is that the key to building and sustaining stress resilience is improving one's ability to self-regulate with regard to energy-draining emotions.<sup>12</sup> Despite a relatively short exposure period, the SDPD study results clearly support the ability of the SRTS program to achieve its major goal of building stress resilience through the self-regulation of emotional energy.

In police work, energy-draining emotional responses to challenges, as well as actual fatigue, are what deplete both energy and self-regulatory capacity—and thus resilience. From both comments in the mentor reports and the POQA survey results, we see that after using SRTS to learn about resilience and practice the self-regulation techniques including HRV coherence, the SDPD officers report that they have more energy, are less fatigued, have more emotional buoyancy, and have increased their ability to self-regulate as reflected in reduced anger, anxiety, stress, and physical symptoms of stress, such as sleep problems. All of these effects indicate an increase in stress resilience.

The stress and resilience improvements in this study were achieved despite the facts that: (1) the SRTS app was oriented to the Navy environment in its look and feel and in the content of its learning modules and self tests; (2) the volunteer SDPD police sample was at an above-average level of psychological and emotional health to begin with; and (3) the exposure to the SRTS app was relatively short. Accordingly, the results of the SDPD case study indicate strongly that the SRTS approach to building stress resilience is as appropriate for law enforcement personnel as it is for military personnel, its original target.

It is worthwhile to note that the distinction between law enforcement and military operational environments may be getting smaller. Radley Balko, in his recent article "Rise of the Warrior Cop," points out that "in response to a range of perceived threats, law enforcement agencies across the US, at every level of government, have been blurring the line between police officer and soldier."<sup>1</sup> Possible civic ramifications of this tendency aside, law enforcement personnel should have available to them the same training in stress resilience through self-regulation of emotional energy as do mili-

tary personnel. A key objective of such training is to improve awareness and appropriate responses during intense situations, up to and including combat—and also in the instances of intense social interactions that comprise a law enforcement officer's daily routine.

The SDPD case study results underscored the importance of mentor support and group interactions. The mentor interactions personalized the training to each participant, focusing on the issues that cause the most distress in each individual's life and applying the resilience-building techniques to those issues. This approach minimizes the negative effects of professional disturbances on the home, and the negative effects of domestic disturbances on the job. Mentors also build on a foundation of issues that rejuvenate and build energy, which leads to improved communication and performance. Likewise, an environment in which discussing the techniques and their application are both acceptable and encouraged is critical to improving the resilience of a unit or a department. These aspects of resilience training are so significant that we are adjusting the new Web-based iteration of SRTS to emphasize the personalizing role of the mentor and the supportive impact of the group. We are confident that these adjustments will build on the improvements shown in the SDPD case and will result in an SRTS program that is highly suitable for general law enforcement as well as for numerous other civilian applications.

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