

# SPECIAL TOPICS

## Mind-Body Skills Groups for Adolescents

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*Chronic illness provides a significant morbidity in children and their families. Many children and teens with chronic illness experience concurrent emotional and behavioral challenges that are mediated by the stress response. This article reviews the use of mind-body skills, including biofeedback, hypnosis, guided imagery, meditation, music, and movement, for treatment of these stress-related conditions. We outline the use of the model taught by James Gordon, MD, and the Center for Mind-Body Medicine as we have integrated it into groups of teens with diagnoses including cancer, anxiety, headaches, abdominal pain, inflammatory bowel disease, and chronic pain syndrome.*

*Are you stressed? Are you so busy getting to the future that the present is reduced to a means of getting there? Stress is caused by being "here" but wanting to be "there," or being in the present but wanting to be in the future. It's a split that tears you apart inside. To create and live with such an inner split is insane. The fact that everybody else is doing it doesn't make it any less insane.*

—Ekhard Tolle, *The Power of Now*

### Introduction

Parents are increasingly seeking out complementary/alternative medicine (CAM) and integrative therapies in their efforts to help their children best cope with chronic illness, psychophysiological disorders, and mental health conditions. A recent article reported that 83% of pediatricians surveyed believed that their patients were using CAM, and 50% of these pediatricians said they would refer a patient for CAM therapies, including biofeedback, self-help groups, relaxation therapy, and hypnosis (Sikand & Laken, 1998). With up to 50% of pediatric encounters at primary care clinics focusing on psychophysiological concerns (Sobel, 2000), the need for integration of mind-body skills into group treatment models is great. The challenge for the coming years is for research to document that this intervention is "best practice."

Mind-body approaches with children and adolescents, including biofeedback and hypnosis, have become more

widely accepted, utilized, and researched. Mind-body medicine is defined by the National Center for Complementary and Alternative Medicine (NCCAM) of the National Institutes of Health as

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...medicine that focuses on the interactions among the brain, mind, body, and behavior, and the powerful ways in which emotional, mental, social, spiritual, and behavioral factors can directly affect health. It regards as fundamental an approach that respects and enhances each person's capacity for self-knowledge and self-care, and it emphasizes techniques that are grounded in this approach. (NCCAM, 2005).

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Mind-body approaches include biofeedback, hypnosis, imagery, meditation, art and music therapies, spirituality, support groups, and lifestyle interventions. Mind-body approaches teach coping skills and provide tools for self-awareness, self-regulation, and self-care. Teaching these skills within groups provides participants with emotional support, connectedness, and encouragement (Gordon, 1996; Gordon & Moss, 2003).

The efficacy of mind-body medicine and group treatment models for adults with stress and chronic diseases has been well established in the literature (Fawzy et al., 1993; Ornish et al., 1990; Pelletier, 2002; Specia, Carlson, Goodey, & Angen, 2000; Spiegel, Bloom, Kraemer, & Gottheil, 1989). These studies report positive effects of therapeutic groups including improvements in mood, pain, stress-related symptoms, coping skills, disease progression, and mortality. A pilot study by Gordon et al. (2004) supports that mind-body skills groups are effective in reducing the symptoms of posttraumatic stress in war-traumatized adolescent students. This study collected pre- and postquestionnaires from 139 high school students in Kosovo who participated in a 6-week mind-body skills group program based on the Gordon model. Participants reported that group made them feel that they were "not alone" in their experience of war and trauma (Gordon et al., 2004).

Pediatric studies support that children and adolescents as a group are very skilled at learning self-regula-

tion techniques, and likely learn these techniques more quickly than adults (Attansio et al., 1985; Culbert, Kajander, & Reaney, 1996). It is our experience that teaching these skills in a group provides the most meaningful and significant change in their quality of life, mood, and coping skills, and that this intervention is both clinically effective and cost-effective.

The purpose of this article is to discuss the elements of the Gordon model and our experience with mind-body skills groups with adolescents in a hospital clinic setting.

### Center for Mind-Body Medicine Model

This article outlines the use of the mind-body skill group model taught by James Gordon, MD, and the Center for Mind-Body Medicine. The Center is a non-profit educational organization that provides a Professional Training Program in MindBodySpirit Medicine. Information about the Center is available online at [www.cmbm.org](http://www.cmbm.org).

