From Good to Great: The Use of Biofeedback in Employee Assistance Programs as a Tool to Build Resilience in the Workplace
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Presentation for the WESTERN ASSOCIATION OF BIOFEEDBACK & NEUROSCIENCE Annual Conference November 4, 2017

Disclosure

Materials that are included in this course may include interventions and modalities that are beyond the authorized practice of mental health professionals. As a licensed professional, you are responsible for reviewing the scope of practice, including activities that are defined in law as beyond the boundaries of practice in accordance with and in compliance with your professions standards.

What is an EAP and History of Biofeedback at UCLA's Staff and Faculty Counseling Center

• What is an EAP and role of EAPs in workplace emotional and physical health
• Providing brief and effective interventions
• Early study using the Environ
Benefits Innovations in Employee Behavioral Health

• Employers recognize the business impact of behavioral health concerns in the workplace, including impaired performance, increased health expenditures, and short term disability claims and productivity loss.

• 53% of U.S. employees rate employee stress levels as either "high" or "very high" more than any other country.

• Behavioral health concerns represent one of the most common contributors to the use of short-term disability.

• EAPs understand behavioral health concerns and have increased awareness of depression and anxiety of employees and are utilizing more effective treatments.

• Aside from financial stress, job stress is the most prevalent source of stress reported by employees.

• An integrated Benefits Institute showed that anxiety and depression are major contributors to loss of productivity in the workplace.

Creating a Resilient Workforce

• The most successful health and wellbeing programs are those that have been integrated into the business and have become a part of the culture.

• Resilient leadership workshops are useful for covering physical, emotional, mental and spiritual needs and implementing evidence based practice underpinned with positive psychology principles.

• Resilience and other programs are necessary to support companies – to build a healthy, high performing culture.

The Environ


• 29 subjects at SFCC

• Subjects showed a positive change in resistance to stress and learned to create deeper levels of relaxation. Subjects were able to significantly lower both their muscular tension levels (EMG) as well as decrease SCL levels.
The Environ Biofeedback System is an effective instrument to produce a positive physiological change. The goal of the treatment is to teach a relaxation procedure that can be directly utilized in the changing environment of our workers life and to assist them towards developing an effective coping strategy as a tool in resistance to stress.

The Environ Biofeedback System is a patented biofeedback/relaxation system that was developed for behavior modification. It uses advanced computer technology to deliver integrated, multisensory stimuli to accelerate the development of positive behavioral responses, such as the relaxation response.

From Jorge Cherbosque and Frank l. Italiane, 1999

Computer technology, as it is applied to sophisticated biofeedback instrumentation, allows auditory, olfactory, kinesthetic and visual stimuli to create specific stimulus-response patterns, enhancing behavior modification.

Data was compiled and evaluated from Electromyography (EMG) and Skin Conductance Level (SCL), measured by the mean, high, low, and standard deviation. EMG is an indication of muscle tension, and SCL is an indication of emotional arousal directly related to the sympathetic nervous system, or what is commonly labeled “anxiety.”

Results

Overall results indicated both statistically significant change as well as a clinically relevant shift towards increased relaxation responsively.

From Jorge Cherbosque and Frank l. Italiane, 1999
Conclusion

• We conclude from the data presented that our employees showed a positive change in resistance to stress and learned to create deeper levels of relaxation. The data indicates that the our clients were able to significantly lower both their muscular tension levels (as measured in the EMG) as well as decrease SCL levels.

• The Environ Biofeedback System appears to be a powerful instrument for training stress-reduction and relaxation.

In Search for a New System

• Received training and help to design a new biofeedback and resilience program from Dr. Stephen Sideroff, PhD and Thought Technology

<table>
<thead>
<tr>
<th>RELATIONSHIP</th>
<th>ORGANISMIC-BALANCE &amp; MASTERY</th>
<th>PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship with Self</td>
<td>Physical Balance &amp; Mastery</td>
<td>Presence</td>
</tr>
<tr>
<td>Relationship with Others</td>
<td>Mental Balance &amp; Mastery</td>
<td>Flexibility</td>
</tr>
<tr>
<td>Relationship with Something Greater</td>
<td>Emotional Balance &amp; Mastery</td>
<td>Power: the ability to get things done</td>
</tr>
</tbody>
</table>
Week One
Self-awareness

• Personal Portrait – history and assessment of traits
• Physical, behavioral and emotional symptoms

Week One
Self-Awareness – Sources of Stress

• Noticing your time pressures
• Noticing your people pressures
• Noticing how your filtering (interpretations) create stress
• Noticing how your unfinished business creates stress
• Change and uncertainty as sources of stress

