Everyone encounters frustrating, frightening, or irritating situations on a daily basis. For most of us, the initial feelings of anger or stress come quickly but subside as we “talk ourselves down” or get support from another person in managing the situation. In some cases, however, the intensity of the anger or anxiety can become too much to handle. At this point, some people choose to seek help from a therapist (or perhaps even a self-help book) to manage their emotions and learn a form of relaxation training.

What about for persons with autism? Intense anxiety, rapid mood changes, or a low frustration tolerance are far more common than in the typically-functioning population. In addition, intense emotions often precede problem behaviors such as self-injury or aggression. Over 30 years of research in Applied Behavior Analysis have resulted in a well-established conceptual framework of operant behavior that currently allows us to successfully decrease problem behaviors and increase adaptive skills in people with and without disabilities. Interventions for respondent behaviors, however, are under-researched. Common respondent behaviors are listed in the following table.

**Examples of respondent behaviors elicited by strong emotions**

- Screaming
- Crying
- Sweaty palms
- Fist-clenching
- Trembling
- Knee jerking
- Rapid heart beat
- Gagging
One of the challenges to effective relaxation training is that the effects are gradual. However, the effort can still be worth it as it teaches a person how to independently cope with distressing emotions. Additionally, a person’s cognitive functioning is not a factor: researchers have found that knowing what an intervention was intended to do was not necessary for that intervention to work effectively in managing a person’s anxiety (Obler & Terwillinger, 1970).

This finding offers some potentially significant treatment opportunities for addressing stress, fear, and anger in people with autism. Some forms of relaxation training have already been modified for those with developmental disabilities. The most researched relaxation procedure has been a modified form of Progressive Relaxation (PR) (Lindsay & Baty, 1989; Luiselli, 1980). With PR it is assumed that through a series of tense-release muscle exercises, an individual will become aware of the physical and emotional sensations that their body experiences in tensed and relaxed states (Bernstein & Borkovec, 1973). Thus, when the person is anxious, he or she can employ PR techniques to help alleviate the feeling of tension through the relaxation response.

**The Relaxation Response:**

Warmth or tingling in the muscles from decreased muscle tension, a decrease in blood pressure, decreased oxygen consumption, improved digestion, slower breathing, and improved circulation that all result in a feeling of well-being and calm.

However, a limitation of this procedure is that it requires the person to report back to the trainer on how they feel, which may be difficult for individuals with communication impairments (Lindsay, Baty, Michie, & Richardson, 1989; Michulka, Poppen, & Blanchard, 1988; Poppen, 1998). Other challenges can occur if the person who could benefit from relaxation training cannot necessarily tolerate demands, or has difficulty with motor imitation. A potential alternative is a method known as Behavioral Relaxation Training (BRT; Poppen, 1998; Schilling & Poppen, 1983).

BRT focuses on the training of visible behaviors that allow an observer to independently determine...
whether or not the trainee is relaxed. The procedures of BRT involve modeling very specifically defined positions/behaviors in 10 areas/actions of the body listed in the accompanying chart. The person is taught to imitate the appropriate behaviors and sit in an overall position that will bring on the relaxation response. The observer can score whether or not the person is relaxed by using the Behavioral Relaxation Scale (BRS), a reliable and valid checklist for recording the presence of relaxed behaviors (Poppen & Maurer, 1982; Schilling & Poppen, 1983).

**BRT: 10 behaviors**

- Head
- Feet
- Quiet
- Shoulders
- Hands
- Body
- Eyes
- Breathing
- Throat
- Mouth

Over the past 5 years, we have trained 19 patients referred either for clinic-based services, inpatient treatment, or outpatient consultation. Anecdotal observation indicated that training the 10 behaviors specified in the BRT procedure appeared more difficult when taught in an unspecified order, especially when behaviors involving fine motor skills (e.g., keeping eyes lightly closed) were interspersed with gross motor behaviors (e.g., keeping torso in contact with the back of a cushioned chair). Consequently, clinicians were instructed to train the 10 behaviors in a structured order from large-to-small muscle groups: body, head, shoulders, feet, hands, throat, mouth, eyes, and finally breathing and quiet.

To date, 12 studies have been conducted to evaluate the teaching and treatment applicability of BRT with individuals with mental retardation. These studies demonstrated that the participants could acquire BRT more rapidly and more effectively than other forms of relaxation training. Additionally, participants demonstrated improvement in short-term memory and attention (Lindsay, Baty, Michie, & Richardson, 1989; Lindsay, Fee, Michie, & Heap, 1994; Lindsay & Morrison, 1996; Morrison & Lindsay, 1997).

In the Neurobehavioral Unit inpatient and outpatient programs at the Kennedy Krieger Institute, we have begun investigating the potential of BRT as an addition to the comprehensive behavioral treatment interventions we use for children with developmental disabilities and severe behavior problems.
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Our data demonstrate significant benefits when the structured training sequence was utilized. For the group as a whole:

1. Patients were taught to engage in BRT for an average of 7 minutes and required an average of 2 hours to achieve mastery.

2. Those patients trained using the structured sequence displayed more improvements across untrained behaviors (m=4) than those trained in a random order (m=1). That is, training in the structured order on average required teaching only 6/10 responses, as opposed to having to teach 9 or all 10 responses when a random order was used.

We now use the structured teaching sequence only, and have seen shortened training times as a result. For the patients for whom BRT was added as a standard intervention, we saw greater than expected improvements for target behaviors such as tantrums in response to noise, compulsive skin picking, and self-injury and aggression co-occurring with agitation and screaming. We hope to continue our work in treatment evaluation to identify which persons are the best candidates for such treatment and in which problem areas is it most useful.

References


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