This model is based on the use of small groups that allow for a meditative (i.e., staying in the moment) and safe environment to learn self-care skills that include self-awareness, relaxation, autogenics/hypnosis, biofeedback, meditation, and guided imagery (Gordon, 2004; see the Table). Each group is structured to provide short, didactic teaching interwoven with opportunities to experience mind-body techniques. The small group setting provides group support, structure, and flexibility, giving participants the chance to discuss and process their experiences with mind-body techniques. Participants are also encouraged to practice these skills outside of group. These groups have been utilized in a number of settings, including groups for individuals with chronic and life-threatening illness, medical students, victims of war and terrorism-related trauma, and with children in school systems. The Center has conducted training workshops for professionals for over 10 years.

### Mind-Body Approaches Used in Group

#### *Biofeedback*

Biofeedback is the use of electronic or electromechanical equipment to measure and then feed back information about physiological processes such as muscle activity, heart rate variability, breathing, finger temperature, sweat gland activity, and electroencephalogram (EEG) activity (Schwartz & Andrasik, 2003). Biofeedback is a powerful tool in working with adolescents who can be skeptical of their own abilities to control their bodily

responses or are even unaware of the activation of the stress response in their lives. Biofeedback increases the adolescents' awareness, provides immediate reinforcement of self-regulation strategies, and quickens the learning process. There is a strong body of research that supports the use of biofeedback and related mind-body approaches in pediatrics (Culbert & Banez, 2003; Culbert et al., 1996; Olness & Kohen, 1996; Schwartz & Andrasik, 2003).

In the Gordon model, simple biofeedback equipment (i.e., biodots, peripheral temperature monitors) is used to measure the relaxation response. Biofeedback is integrated with autogenics, guided imagery, and meditation. Participants also use it in gaining self-awareness into which situations, thoughts, and experiences make them feel tense. In our experience, biofeedback is an important tool in mind-body skills groups. Adolescents enjoy using home biofeedback monitors, either biodots or peripheral temperature monitors, which reinforce their practice of mind-body skills. Within our groups, we have also used heart rate variability training (HeartMath) on laptops with great success.

#### *Hypnosis, Autogenic Training, and Guided Imagery*

Hypnosis is defined as an altered state of consciousness or awareness, usually but not always involving relaxation, within which individuals experience heightened suggestibility (Olness & Kohen, 1996). Children and adolescents are naturally endowed with hypnotic ability and readily use imagery to enhance their performance and decrease pain and anxiety. Adolescents come to the clinic in an altered state of awareness (Sugarman, 1996), characterized by a narrowed focus of attention (which can include their own apprehensions about group), heightened expectancy (will this new intervention help?), and enhanced responsiveness to suggestion. Within our mind-body skills groups, we use therapeutic language, self-hypnosis, and guided imagery exercises to facilitate the development of self-regulation. The initial breathing meditation is often the "formal induction," and then the stages of hypnotherapy—utilization, intensification, and reflection—are used throughout the group session and are blended with other approaches.

Autogenic training is one form of self-hypnosis. Autogenic phrases are organized to produce specific physiologic responses. For example, the phrases "my legs are heavy and warm" is meant to increase the blood flow to this area, resulting in relaxation. This is done

progressively through different parts of the body (muscle, blood vessels, heart, respiration, inner organs, and head) along with the use of deep breathing and repetition of the phrases (Rakel, 2003). In the Gordon model, thermal biofeedback is combined with autogenic training to demonstrate the mind-body connection.

Guided imagery uses all the senses and is the communication mechanism between perception, emotion, and bodily change (Achterberg, 1985). Imagery and visualization exercises can have profound effects on health by reducing anxiety and pain and improving quality of life, immune function, and outcome of disease. In the Gordon model, many different types of imagery are utilized, including special place imagery.

### *Meditation*

There are three basic types of meditation: concentrative, awareness/mindfulness, and expressive. Borysenko (1988) defines meditation simply as any activity that keeps the attention anchored in the present moment. Kabat-Zinn (2005) describes mindfulness meditation as “moment-to-moment, nonjudgmental awareness, cultivated by paying attention in a specific way, that is in the present moment, and as nonreactively, as nonjudgmental, and as openheartedly as possible” (p. 108). Diaphragmatic breathing is a form of concentrative meditation and is the most portable mind-body technique we teach. It is also the one technique that adolescents say they continue to use on a regular basis following mind-body skills group. Kajander and Peper (1998) provide helpful clinical tips for teaching breathing techniques (“belly breathing”) to children and adolescents. Research on diaphragmatic breathing indicates that it slows the heart rate, lowers blood pressure, restores respiratory sinus arrhythmia, and stimulates the immune system (Hendricks, 1995; Schwartz, 1995).

Simple breathing techniques (“soft belly”) are the initial focus in the Gordon groups. Attention to the breath is followed by deepening of the breath into diaphragmatic breathing, which induces the “relaxation response.” This type of breathing is the foundation upon which all the meditations and guided imageries are built upon.