Week Two
Biofeedback Training

• Learn to relax
• Learn to reduce tension rapidly
• Becoming more sensitive to tension building in your body
• Generalizing the biofeedback training to real life stresses
• Use of visualization to help cope with difficult stressors
Week Three
Preparing Your Body to Handle Stress

- Setting goals and daily planning to insure relaxation practice & and optimal prioritizing
- Focus and improvement of eating habits
- Using exercise to reduce stress

Week Four
Mastering Your Thinking Patterns

- Controlling fears and catastrophic expectations
- Reality testing
- Identifying and overcoming “old rules”
- Assertiveness training
- Resolving unfinished business
- Staying in the present and ways of letting go

Week Five
Developing a Positive Attitude & Self-Image

- Improving self-image: Giving your positive side more power
- Taking control of your life
- Your emotional boundaries and establishing new boundaries
- Giving meaning to your life
Week Six
Problem Solving & Communication

• Desensitization training to control anxiety and stress
• Rewarding your new and positive behaviors
• Problem-solving techniques
• Communication and conflict resolution steps

Example of an exercise
Unfinished Business

Common Reasons Employees Enroll in the
SFCC Biofeedback and Resilience Program

• Work Stress (new work environment, new boss, too much work)
• Work Performance (need to be more focused, need to pass a test)
• Anxiety (perfectionism, chronic worry, panic attacks, specific phobias, trauma)
• Workplace Injury (as part of the UCLA WorkStrong Program)
• Chronic Pain (useful Chronic Pain and Hrv workshop-Svens)
• Transition (new to LA, new job, job search)
• As a compliment to therapy
• Depression
• Sleep Disturbance
• Coping with Relational/Family issues
• Heard about it in one of presentations and are curious
• Referred by their MD or another program participant
• Another EAP therapist refers them to the program
Biofeedback and Resilience Program

<table>
<thead>
<tr>
<th>Client</th>
<th>Session</th>
<th>Biofeedback</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Stress</td>
<td>Stress Assessment</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>HRV</td>
<td>2 min breathing with eyes closed, 2 min paced breathing, Practice breathing, Read handouts, CD #1 Self Awareness, Self Awareness and Resilience packet</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Temp, SC</td>
<td>CD #2 Time Management, Goals, Healthy Eating and Exercise, Homework packet with exercises related to CD, Introduction to Mindfulness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EMG, SC</td>
<td>CBT Part I, CD 3: Successful Thinking, Enhancing your self-image</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EmWave Pro (Quick Coherence Technique), CBT Part II, CD 3: Enhancing your self-image</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EMG</td>
<td>Using Loving Kindness Meditation, CD 4: Problem solving and Communication, Relaxation and Desensitization, Handouts on communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biofeedback of their choice</td>
<td>In session complete outcome measures, Final handout on managing stress, Review skills attained during program, Give them certificate of completion</td>
</tr>
</tbody>
</table>

Notes: Particulars to each client. E.g., Very difficult work situation, Pelvic Pain, Breathing with own breathing rather than paced breathing, Breathing rate 3
2012 – 2016
Biofeedback/ Resilience Program Summary*

- 234 Clients have participated in 1 or more biofeedback sessions since we started using the Thought Technology Biofeedback System in 7/11.
- 61 Clients have completed the 7 session program.
- We are getting more referrals from the UCLA WorkStrong program (15 clients have been referred from the WS Program in the past two years and 7 have completed the program).
- Another trend is an increase in use by Nurses.

* We have seen about 20 other individuals as of May 2017 and about 6 have completed the program. These numbers are not included in the above statistics.

The Following are Statistics that we gathered from those individuals completing the 7-session program

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship with Self</td>
<td>6.67</td>
<td>8.77</td>
</tr>
<tr>
<td>Relationship with Others</td>
<td>7.39</td>
<td>8.77</td>
</tr>
<tr>
<td>Relationship with Something Greater</td>
<td>8.73</td>
<td>9.91</td>
</tr>
<tr>
<td>Total Relational</td>
<td>7.61</td>
<td>9.91</td>
</tr>
</tbody>
</table>

*Higher numbers reflect higher levels of resilience

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological Balance</td>
<td>4.91</td>
<td>7.04</td>
</tr>
<tr>
<td>Emotional Balance</td>
<td>8.46</td>
<td>10.16</td>
</tr>
<tr>
<td>Cognitive Balance</td>
<td>6.31</td>
<td>7.43</td>
</tr>
<tr>
<td>Total Organismic</td>
<td>6.98</td>
<td>8.21</td>
</tr>
</tbody>
</table>