In the Gordon model, meditation is used for the development of self-awareness. Awareness of the breath is a beginning exercise to encourage the participants to focus inward. Attention to nutrition is promoted by eating meditations; interaction with the environment is encouraged in walking meditations; and movement is experienced through expressive meditations of shaking, dancing, and yoga.

### *Movement*

Research on exercise and mood has suggested that physical activity is associated with improved mood. LaFontaine et al. (1992) reviewed the literature between 1985 and 1990 on aerobic exercise and mood and concluded that a moderate amount of exercise resulted in mood enhancement. More recently, Stewart et al. (2003) reported that relatively small amounts of routine physical activity are associated with a better health-related quality of life and mood in older individuals.

In the Gordon model, movement such as shaking and dancing balances quiet meditation and imagery. This affords an opportunity for those that have difficulty with fatigue, anxiety, depression, and chronic pain to use and experience their body in a positive manner. In our experience, adolescents often come to group with a more sedentary lifestyle. Adolescents have been engaged to change this lifestyle by the use of pedometers outside of group and the exercise of active meditations, including shaking, dancing, and yoga, in the group sessions.

### *Drawings*

Drawings have long been a widely used and accepted technique in psychotherapy. A study by Stafstrom, Rostasy, and Minster (2002) reported that children’s drawings of their headaches were not only insightful, but also highly predictive of their symptoms and diagnostic type. A headache drawing with migraine features has approximately an 87% likelihood of correctly predicting the clinical diagnosis of migraine. The authors encouraged the use of drawings in the evaluation and treatment of pediatric headache disorders.

Drawings in the Gordon model are used to express feelings and thoughts. They are a tool for self-awareness and communication. Drawing can assist in clarifying a variety of issues including emotions, relationships, goals, and conflicts. In our experience, we have used drawings to identify key issues and goals, as well as to process meditations and imagery. Teens, in particular, may have difficulty expressing themselves in words, and drawings have often served to communicate and explore their feelings.

### *Music*

Fried (1990a, 1990b) provides an excellent discussion on how integrating music with mind-body skills training can “deepen” breathing and achieve autonomic nervous system balance. In the Gordon model, music can support the relaxation response, enhance imagery and meditation, change energy, and promote self-awareness



Figure 1. "How I see myself right now."

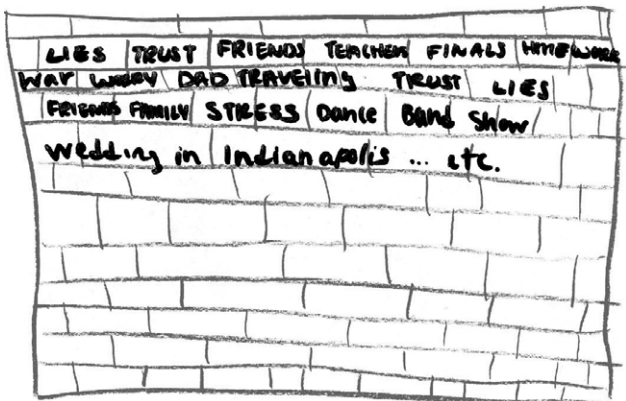


Figure 2. "My biggest problem."

(Gordon, 2004). Music can also elicit strong emotional responses. In our experience, teens engage in the group more when they can bring their own musical selections (occasionally to the dismay of the group leaders!).

### Case Example

The following case example illustrates the power of the group to provide the milieu for healing and personal change (Gordon, 1996).

K. L. was a 15-year-old girl who was a member of a mind-body skills group that consisted of seven girls between 14 and 17 years of age. K. L. had difficulties with

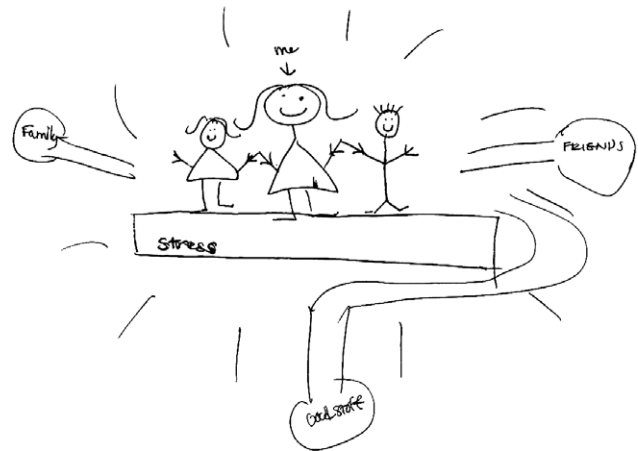


Figure 3. "How I want to be in the future."

chronic joint pain and sleep disturbance, contributing to her considerable stress. She was a 10th grader enrolled in honors classes with a straight A average. She was motivated to participate in the group, but reported feeling isolated.