*Higher numbers reflect higher levels of resilience
Process

<table>
<thead>
<tr>
<th>Presence</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.03</td>
<td>10.17</td>
</tr>
<tr>
<td>Flexibility</td>
<td>9.69</td>
<td>9.14</td>
</tr>
<tr>
<td>Power</td>
<td>11.25</td>
<td>12.37</td>
</tr>
<tr>
<td>Total Process</td>
<td>9.67</td>
<td>10.58</td>
</tr>
</tbody>
</table>

*Higher numbers reflect higher levels of resilience

Resilience Profile
(Higher scores reflect more resilience)

<table>
<thead>
<tr>
<th>TOTAL RESILIENCE</th>
<th>Mean Pre</th>
<th>Mean Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.94</td>
<td>9.21</td>
</tr>
</tbody>
</table>

Burns Anxiety Checklist

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Degree of Anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 4</td>
<td>Minimal or no anxiety</td>
</tr>
<tr>
<td>5 – 10</td>
<td>Borderline anxiety</td>
</tr>
<tr>
<td>11 – 20</td>
<td>Mild anxiety</td>
</tr>
<tr>
<td>21 – 30</td>
<td>Moderate anxiety</td>
</tr>
<tr>
<td>31 – 50</td>
<td>Severe anxiety</td>
</tr>
<tr>
<td>51 – 80</td>
<td>Extreme anxiety or panic</td>
</tr>
</tbody>
</table>

Scoring key for anxiety:
Mean Score: Pre (27.45) Post (18.17)
Beck Depression Inventory

Scoring key for depression:

<table>
<thead>
<tr>
<th>Total Score</th>
<th>Degree of depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 10</td>
<td>These ups and downs are considered normal</td>
</tr>
<tr>
<td>11 – 19</td>
<td>Mild mood disturbances</td>
</tr>
<tr>
<td>20 – 25</td>
<td>Borderline clinical depression</td>
</tr>
<tr>
<td>26 – 30</td>
<td>Moderate depression</td>
</tr>
<tr>
<td>31 – 40</td>
<td>Severe depression</td>
</tr>
<tr>
<td>Over 40</td>
<td>Extreme depression</td>
</tr>
</tbody>
</table>

Mean Score | Pre (10.5) | Post (5.88)  

Stress Level

(1 – 10, 1 Least Stressed, 10 Most Stressed)

| Stress Score Mean | Pre (6.79) | Post (4.30) |

Feedback From Participants After Program Completion
How effective was the Biofeedback program in helping you to learn how stress affects your body?

- **Reduced stress** - It helps to see how effectively the program reduced my stress.
- **Increased self-Awareness** - Biofeedback/stress management program was very effective and helpful for me because I learned these understanding of mind-body correlation through biofeedback, and realization of my stress level and how I have been dealing my Stress (Awareness).
- **Learning experience** - Very effective. Several examples of stressful events in my life have had a physiological expression and this program identified and explained how this process works.
- **Visual perception and Measurements** - It was effective. It helps to visualize the effects of stress on the body and measure the stress quantitatively.
- **Breathing was helpful** - Excellent! I learned to be more aware of my breathing.

List the skills that you learned from the program that are helping you to manage stress?

- **Breathing** – Paced breathing, breathing techniques.
- **Shift in the ways of thinking** – Better able to “think” before reacting, taking “mental vacations,” thought control, positive thinking
- **Raising Awareness** – Awareness of how stress physically manifest itself and how to take time to relax, taking in the situation, Visualization.
- **Stress Reduction** – Stress recovery, identifying stressors quickly,
- **Relaxing** – Focus, taking time out to relax, relaxation techniques, focus on relaxing.
- **Alternative Choices** – Learning to prioritize rather than procrastinate, decided to do one day at a time process, reframing.

Other resources used

- UCLA Mindfulness Research Awareness Center [http://marc.ucla.edu/](http://marc.ucla.edu/)
- UCLA Ergonomics [https://ergonomics.ucla.edu/](https://ergonomics.ucla.edu/)
- UCLA Fitwell Program [http://www.recreation.ucla.edu/fitwell](http://www.recreation.ucla.edu/fitwell)
- Dr. Erik Peper’s website [https://biofeedbackhealth.org/](https://biofeedbackhealth.org/)
- Heartmath [https://heartmath.org](https://heartmath.org)
- Breathing apps: Paced Breathing (Android), BioBreathing (iphone)
- iChill app [https://www.traumaresourcesinstitute.com/iChill-App/iChill-app](https://www.traumaresourcesinstitute.com/iChill-App/iChill-app)
Example of one of the CBT Homework Exercises on Schemas

Questions or Comments?

Thank you