The initial group included introductions and discussion of group guidelines emphasizing confidentiality. The first group exercise involved a drawing activity (see Figures 1–3), beginning with K. L. as she saw herself in the present. K. L.'s drawing demonstrated that she felt "chained" by her pain and discomfort. She had difficulty balancing the many demands of her life. The next task was to draw her biggest problem. K. L. drew a brick wall with her stressors (friends, teachers, homework, war, dad traveling, dance, etc.), each occupying a brick in the wall. The last drawing was to be of her without her problems. K. L. drew herself balanced and on top of her stress, enjoying time with her family and friends. The drawings enabled this otherwise shy girl to express her feelings about the present and the future.

Subsequent groups taught the girls to be aware of how stress affected their bodies. Visual aids, such as anatomy books, illustrated the relationship between the autonomic nervous system and the stress response. K. L. identified that a fight with her parents precipitated shallow breathing. To settle herself, she used the diaphragmatic breathing she had learned. She also found that certain music promoted her relaxation response.

Biodots (visual temperature monitors) and digital stress thermistors were used with the girls to demonstrate peripheral vasodilation as a measure of relaxation. Later that week K. L. wore a biodot at school and discovered that when she took a quiz her hands became colder. She then increased her temperature with daydreaming

and relaxation. K. L. also found that she learned to relax using the autogenic exercises demonstrated in the group.

Guided imagery was used throughout the series of groups. K. L. wore her biodot during the safe place imagery. She was encouraged to imagine she was in a safe, comfortable place. She found herself imagining she was in a prairie, and reported that she felt comfortable and without worry. The digital peripheral temperature monitor indicated relaxation as her hands warmed. She described her feeling at the end of the session as "alright." In another session, the body scan imagery enhanced awareness of the body, and K. L. began to check out her joints. She reported relaxation after this as well.

Meditation, including belly breathing, was a part of each group session, and this helped to increase self-awareness. For example, the group on nutrition included a focused eating meditation. K. L. shared in subsequent weeks that she discovered that certain foods seemed to affect her joints, and she felt better when she ate breakfast. Education on exercise was followed by a walking meditation. K. L. reported noticing things in the environment that she had not noticed before, and described being relaxed at the end of the exercise. She increased her exercise when pedometers were handed out and the girls learned how to use them.

K. L. continued to make progress throughout the series. She reported she could focus less on the joint pain and used the self-regulation strategies on a regular basis. She shared that she was sleeping better and was less anxious.

The skills K. L. learned were important, but the power of the group should not be underestimated. She reported that the activities, especially meditation, were easier to do with the group. She was able to identify that the support of the group was useful to her. K. L. and all the group members were sad to have the group come to an end. However, the girls felt confident that their future would be better and they would continue to use the skills learned in the group.

At the conclusion of the series of groups, K. L. joined the other participants in indicating that there had been significant improvement in functioning, although she still had issues with some pain symptoms. A final set of drawings were completed to show herself as she sees herself now, how she wanted to be, and lastly what she would do to get there. K. L.'s drawing of herself indicated that she still saw herself with multiple stressors including "school, parents, rules, and organizational demands." She indicated that she wanted to be "loved, closer to God, smiling, carefree, fresh, enjoyable, and

**Table. Empowering skills taught in mind-body skills groups**

Guided imagery Biofeedback Drawings Meditation Exercise and nutrition Self-awareness Breath work Stress-management Movement
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*Note.* From *MindBodySpirit Medicine: The Professional Training Program* by J. Gordon, 2004, Washington, DC: Center for Mind-Body Medicine. Copyright 2004 by the Professional Training Program, Center for Mind-Body Medicine. Adapted with permission.

involved in many activities." Her plan of how to get there was to "sort things out, trust in herself and others, take her medications, and manage her pain better."

## Conclusion

Mind-body skills groups for adolescents offer a promising integrative treatment model. Adolescents with chronic illness, psychophysiological disorders, and/or mental health conditions often struggle with feelings of isolation and hopelessness. Mind-body skills groups offer adolescents an opportunity to enhance their understanding of self, learn from their peers, try various mind-body skills, develop self-regulation, and benefit from the support afforded by the group process. Our clinical experience points to the efficacy of this intervention, and with the growing number of adolescents experiencing significant psychophysiological disorders, the need for group-based treatment models is great.

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